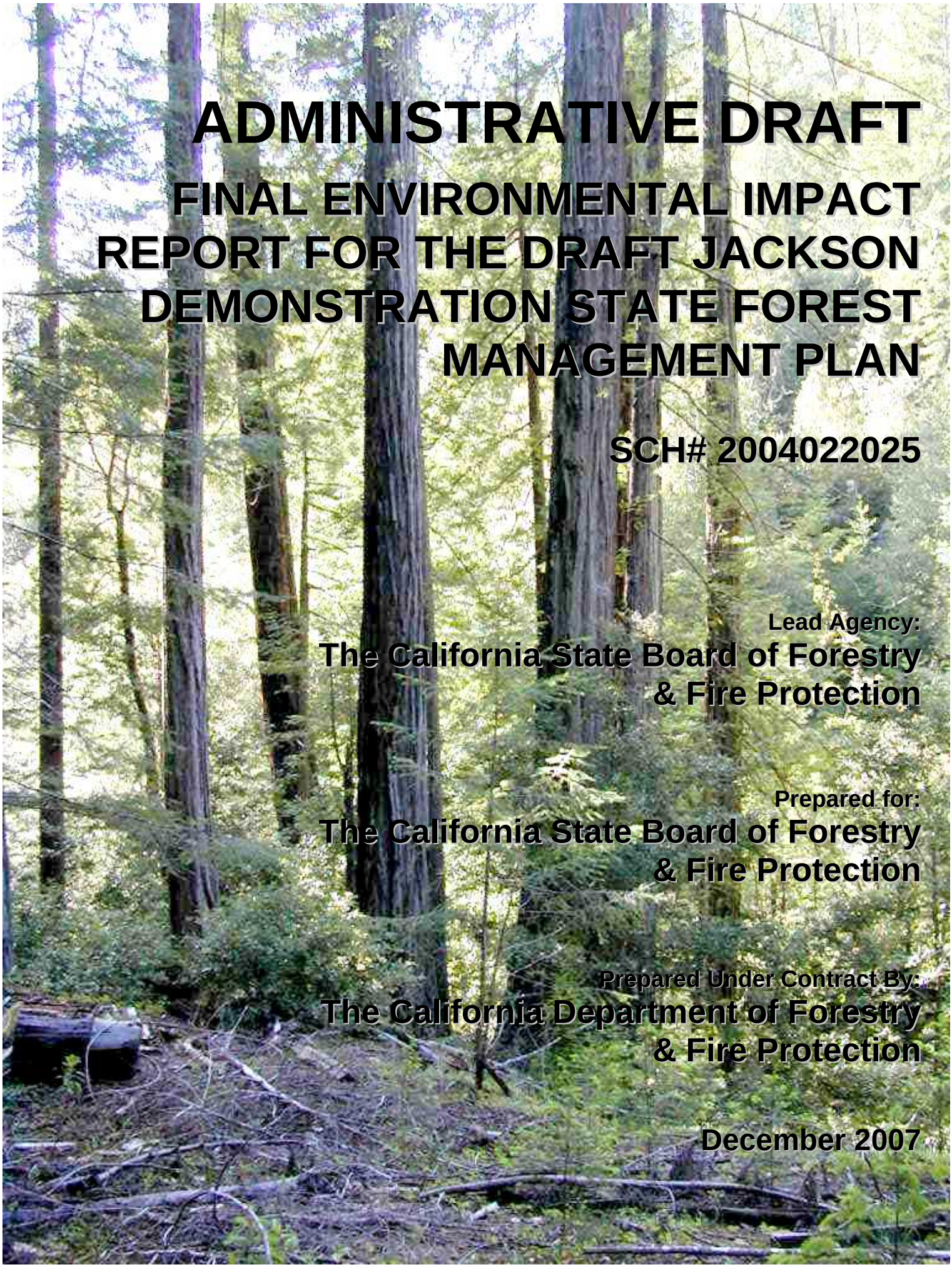


ADMINISTRATIVE DRAFT

FINAL ENVIRONMENTAL IMPACT REPORT FOR THE DRAFT JACKSON DEMONSTRATION STATE FOREST MANAGEMENT PLAN

SCH# 2004022025

Lead Agency:
The California State Board of Forestry & Fire Protection

Prepared for:
The California State Board of Forestry & Fire Protection

Prepared Under Contract By:
The California Department of Forestry & Fire Protection

December 2007

This Page Intentionally Blank

ADMISTRATIVE DRAFT

FINAL ENVIRONMENTAL IMPACT REPORT FOR THE DRAFT JACKSON DEMONSTRATION STATE FOREST MANAGEMENT PLAN

SCH# 2004022025

Lead Agency:
The California State Board of Forestry & Fire Protection

Prepared for:
The California State Board of Forestry & Fire Protection

Prepared Under Contract By:
The California Department of Forestry & Fire Protection

December 2007

This Page Intentionally Blank

Table of Contents

Index Table to Comments by Commenter Name and Comment Number

I Introduction

II General Responses

III Agency Comments
- 2005 Draft Environmental Impact Report
- 2007 Recirculated Draft Environmental Impact Report

IV Individual Comments
- IV.1 Responses to Individual DEIR E-Mail Comments E-1 to E-26
- IV.2 Responses to Individual DEIR E-Mail Comments E-27 to E-40
- IV.3 Responses to Individual DEIR E-Mail Comments E-41 to E-113
- IV.4 Responses to Individual DEIR E-Mail Comments E-114 to E-124
- IV.5 Responses to Individual DEIR Mailed Comments P-1 to P-75
- IV.6 Responses to Individual DEIR Mailed Comments P-76 to P-150
- IV.7 Responses to Individual DEIR Mailed Comments P-151 to P-182
- IV.8 Responses to Individual DEIR Mailed Comment P-183
- IV.9 Responses to Individual DEIR Mailed Comments P-184 to P-185
- IV.10 Responses to Individual DEIR Mailed Comments P-186 to P-188
- IV.11 Responses to Individual DEIR Mailed Comments P-188B to P-197
- IV.12 Responses to Individual DEIR Mailed Comments P-198 to P-229
- IV.13 Responses to Individual DEIR E-mail Modified Form Letters
- IV.14 Responses to Individual RDEIR E-Mail Comments EC-1 to EC-184
- IV.15 Responses to Individual RDEIR Mailed Comments GM-1 to GM-38
- IV.16 Responses to Individual RDEIR Mailed Comments GM-39 to GM-40

V Form Letter Responses

VI Oral Testimony

VII Corrections and Additions

Index Table to Written Comments by Commenter Name and Comment Number

Index to Comments by Commenter Name

Where a comment letter had multiple signatories, only the name of the first signer was entered in the index table.

Comments on the 2005 Draft Environmental Impact Report

Agency Comments on 2005 Draft Environmental Impact Report (Sorted by Agency Name)				
Letter ID	**Last Name**	**First Name**	**Agency Name**	**FEIR Section**
A-5	Curtis	Banky E.	California Department of Fish and Game	III
A-4	Marshall	Kirk	California Department of Parks and Recreation	III
A-6	Chesbro	Wesley	California State Senate (with Senators Perata, Bowen, Cedillo, and Simitian)	III
A-3	Nakamura	Gary	Demonstration State Forest Advisory Group	III
A-7	Turner	Dave	Fort Bragg City Council	III
A-7a	Turner	Dave	Fort Bragg City Council	III
A-2	Furman	Kristi	Mendocino County Board of Supervisors	III
A-2a	Wagenet	Hal	Mendocino County Board of Supervisors	III
LA-1	Butler	Dick	National Marine Fisheries Service	III
A-1	Klamt	Robert	North Coast Regional Water Quality Control Board	III
A-8	O'Hara	Kevin	University of California, Berkeley	III

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-116	Aigner	Mary		IV.4
E-11	Altmann	Mary		IV.1
P-1	Andersen	John	Registered Professional Forester	IV.5
E-46	Anderson	Stacey		IV.3
P-74	Anderson	James	Registered Professional Forester	IV.5
P-193	Anderson	Mike	Registered Professional Forester/Licensed Timber Operator	IV.11
P-196	Anderson	Myles		IV.11
P-226	Anderson	Mike	Mendocino Working Group	IV.12
P-228	Anderson	Mike	Mendocino Working Group	IV.12
P-211	Anderton	Katherine	Save-the-Redwoods League	IV.12
E-66	Antin	Eleanor		IV.3
P-187	Bailey	Kathy	California Sierra Club	IV.10
P-188	Bailey	Kathy	California Sierra Club	IV.10
P-188B	Bailey	Kathy	California Sierra Club	IV.11
P-220	Bailey	Kathy	California Sierra Club	IV.12
7-23	Bailey	Christine		IV.13

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
P-189	Baldo	Chris	Willits Redwood Company	IV.11
P-192	Barrett	Brian		IV.11
P-31	Bates	Michael		IV.5
C2-129	Bauriedel	William		IV.13
P-214	Baye	Peter	Dharma Cloud Foundation	IV.12
E-59	Bebensee	Dennis	Registered Professional Forester	IV.3
E-47	Becker	Carol		IV.3
P-13	Beltrami	Al		IV.5
P-169	Berg	Kervin		IV.7
P-200	Biddison	Bonnie		IV.12
E-84	Birecki	Richard		IV.3
P-212	Blencowe	Craig	Registered Professional Foresters (7)	IV.12
E-73	Boothe	Glendon		IV.3
E-106	Boothe	Glendon		IV.3
E-24	Borras	Thembi	Registered Professional Forester	IV.1
7-251	Boutin	Dolores		IV.13
P-43	Bozeman	Jackie	J&B Tree Farm	IV.5
P-18	Bradley	Stacey	Shoreline Riders, Inc	IV.5
P-50	Bradley	Stacey	Pacific Auto Body & Rental Inc	IV.5
P-144	Bradley	Stacey	Graves Apartments	IV.6
P-52	Brandon	Victoria	Sierra Club Lake Group	IV.5
P-97	Brennen	Sophia		IV.6
E-110	Brittner	Gary	Registered Professional Forester	IV.3
E-52	Brun	Katie		IV.3
P-167	Burton	R. Edward	EBC Company	IV.7
P-223	Burton	Bruce	Mendocino Working Group	IV.12
P-224	Burton	Bruce	Willits Redwood Company	IV.12
E-113	Calvert	Karen A.		IV.3
P-183	Campbell	Bruce		IV.8
P-103	Cannon	Steve Q.	Foothill Resource Management	IV.6
P-171	Carroll	Paul	Dharma Cloud Charitable Trust Foundation and Campaign to Restore Jackson Redwood State Forest	IV.7
P-221	Carroll	Paul	Dharma Cloud Charitable Trust Foundation and Campaign to Restore Jackson Redwood State Forest	IV.12
E-91	Casey	Kevin	Registered Professional Forester	IV.3
P-120	Champagne	Marie		IV.6
P-125	Champagne	Rhonda		IV.6
E-41	Childs	Richard		IV.3
C2D-30	Clark	Dolores		IV.13
C2-115	Collins	Kevin		IV.13
E-37	Connelly	Daniel		IV.2
P-85	Crean, Jr	Dennis M.		IV.6
C2-44	Dame	Richard		IV.13

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
C2-149	Davis	Andrea		IV.13
C2-173	Davis	Gioia		IV.13
P-73	Delfino	Kim	Defenders of Wildlife	IV.5
P-173	Devall	Gorman L.		IV.7
E-121	Dias	Michele	California Forestry Association	IV.4
P-79	Dickerson	John	Employers Council of Mendocino County	IV.6
P-142	Dickerson	John G.		IV.6
7-114	Dudrick	Roseann		IV.13
P-170	Dullinger	Heinz		IV.7
P-106	Dunn	Alan and Ruth		IV.6
E-74	Dwyer	Evelyn		IV.3
P-59	Ederer	Paul	Registered Professional Forester	IV.5
P-3	Ehlers	Ed	Associated California Loggers	IV.5
E-98	Ellingson	Robert		IV.3
E-109	Emmert	Patrick		IV.3
E-101	Enders	Todd		IV.3
E-123	Epp	Walter		IV.4
E-104	Farr	Gina		IV.3
7-54	Fiedler	Susan		IV.13
E-7	Fisher	Daniel J.	Fruit Growers Supply Co	IV.1
P-181	Force	T.S.		IV.7
P-16	Freeman	Patty	Freeman Realty	IV.5
E-5	Fry	Debbie		IV.1
E-70	Gayner	Jay		IV.3
P-175	Gienger	Richard	Environmental Information Center	IV.7
E-63	Gobby	Alyssa		IV.3
P-45	Goldner	Robin	Robin Goldner, MSW	IV.5
P-32	Goodner	Michael		IV.5
C5-1	Grace	Marien		IV.13
E-108	Grader	Zeke	Salmon and Steelhead Recovery Coalition	IV.3
C2D-37	Graham	Allan		IV.13
P-177	Grassetti	Richard	Grassetti Environmental Consulting/Dharma Cloud Foundation	IV.7
P-29	Graw	Debra De	Chamber of Commerce-Mendocino Coast	IV.5
P-149	Gundling	Henry		IV.6
E-22	Hale	Candace		IV.1
E-78	Hanna	Tamara		IV.3
E-28	Harrison	Pete	Californians for Alternatives to Toxics	IV.2
E-44	Hartzell	Christine		IV.3
P-49	Harwood	Art	Harwood Products	IV.5
E-82	Hazelleaf	Tom		IV.3
P-210	Helenchild	Liz		IV.12
E-68	Hellwig	Christian		IV.3
E-26	Higgins	Patrick	Consulting Fisheries Biologist	IV.1

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
C2-83	Hoffman	Jeff		IV.13
P-24	Hollister	George A.		IV.5
P-176	Holm	Lindsey	Environmental Protection Information Center	IV.7
P-84	Hooper	James D.		IV.6
E-117	Horner	Steve	Barnum Timber Company	IV.4
P-100	Horvat	Robert		IV.6
P-199	Hubbart	Lori	Dorothy King Chapter, California Native Plant Society	IV.12
P-197	Hughes	Paul	Forests Forever	IV.11
P-14	Ingram	Robert G.		IV.5
E-53	Jacobs	Laurie		IV.3
E-120	Jacobson	Dan	Environment California	IV.4
P-54	Jones	Ken		IV.5
C2-46	Karlstad	Ken		IV.13
E-8	Kelley	Bob		IV.1
E-14	Kelly	Scot		IV.1
P-179	Kessler	John	Northern California Society of American Foresters	IV.7
P-225	King	James F.	Willits Redwood Company	IV.12
P-12	Kisliuk	Tom	Registered Professional Forester	IV.5
P-158	Knott	Heide		IV.7
E-90	Kravitz	Scott		IV.3
E-67	Krueger	Jon		IV.3
P-53	Kruse	Autumn R.		IV.5
E-61	Lai	Jade		IV.3
E-95	Lam	Perrin		IV.3
E-3	Lane	Eleanor		IV.1
P-161	Lauby	Adrienne		IV.7
P-180	Lawrence	Patricia		IV.7
E-12	LeBus	Annie		IV.1
P-42	Levine	Alan	Coast Action Group	IV.5
P-46	Loy	Gareth		IV.5
E-55	Lozaw	Kevin	Lozaw Photography	IV.3
P-2	MacDougall	Bob		IV.5
P-5	MacDougall	Bob		IV.5
E-17	MacDougall	Bob (Robert) T. , Jr.		IV.1
P-9	MacDougall	Bob (Robert) T. , Jr.	Registered Professional Forester	IV.5
P-23	MacDougall	Bob (Robert) T. , Jr.	Registered Professional Forester	IV.5
E-103	Macmillan	Gail		IV.3
P-4	Mahoney	Darcie	Registered Professional Forester	IV.5
E-43	Mandrussow	Olga		IV.3

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-85	Marcuse	Harold		IV.3
E-13	Martins	Chuck		IV.1
E-87	Marvier	Mike	Registered Professional Forester	IV.3
C2D-33	Mary	Redwood		IV.13
E-64	Matzek	Mary		IV.3
E-76	Matzek	Virgina		IV.3
P-27	Melo	Jere		IV.5
E-51	Michaelson	Peter		IV.3
E-6	Michener	Ron		IV.1
P-122	Miksak	Anthony		IV.6
E-86	Monteiro	Sergio		IV.3
7-122	Morey	Sandi		IV.13
E-19	Morse	Andrew G.		IV.1
P-7	Nelson	G. Tyler	Mendocino County Farm Bureau	IV.5
P-178	Nelson	Diane		IV.7
P-194	Nelson	S. Kim		IV.11
P-195	Nelson	S. Kim		IV.11
E-115	Noble	Elisa	California Farm Bureau Federation	IV.4
E-10	Nuzum	Robert C.	Applied Natural and Cultural Resource Management	IV.1
7-81	Oberlin	Kent		IV.13
P-124	Olsen	Jack	San Mateo County Farm Bureau	IV.6
E-80	O'Neil	William		IV.3
P-17	Overfield	Allen C.	Registered Professional Forester	IV.5
7-18	Pappalardo	Sue		IV.13
P-90	Pardini	Joseph R.	Acme Automotive Company	IV.6
E-57	Parker	Peter T.		IV.3
E-79	Parsons	Nancy		IV.3
E-49	Patotzka	Lori		IV.3
P-190	Patton	Gary	Planning and Conservation League	IV.11
7-186	Pedigo	Kelley		IV.13
E-119A	Perkins	Linda	Albion River Watershed Protection Assoc./Friends of Salmon Creek	IV.4
E-119B	Perkins	Linda	Albion River Watershed Protection Assoc./Friends of Salmon Creek	IV.4
E-27	Pickett	Karen	Bay Area Coalition for Headwaters	IV.2
7-1	Pittman	Lamar		IV.13
E-45	Pomeroy	Carolyn		IV.3
E-94	Pritchard	Mark		IV.3
P-66	Pustejovsky	Mark	Registered Professional Forester	IV.5
7-209	Raab	Ted		IV.13
E-40	Reid	W. Bruce		IV.2
P-213	Ribar	Peter F.	Registered Professional Forester	IV.12
P-182	Rilla	Mike		IV.7
C2-60	Robinson	Monroe		IV.13

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
P-60	Rogers	Robert L.	Rogers Forest Management	IV.5
E-88	Rollins	Becca		IV.3
E-81	Rothman	Meg		IV.3
E-38	Rypp	Norbert		IV.2
E-100	Sacks	Al		IV.3
P-198	Santana	Mary		IV.12
P-6	Schallon	Eric	California Licensed Foresters Association	IV.5
E-114	Scholars	Teresa		IV.4
E-56	Schroeder	Nancy		IV.3
P-119	Schulte	Dawne		IV.6
C2-148	Schumacher	Peter		IV.13
E-48	Seavey	Beverly		IV.3
P-117	Sharkey	Virginia		IV.6
E-1	Smart	Tanya		IV.1
E-54	Smith	Charles		IV.3
E-58	Smith	Nancy A.		IV.3
E-60	Smith	Erica Meta		IV.3
P-8	Smith	William		IV.5
P-35	Smith	Shery		IV.5
P-70	Smith	Walter		IV.5
P-229	Smith	James D.		IV.12
7-24	Smith	Barbara		IV.13
E-4	Smythe	Tom	Registered Professional Forester	IV.1
E-124	Spitz	Jon	Willits Environmental Center	IV.4
E-36	Stanton	Pete		IV.2
7-35	Stevens	Kathleen		IV.13
E-21	Stout	Nathan		IV.1
P-94	Stout	Nathan		IV.6
E-25	Strittholt	James R.	Conservation Biology Institute	IV.1
E-62	Studebaker	David		IV.3
E-9	Sutfin	Thomas		IV.1
C2-75	Taube	Skip		IV.13
E-18	Taylor	Bill		IV.1
P-112	Taylor	Don	Mendocino Woodlands Camp Association	IV.6
P-166	Taylor	Elinor		IV.7
P-184	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.9
P-185	Taylor	Vince	Dharma Cloud Foundation	IV.9
P-222	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.12
P-19	Tenzel	Marc	Mendocino Coast Cyclists	IV.5
E-20	Thompson	George A.		IV.1
P-186	Thorstrom	Wayne		IV.10
P-22	Thrush	Michael A.	Registered Professional Forester	IV.5
P-36	Tilley	Forest B.		IV.5

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-96	Tischler	Dan		IV.3
P-168	Tumolo	Paul		IV.7
P-174	Ulloth	John		IV.7
P-164	Van Alstyne	Dick		IV.7
E-83	Vasic	Jonny		IV.3
E-89	Vernon	Stephen	Vernon Law Office	IV.3
E-39	Vue	Tiffany		IV.2
P-15	Wade	Warren F.	Mendocino Coast Audubon Society	IV.5
E-92	Wagenet	Hal		IV.3
P-172	Waldman	Sam		IV.7
E-2	Watt	Mark		IV.1
E-112	Weldon	Daniel M.	Forest Landowners of California	IV.3
E-69	Wertz	Eric		IV.3
E-71	Wiezner	Lawrence		IV.3
E-72	Wilkinson	Matthew		IV.3
E-105	Wilkinson	Lila		IV.3
C2D-27	Wilson	Nicholas		IV.13
E-75	Wixson	Gene		IV.3
P-147	Wooster	Thoedore W.	Consulting Biologist	IV.6
E-23	Wortley	Richard C.	RANK's Forest LLC	IV.1
E-93	Young	Louise		IV.3

Comments on the 2007 Recirculated Draft Environmental Impact Report

Agency Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Agency Name)				
Letter ID	**Last Name**	**First Name**	**Agency Name**	**FEIR Section**
GM-31	Hammerstrom	Doug	Fort Bragg City Council	III
A-9	Smith	Kendall	Mendocino County Board of Supervisors	III
A-10	Sanchez	Katy	Native American Heritage Commission	III
A-11	Stewart	William	University of California, Berkeley	III
GM-29	O'Hara	Kevin	University of California, Berkeley	III
GM-34	Biging	Greg	University of California, Berkeley	III
GM-35	NcNally	Marcia	University of California, Berkeley	III

Public Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
GM-2	Anonymous			IV.15
EC-35	Artley	Dick		IV.14
EC-49	Bailey	Kathy	California Sierra Club	IV.14
EC-70	Bannon	Robert Oakes		IV.14
EC-163	Bartlet	Joselyn		IV.14
GM-7	Bowman-Schmidt	Dorothea		IV.15
GM-13	Brandon	Victoria	Sierra Club Lake Group	IV.15
GM-16	Brewer	Marilou		IV.15
GM -40	Burton	Bruce	Mendocino Working Group	IV.16
EC-123	Cadile	Casey		IV.14
EC-101	Campbell	Bruce		IV.14
GM-39	Campbell	Bruce		IV.16
GM-33	Carroll	Paul	Dharma Cloud Charitable Trust, Campaign to Restore Jackson Redwood State Forest	IV.15
EC-133	Christianson	Steve		IV.14
EC-100	Cobb	Dean		IV.14
EC-39	Connelly	Daniel		IV.14
EC-140	Cook	Alan		IV.14
EC-184	Cooke	D		IV.14
EC-89	Coppock	Robert		IV.14
EC-136	Davis	Gioia		IV.14
GM-36	de Lasaux	Michael	Northern California Society of American Foresters	IV.15
EC-2	Dias	Michele	California Forestry Association	IV.14
EC-97	Duff	Ray		IV.14
EC-1	Ellingson	Robert		IV.14
GM-23	Gioumousis	Ellie		IV.15
EC-4	Goodner	Michael		IV.14
GM-4	Handley	Margie	Employers Council of Mendocino County	IV.15
EC-37	Herbert	Betsy		IV.14
EC-110	Hertzberg	Jean		IV.14
GM-17	Hubbart	Lori	Dorothy King Chapter, California Native Plant Society	IV.15
GM-18	Johnson	Peter	Mendocino County Farm Bureau	IV.15
GM-25	Joyce	Chantz	California Licensed Foresters Association	IV.15
GM-21	Komer	Marc		IV.15
EC-147	Macdonald	BC		IV.14
GM-20	Miklose	Stan	Mendocino Coast Cyclists	IV.15
EC-144	Morey	Sandra		IV.14
EC-38	Musgrave	Jeff		IV.14
EC-160	Nierlich	Donald		IV.14
GM-27	Pandone	Marc	Napa Sierra Group	IV.15

Public Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Last Name of First Signer)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
GM-5	Pjerrou	Mary	Greenwood Earth Alliance	IV.15
EC-159	Rawson	Bob		IV.14
EC-43	Rusert	Brent		IV.14
EC-45	Russell	Lang		IV.14
GM-22	Schneider	David	Dr. David Schneider, Optometrist	IV.15
EC-120	Schoettle	Anna		IV.14
EC-122	Shook	Deborah		IV.14
EC-42	Silvers	Rodger		IV.14
EC-94	Smith	James		IV.14
GM-28	Smith	James	The Old Growth Organization	IV.15
GM-30	Smith	William		IV.15
GM-38	Staub	Stephen	Staub Forestry & Environmental Consulting	IV.15
EC-48	Taylor	Don	Mendocino Woodlands Camp Association	IV.14
GM-37	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.15
GM-3	Tipurt	Piper		IV.15
GM-12	Trotter	Marvin		IV.15
EC-41	Valencia	Alis		IV.14
GM-24A/B	Van Alstyne	Richard		IV.15
EC-44	Waters	Alea		IV.14
EC-154	Willis	Donald		IV.14
GM-9	Wilson	Brian		IV.15
EC-114	Wong	Weldon		IV.14

Index to Comments by Comment Number

There will not be comment letters for every number within the series because some letters were dropped if they were duplicates or if they were found to be form letters. Form letters are found in section V.

Comments on the 2005 Draft Environmental Impact Report

Agency Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
A-1	Klamt	Robert	North Coast Regional Water Quality Control Board	III
A-2	Furman	Kristi	Mendocino County Board of Supervisors	III
A-2a	Wagenet	Hal	Mendocino County Board of Supervisors	III
A-3	Nakamura	Gary	Demonstration State Forest Advisory Group	III
A-4	Marshall	Kirk	California Department of Parks and Recreation	III
A-5	Curtis	Banky E.	California Department of Fish and Game	III
A-6	Chesbro	Wesley	California State Senate (with Senators Perata, Bowen, Cedillo, and Simitian)	III
A-7	Turner	Dave	Fort Bragg City Council	III
A-7a	Turner	Dave	Fort Bragg City Council	III
A-8	O'Hara	Kevin	University of California, Berkeley	III
LA-1	Butler	Dick	National Marine Fisheries Service	III

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-1	Smart	Tanya		IV.1
E-2	Watt	Mark		IV.1
E-3	Lane	Eleanor		IV.1
E-4	Smythe	Tom	Registered Professional Forester	IV.1
E-5	Fry	Debbie		IV.1
E-6	Michener	Ron and Carol		IV.1
E-7	Fisher	Daniel J.	Fruit Growers Supply Co	IV.1
E-8	Kelley	Bob		IV.1
E-9	Sutfin	Thomas		IV.1
E-10	Nuzum	Robert C.	Applied Natural and Cultural Resource Management	IV.1
E-11	Altmann	Mary		IV.1
E-12	LeBus	Annie		IV.1
E-13	Martins	Chuck		IV.1
E-14	Kelly	Scot		IV.1
E-17	MacDougall	Bob (Robert) T., Jr.		IV.1
E-18	Taylor	Bill		IV.1
E-19	Morse	Andrew G.		IV.1
E-20	Thompson	George A.		IV.1

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-21	Stout	Nathan		IV.1
E-22	Hale	Candace		IV.1
E-23	Wortley	Richard C.	RANK's Forest LLC	IV.1
E-24	Borras	Thembi	Registered Professional Forester	IV.1
E-25	Strittholt	James R.	Conservation Biology Institute	IV.1
E-26	Higgins	Patrick	Consulting Fisheries Biologist	IV.1
E-27	Pickett	Karen	Bay Area Coalition for Headwaters	IV.2
E-28	Harrison	Pete	Californians for Alternatives to Toxics	IV.2
E-36	Stanton	Pete		IV.2
E-37	Connelly	Daniel		IV.2
E-38	Rypp	Norbert		IV.2
E-39	Vue	Tiffany		IV.2
E-40	Reid	W. Bruce		IV.2
E-41	Childs	Richard		IV.3
E-43	Mandrussow	Olga		IV.3
E-44	Hartzell	Christine		IV.3
E-45	Pomeroy	Carolyn		IV.3
E-46	Anderson	Stacey		IV.3
E-47	Becker	Carol		IV.3
E-48	Seavey	Beverly		IV.3
E-49	Patotzka	Lori		IV.3
E-51	Michaelson	Peter		IV.3
E-52	Brun	Katie and Aaron		IV.3
E-53	Jacobs	Laurie		IV.3
E-54	Smith	Charles		IV.3
E-55	Lozaw	Kevin	Lozaw Photography	IV.3
E-56	Schroeder	Nancy		IV.3
E-57	Parker	Peter T.		IV.3
E-58	Smith	Nancy A.		IV.3
E-59	Bebensee	Dennis	Registered Professional Forester	IV.3
E-60	Smith	Erica Meta		IV.3
E-61	Lai	Jade		IV.3
E-62	Studebaker	David		IV.3
E-63	Gobby	Alyssa		IV.3
E-64	Matzek	Mary		IV.3
E-66	Antin	Eleanor		IV.3
E-67	Krueger	Jon		IV.3
E-68	Hellwig	Christian		IV.3
E-69	Wertz	Eric		IV.3
E-70	Gayner	Jay		IV.3
E-71	Wiezner	Lawrence		IV.3
E-72	Wilkinson	Matthew		IV.3
E-73	Boothe	Glendon		IV.3
E-74	Dwyer	Evelyn		IV.3
E-75	Wixson	Gene		IV.3

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
E-76	Matzek	Virgina		IV.3
E-78	Hanna	Tamara		IV.3
E-79	Parsons	Nancy		IV.3
E-80	O'Neil	William		IV.3
E-81	Rothman	Meg		IV.3
E-82	Hazelleaf	Tom		IV.3
E-83	Vasic	Jonny		IV.3
E-84	Birecki	Richard		IV.3
E-85	Marcuse	Harold		IV.3
E-86	Monteiro	Sergio		IV.3
E-87	Marvier	Mike	Registered Professional Forester	IV.3
E-88	Rollins	Becca		IV.3
E-89	Vernon	Stephen	Vernon Law Office	IV.3
E-90	Kravitz	Scott		IV.3
E-91	Casey	Kevin	Registered Professional Forester	IV.3
E-92	Wagenet	Hal		IV.3
E-93	Young	Louise		IV.3
E-94	Pritchard	Mark		IV.3
E-95	Lam	Perrin		IV.3
E-96	Tischler	Dan		IV.3
E-98	Ellingson	Robert		IV.3
E-100	Sacks	Al		IV.3
E-101	Enders	Todd		IV.3
E-103	Macmillan	Gail		IV.3
E-104	Farr	Gina		IV.3
E-105	Wilkinson	Lila		IV.3
E-106	Boothe	Glendon		IV.3
E-108	Grader	Zeke	Salmon and Steelhead Recovery Coalition	IV.3
E-109	Emmert	Patrick		IV.3
E-110	Brittner	Gary	Registered Professional Forester	IV.3
E-112	Weldon	Daniel M.	Forest Landowners of California	IV.3
E-113	Calvert	Karen A.		IV.3
E-114	Scholars	Teresa		IV.4
E-115	Noble	Elisa	California Farm Bureau Federation	IV.4
E-116	Aigner	Mary		IV.4
E-117	Horner	Steve	Barnum Timber Company	IV.4
E-119A	Perkins	Linda	Albion River Watershed Protection Assoc./Friends of Salmon Creek	IV.4
E-119B	Perkins	Linda	Albion River Watershed Protection Assoc./Friends of Salmon Creek	
E-120	Jacobson	Dan	Environment California	IV.4
E-121	Dias	Michele	California Forestry Association	IV.4
E-123	Epp	Walter		IV.4
E-124	Spitz	Jon	Willits Environmental Center	IV.4
P-1	Andersen	John	Registered Professional Forester	IV.5

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
P-2	MacDougall	Bob		IV.5
P-3	Ehlers	Ed	Associated California Loggers	IV.5
P-4	Mahoney	Darcie	Registered Professional Forester	IV.5
P-5	MacDougall	Bob		IV.5
P-6	Schallon	Eric	California Licensed Foresters Association	IV.5
P-7	Nelson	G. Tyler	Mendocino County Farm Bureau	IV.5
P-8	Smith	William		IV.5
P-9	MacDougall	Bob (Robert) T., Jr.	Registered Professional Forester	IV.5
P-12	Kisliuk	Tom	Registered Professional Forester	IV.5
P-13	Beltrami	Al		IV.5
P-14	Ingram	Robert G.		IV.5
P-15	Wade	Warren F.	Mendocino Coast Audubon Society	IV.5
P-16	Freeman	Patty	Freeman Realty	IV.5
P-17	Overfield	Allen C.	Registered Professional Forester	IV.5
P-18	Bradley	Stacey	Shoreline Riders, Inc	IV.5
P-19	Tenzel	Marc	Mendocino Coast Cyclists	IV.5
P-22	Thrush	Michael A.	Registered Professional Forester	IV.5
P-23	MacDougall	Bob (Robert) T., Jr.	Registered Professional Forester	IV.5
P-24	Hollister	George A.		IV.5
P-27	Melo	Jere		IV.5
P-29	Graw	Debra De	Chamber of Commerce-Mendocino Coast	IV.5
P-31	Bates	Michael		IV.5
P-32	Goodner	Michael		IV.5
P-35	Smith	Sherry		IV.5
P-36	Tilley	Forest B.		IV.5
P-42	Levine	Alan	Coast Action Group	IV.5
P-43	Bozeman	Jackie	J&B Tree Farm	IV.5
P-45	Goldner	Robin	Robin Goldner, MSW	IV.5
P-46	Loy	Gareth		IV.5
P-49	Harwood	Art	Harwood Products	IV.5
P-50	Bradley	Stacey	Pacific Auto Body & Rental Inc	IV.5
P-52	Brandon	Victoria	Sierra Club Lake Group	IV.5
P-53	Kruse	Autumn R.		IV.5
P-54	Jones	Ken		IV.5
P-59	Ederer	Paul	Registered Professional Forester	IV.5
P-60	Rogers	Robert L.	Rogers Forest Management	IV.5
P-66	Pustejovsky	Mark	Registered Professional Forester	IV.5
P-70	Smith	Walter		IV.5
P-73	Delfino	Kim	Defenders of Wildlife	IV.5
P-74	Anderson	James	Registered Professional Forester	IV.5
P-79	Dickerson	John	Employers Council of Mendocino County	IV.6
P-84	Hooper	James D.		IV.6
P-85	Crean, Jr	Dennis M.		IV.6

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
P-90	Pardini	Joseph R.	Acme Automotive Company	IV.6
P-94	Stout	Nathan Daniel		IV.6
P-97	Brennen	Sophia		IV.6
P-100	Horvat	Robert		IV.6
P-103	Cannon	Steve Q.	Foothill Resource Management	IV.6
P-106	Dunn	Alan and Ruth		IV.6
P-112	Taylor	Don	Mendocino Woodlands Camp Association	IV.6
P-117	Sharkey	Virginia		IV.6
P-119	Schulte	Dawne		IV.6
P-120	Champagne	Marie		IV.6
P-122	Miksak	Anthony		IV.6
P-124	Olsen	Jack	San Mateo County Farm Bureau	IV.6
P-125	Champagne	Rhonda		IV.6
P-142	Dickerson	John G.		IV.6
P-144	Bradley	Stacey	Graves Apartments	IV.6
P-147	Wooster	Thoedore W.	Consulting Biologist	IV.6
P-149	Gundling	Henry		IV.6
P-158	Knott	Heide		IV.7
P-161	Lauby	Adrienne		IV.7
P-164	Van Alstyne	Dick		IV.7
P-166	Taylor	Elinor		IV.7
P-167	Burton	R. Edward	EBC Company	IV.7
P-168	Tumolo	Paul		IV.7
P-169	Berg	Kervin		IV.7
P-170	Dullinger	Heinz		IV.7
P-171	Carroll	Paul	Dharma Cloud Charitable Trust Foundation and Campaign to Restore Jackson Redwood State Forest	IV.7
P-172	Waldman	Sam		IV.7
P-173	Devall	Gorman L.		IV.7
P-174	Ulloth	John		IV.7
P-175	Gienger	Richard	Environmental Information Center	IV.7
P-176	Holm	Lindsey	Environmental Protection Information Center	IV.7
P-177	Grassetti	Richard	Grassetti Environmental Consulting/Dharma Cloud Foundation	IV.7
P-178	Nelson	Diane		IV.7
P-179	Kessler	John	Northern California Society of American Foresters	IV.7
P-180	Lawrence	Patricia		IV.7
P-181	Force	T.S.		IV.7
P-182	Rilla	Mike		IV.7
P-183	Campbell	Bruce		IV.8
P-184	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.9

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
P-185	Taylor	Vince	Dharma Cloud Foundation	IV.9
P-186	Thorstrom	Wayne		IV.10
P-187	Bailey	Kathy	California Sierra Club	IV.10
P-188	Bailey	Kathy	California Sierra Club	IV.10
P-188B	Bailey	Kathy	California Sierra Club	IV.11
P-189	Baldo	Chris	Willets Redwood Company	IV.11
P-190	Patton	Gary	Planning and Conservation League	IV.11
P-192	Barrett	Brian		IV.11
P-193	Anderson	Mike	Registered Professional Forester/Licensed Timber Operator	IV.11
P-194	Nelson	S. Kim		IV.11
P-195	Nelson	S. Kim		IV.11
P-196	Anderson	Myles		IV.11
P-197	Hughes	Paul	Forests Forever	IV.11
P-198	Santana	Mary		IV.12
P-199	Hubbart	Lori	Dorothy King Chapter, California Native Plant Society	IV.12
P-200	Biddison	Bonnie		IV.12
P-210	Helenchild	Liz		IV.12
P-211	Anderton	Katherine	Save-the-Redwoods League	IV.12
P-212	Blencowe	Craig	Registered Professional Foresters (7)	IV.12
P-213	Ribar	Peter F.	Registered Professional Forester	IV.12
P-214	Baye	Peter	Dharma Cloud Foundation	IV.12
P-220	Bailey	Kathy	California Sierra Club	IV.12
P-221	Carroll	Paul	Dharma Cloud Charitable Trust Foundation and Campaign to Restore Jackson Redwood State Forest	IV.12
P-222	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.12
P-223	Burton	Bruce	Mendocino Working Group	IV.12
P-224	Burton	Bruce	Willits Redwood Company	IV.12
P-225	King	James F.	Willits Redwood Company	IV.12
P-226	Anderson	Mike	Mendocino Working Group	IV.12
P-228	Anderson	Mike	Mendocino Working Group	IV.12
P-229	Smith	James D.		IV.12
C2D-27	Wilson	Nicholas		IV.13
C2D-30	Clark	Dolores		IV.13
C2D-33	Mary	Redwood		IV.13
C2D-37	Graham	Allan		IV.13
C2-44	Dame	Richard		IV.13
C2-46	Karlstad	Ken		IV.13
C2-60	Robinson	Monroe		IV.13
C2-75	Taube	Skip		IV.13
C2-83	Hoffman	Jeff		IV.13
C2-115	Collins	Kevin		IV.13
C2-129	Bauriedel	William		IV.13

Public Comments on 2005 Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation (if any)**	**FEIR Section**
C2-148	Schumacher	Peter		IV.13
C2-149	Davis	Andrea		IV.13
C2-173	Davis	Gioia		IV.13
C5-1	Grace	Marien		IV.13
7-1	Pittman	Lamar		IV.13
7-18	Pappalardo	Sue		IV.13
7-23	Bailey	Christine		IV.13
7-24	Smith	Barbara		IV.13
7-35	Stevens	Kathleen		IV.13
7-54	Fiedler	Susan		IV.13
7-81	Oberlin	Kent		IV.13
7-114	Dudrick	Roseann		IV.13
7-122	Morey	Sandi		IV.13
7-186	Pedigo	Kelley		IV.13
7-209	Raab	Ted		IV.13
7-251	Boutin	Dolores		IV.13

Comments on the 2007 Recirculated Draft Environmental Impact Report

Agency Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Letter Number)				
Letter ID	**Last Name**	**First Name**	**Agency Name**	**FEIR Section**
A-9	Smith	Kendall	Mendocino County Board of Supervisors	III
A-10	Sanchez	Katy	Native American Heritage Commission	III
A-11	Stewart	William	University of California, Berkeley	III
GM-29	O'Hara	Kevin	University of California, Berkeley	III
GM-31	Hammerstrom	Doug	Fort Bragg City Council	III
GM-34	Biging	Greg	University of California, Berkeley	III
GM-35	NcNally	Marcia	University of California, Berkeley	III

Public Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation**	FEIR Section
EC-1	Ellingson	Robert		IV.14
EC-2	Dias	Michele	California Forestry Association	IV.14
EC-4	Goodner	Michael		IV.14
EC-35	Artley	Dick		IV.14
EC-37	Herbert	Betsy		IV.14
EC-38	Musgrave	Jeff		IV.14
EC-39	Connelly	Daniel		IV.14
EC-41	Valencia	Alis		IV.14
EC-42	Silvers	Rodger		IV.14

Public Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation**	FEIR Section
EC-43	Rusert	Brent		IV.14
EC-44	Waters	Alea		IV.14
EC-45	Russell	Lang		IV.14
EC-48	Taylor	Don	Mendocino Woodlands Camp Association	IV.14
EC-49	Bailey	Kathy	California Sierra Club	IV.14
EC-70	Bannon	Robert Oakes		IV.14
EC-89	Coppock	Robert		IV.14
EC-94	Smith	James		IV.14
EC-97	Duff	Ray		IV.14
EC-100	Cobb	Dean		IV.14
EC-101	Campbell	Bruce		IV.14
EC-110	Hertzberg	Jean		IV.14
EC-114	Wong	Weldon		IV.14
EC-120	Schoettle	Anna		IV.14
EC-122	Shook	Deborah		IV.14
EC-123	Cadile	Casey		IV.14
EC-133	Christianson	Steve		IV.14
EC-136	Davis	Gioia		IV.14
EC-140	Cook	Alan		IV.14
EC-144	Morey	Sandra		IV.14
EC-147	Macdonald	BC		IV.14
EC-154	Willis	Donald		IV.14
EC-159	Rawson	Bob		IV.14
EC-160	Nierlich	Donald		IV.14
EC-163	Bartlet	Joselyn		IV.14
EC-184	Cooke	D		IV.14
GM-2	Anonymous			IV.15
GM-3	Tipurt	Piper		IV.15
GM-4	Handley	Margie	Employers Council of Mendocino County	IV.15
GM-5	Pjerrou	Mary	Greenwood Earth Alliance	IV.15
GM-7	Bowman-Schmidt	Dorothea		IV.15
GM-9	Wilson	Brian		IV.15
GM-12	Trotter	Marvin		IV.15
GM-13	Brandon	Victoria	Sierra Club Lake Group	IV.15
GM-16	Brewer	Marilou		IV.15
GM-17	Hubbart	Lori	Dorothy King Chapter, California Native Plant Society	IV.15
GM-18	Johnson	Peter	Mendocino County Farm Bureau	IV.15
GM-20	Miklose	Stan	Mendocino Coast Cyclists	IV.15
GM-21	Komer	Marc		IV.15
GM-22	Schneider	David	Dr. David Schneider, Optometrist	IV.15
GM-23	Gioumousis	Ellie		IV.15
GM-24A/B	Van Alstyne	Richard		IV.15

Public Comments on 2007 Recirculated Draft Environmental Impact Report (Sorted by Letter ID)				
Letter ID	**Last Name**	**First Name**	**Affiliation**	FEIR Section
GM-25	Joyce	Chantz	California Licensed Foresters Association	IV.15
GM-27	Pandone	Marc	Napa Sierra Group	IV.15
GM-28	Smith	James	The Old Growth Organization	IV.15
GM-30	Smith	William		IV.15
GM-33	Carroll	Paul	Dharma Cloud Charitable Trust, Campaign to Restore Jackson Redwood State Forest	IV.15
GM-36	de Lasaux	Michael	Northern California Society of American Foresters	IV.15
GM-37	Taylor	Vince	Campaign to Restore Jackson State Redwood Forest	IV.15
GM-38	Staub	Stephen	Staub Forestry & Environmental Consulting	IV.15
GM-39	Campbell	Bruce		IV.16
GM-40	Burton	Bruce	Mendocino Working Group	IV.16

I. Introduction

Background

This is the Final Environmental Impact Report (FEIR) for the comprehensive update to the Jackson Demonstration State Forest (JDSF) Management Plan. Adoption of the Plan by the California Board of Forestry and Fire Protection (Board) is a project subject to the California Environmental Quality Act (CEQA)[1] as defined by statute and the CEQA Guidelines[2]. The Board, as lead agency, prepared a Draft Environmental Impact Report (DEIR) pursuant to CEQA for consideration and certification prior to the Board's approval of a final version of the Plan.

The DEIR was first circulated for public review and comment, commencing on December 16, 2005 and ending on March 1, 2006. Subsequent to the close of public review, and in response to the comments received, the Board proposed substantive changes to the direction for management at JDSF. Those management changes were reflected in a new CEQA alternative (Alternative G) selected on September 12, 2007, by the Board as the new "Proposed Project", replacing the original Proposed Project (Alternative C1) identified in the 2005 DEIR. In accordance with CCR §15088.5 the Board recirculated the Draft EIR (RDEIR) for additional public and agency review from June 1 through July 16, 2007.

On September 12, 2007, the Board directed the Department to prepare this FEIR, including responding to public and agency comments received during the two comment periods and hearings. In addition, the Department was directed to prepare a Final Forest Management Plan (FFMP) that reflected the changes in management and required mitigation found in Alternative G.

On October 10, 2007, following its review of the DEIR and RDEIR the Board made several changes to the DFMP. In summary these changes were with regard to the: (see Board motion at end of this chapter):

- Composition and responsibilities of the Jackson Advisory Committee;
- Responsibility for identifying stand structure on future research projects;
- Allowable annual harvest expected to be within a range of 20-25 MMBF per year, not to exceed 35 MMBF per year;
- Enjoined THPs and Casper Creek research projects are not subject to the interim restrictions.

These changes to the Plan do not require recirculation of the DEIR because:

- The changes are within the scope of the analysis found in the DEIR and RDEIR, or;
- The change could not result in a significant effect to the environment and is therefore covered by the "General Rule" [CCR 15061(b)(3)].

In accordance with CEQA the Board, prior to approving the FFMP, must:

- Certify the FEIR;
- Make written findings with regard to the significant effects identified in the EIR; and
- Prepare a statement of overriding considerations if there are significant effects which are not avoided or substantially lessened.
- Adopt a Mitigation Monitoring and Reporting Plan (MMRP). The MMRP provides the "framework" that ensures impacts are mitigated though application of the specified measures identified in the EIR.

[1] Public Resources Code §21000 et seq.
[2] Title 14, California Code of Regulations [CCR] §15000 et seq.

Following the approval of the Project (approval of the Final Forest Management Plan) the Board must file a Notice of Determination with the State Clearinghouse.

Organization of FEIR

A table in the front of the FEIR provides an index to comments by the name of the comment submitter and the comment number that was assigned to all written comments.

Section II provides eighteen General Responses. These responses respond to the most frequent comments received on the DEIR, RDEIR, and Management Plan. General Response 2 provides an overview of the ADFFMP.

Section III provides the responses to comments from federal, state, and local government agencies. Response letter were sent to all agencies at least 10 days prior to certification of the FEIR.

Section IV provides, in multiple pieces, the written comments received on the DEIR, RDEIR, and Management Plan during the CEQA comment periods. Written comments are organized according to whether they were received electronically or by physical delivery. Distinct individual comment letters are presented separately from modified form letters.

Section V presents the form letters and responses.

Section VI presents the oral testimony received at the four hearings the Board held during the CEQA comment periods for the DEIR and RDEIR.

Section VII presents corrections and additions to the DEIR and RDEIR. Many of these corrections were pointed out by reviewers. The Board appreciates their help in improving these documents.

A separate Mitigation Monitoring and Reporting Plan (MMRP) is to be adopted by the Board. The MMRP will provide a compilation of the mitigations to be applied under the Forest Management Plan and the requirements for monitoring and reporting on implementation and effectiveness. The MMRP will dovetail with Chapter 5 of the ADFMP, Monitoring and Adaptive Management.

Board Motion of October 10, 2007

1. **That the Jackson Advisory Committee be as follows:**

To be appointed by the Director, subject to approval of both membership and charter by the Board.

Membership – to be defined in the committee charter and to include persons with knowledge of forest resource issues; be drawn from a variety of interests, including local and beyond, environmental, timber management, and recreational; have expertise in relevant scientific disciplines, e.g., forestry, botany, ecology, fish biology. The charter will specify the number of members. Members do not "represent" particular interests – they are chosen for knowledge and are to represent the public interest.

Provides advice/recommendations to:

- *Board and Director/Department re issues relevant to review of Plan for possible changes in the initial three-year review period.*
- *Director/Department and Board re ongoing implementation issues*
- *Board and Director/Department on any policy matters.*

The Department will seek public and Board input regarding the committee charter, responsibilities, composition, and members.

Other Committees

Department's Demonstration State Forest Advisory Group
Already exists.
Addresses issues re demonstration forests, primarily on a statewide basis

Board Statewide Committee on Research
To be re-established
Appointed by Board

Board staff and the Department will assure consistency/coordination among three committees, each with a separate and different function.

2. **That the following language recommended by the Mendocino Working Group be reflected in the discussion of stand structure:**

"Decisions on stand structure for future unspecified research projects be developed by JDSF staff in cooperation with researchers, DSFAG, and, when functioning, the [Jackson Advisory Group]"

3. **That the language of Table II.4, page II-28, Alternative G, of the Re-circulated Draft EIR be changed to reflect that allowable annual harvest is expected to be within a range of 20-25 MMBF per year, and shall not exceed 35 MMBF per year.**

4. **The Board also acknowledges that:**

   A. **The enjoined THPs are not subject to interim restrictions.**
   B. **The CalFire/PSW Research Station's planned Casper Creek research projects are not subject to the interim restrictions.**

II. General Responses

General Response 1: General Support or Lack of Support for Proposed Management Plan

Summary of Comments
Comments address a difference of or shared opinion with the proposed management methods in the Jackson Demonstration State Draft Forest Management Plan (DFMP), Alternative G, or the Administrative Draft Final Forest Management Plan (ADFFMP) and do not directly apply to the impacts analysis conducted in the DEIR. A wide variety of comments are addressed by the response to this general comment. Comments ranged from a general approval or disapproval of timber harvest of any sort on JDSF to recommendations for increased recreation opportunities. All comments of general support or general lack of support for the proposed DFMP are referred to this general response.

Response to Comment
The purpose of an EIR is to analyze the potential environmental impacts of a project. The EIR comment process is designed to help identify potential environmental effects associated with the proposed project and the alternatives, that may have been overlooked or inadequately addressed in the EIR. Absent the presentation of substantial evidence in the record that a proposed management activity will cause a significant environmental effect or that the EIR fails to adequately address a specific environmental impact, a reasoned response to the comment is not required. Comments lacking supporting evidence, as well as those regarding content of the Management Plan or an alternative, rather than the environmental analysis, were noted or briefly addressed. However, several of the most commonly expressed concerns are addressed in the General Responses presented below.

While CEQA does not require that a response be made to every comment received, all public comments were considered.

General Response 2: The Purpose of the State Forest System and the Goal of the Forest Management Plan

Summary of Comments
It is clear from many of the comments that certain misconceptions exist as to the historical context of the State Forest and the goals of the Draft Forest Management Plan (DFMP), Alternative G, or the Administrative Draft Final Forest Management Plan (ADFFMP). Comments ranged from concern that Jackson Demonstration State Forest is a federally owned forest that might be sold, to a perception that the proposed updated management plan was a conversion from a protected forest preserve or State Park to an industrial forest managed purely for timber sales, without regard for other resource values. Some comments recognized the current status of the forest, but suggested that it be entirely converted to a State Park or preserve.

Response to Comments
The following summary of the management plan has been largely excerpted from the Executive Summary of the ADFFMP. It is provided here to clarify the historical context, guiding legislation and policy, and direction of the Forest Management Plan.

Executive Summary

The Forest, Its Purpose and Direction

Forests provide immense and diverse values to the citizens of California. They supply many outputs that we use and enjoy, including clean water, fish and wildlife, and forest products. They are also increasing in importance as a destination for recreational activity.

Public and private working landscapes are both key elements in strategies to protect and restore what are now rare components of the ecosystems and to support sustainable forest, grazing, and agricultural operations. The majority of public wildlands in the North Coast region of California are set aside as reserves and parks to preserve rare ecosystems and wild areas. Demonstration State Forests, by contrast, are public lands that by legislative mandate have a unique and distinctly different purpose from parks and wilderness areas. Demonstration State Forests are mandated to conduct research, demonstration, and education on sustainable forestry practices using active forest management, including periodic timber harvests. Management of the Demonstration State forests is required to address values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

While still the number three timber-producing state in the nation, California is also home to a very large population with strong interests in environmental protection. Given the often controversial role of logging and timber production in California, the Demonstration State Forests fill a unique niche to advance research, demonstration, and education on sustainable forestry practices. The State Forests fill an important role in helping maintain California's leading role as an innovator in solutions to difficult resource management challenges.

The California Department of Forestry and Fire Protection (Department or CAL FIRE) manages approximately 71,000 acres of Demonstration State Forests, on behalf of the public. Jackson Demonstration State Forest (JDSF), a 48,652-acre redwood/Douglas-fir forest located in Mendocino County between Fort Bragg and Willits, is the largest (Map Figure 1).

JDSF is a unique forest research site on the West Coast. It is able to accommodate multiple demonstration objectives including sustainable forestry, maintaining multiple long-term research installations, conducting large scale studies with a landscape level focus, as well as studies on smaller scales, providing large areas for threatened and endangered species protection, and maintaining a broad diversity of different forest successional stages in order to remain relevant as a research site. Research forests are often limited in the kind of experiments they can undertake by virtue of their modest size. New priorities in forestry research, exemplified by climate change and carbon sequestration, increasingly focus on a landscape level, where the breadth and complexity of ecosystem functions can be more fully understood. Accommodating large scale studies, which sometimes require several treatments and control units, can require thousands of acres. JDSF is the only public forest property in the State with the size and legislative mandate to meet all of these objectives. Large-scale or landscape-level studies do not necessarily treat large areas, but are always concerned with studying how treating a given area will affect the larger landscape (such as a watershed) or ecosystem processes within which the treatment is embedded..

JDSF's management direction derives directly from statutes, regulations, and policies set by the State Board of Forestry and Fire Protection (see Appendix I for details). Board policy describes Jackson and three of the other Demonstration State Forests as "commercial timberland areas managed by professional foresters who conduct programs in timber management, recreation, demonstration, and investigation in conformance with detailed management plans," (Board Policy 0351.1). More specifically, Board policy states that the primary purpose of JDSF is to conduct innovative demonstrations, experiments, and education in forest management; that timber production will be the primary land use on JDSF, and that recreation is recognized as a secondary but compatible land use on JDSF (Board Policy 0351.2). Further noteworthy policy directions that guide JDSF management include:

- Research and demonstration projects shall include silviculture, mensuration, logging methods, economics, hydrology, protection, and recreation. Research and demonstration projects shall be directed to the needs of the general public, small forest landowners, timber operators, and the timber industry.

- Conduct periodic field tours to exhibit State forest activities and accomplishments to forest industry, small forest landowners, relevant public agencies and the general public,, and disseminate information to these audiences.

- Consult with and solicit the cooperation of the State universities and colleges, the USDA Forest Service, and other public and private agencies in conducting studies requiring special knowledge.

- Cooperate with the Department of Parks and Recreation in establishing on JDSF, adjacent to the Mendocino Woodlands Outdoor Center, forest management demonstration areas that are compatible with recreation for educational purposes.

In 1947, JDSF was established predicated upon declining volumes of old-growth timber and the fact that a large acreage of potentially productive timberland in California was not producing a satisfactory growth of young timber. At that time, there was no requirement to restock the land after removing the timber. Early management within JDSF was conducted with the intent of demonstrating forest management methods that would achieve satisfactory regeneration, demonstrate a high level of productivity, and be financially viable for landowners with differing levels of skilled labor and investment capital. JDSF was purchased from the Caspar Lumber Company in 1947, after nearly 90 years of management for timber production. At the time of purchase by the State, the Forest contained both young and old trees and stands. The Forest has continued to build inventory over the past decades, and forest growth continues to exceed planned harvest by a considerable margin.

In the decades that have followed the establishment of JDSF, many changes have taken place that have increased the complexity of forest management and have threatened to substantially reduce the land base available for active forest management in California. In addition, concerns over the habitat needs of fish and wildlife have increased dramatically as development pressures and habitat impacts have caused the populations of many species to decline substantially. Pressures to devote forest land to other, potentially more financially attractive options, such as subdivision and development, continue to build. The CAL FIRE Fire and Resource Assessment Program estimates that 20,000 acres of forest per year in California make a transition from un-fragmented forests to areas with enough interspersed homes to alter wildlife habitats and natural hydrologic regimes, and to introduce new fire risks. Recent bonds passed by California voters as well as endangered habitat driven mitigation fees may begin to offer new opportunities for long term forestland owners to financially benefit from the ecosystem services that their lands can provide in addition to a sustainable supply of timber.

California now imports over 70 percent of its forest products from other states and regions of the world, where environmental protection levels on forest lands are often below those of the State. Demonstrating economically and environmentally sustainable forestry in California fosters the social benefits of employment and business opportunities associated with timber management in California. Maintaining relatively high wage natural resource and manufacturing jobs in areas far removed from the major metropolitan areas can make important contributions to local economic prosperity.

Given these current circumstances, there is a need to demonstrate forest management approaches that support economically and environmentally viable and sustainable forests and sustain the important benefits of maintaining forest land in terms of watersheds, habitat values, and forest

products. Thus, JDSF has potential to serve an important role in research and demonstration of the practice and viability of sustainable forest management for California's timberland owners.

The Mendocino County economy has been, and will continue to be, heavily influenced by the logging and forest products industries. As the level of local logging has steadily decreased in Mendocino County, the relative economic contribution potential of JDSF has increased, in terms of both direct and indirect employment, tax revenues, and other related economic effects. The 2005 DEIR estimates that each 10 million board foot increment in harvest from JDSF would generate 160 jobs, $4.3 million in local wages, and $184,000 in local tax revenue.

Significant gaps remain in our knowledge of forest ecosystem functions as well as the interactions between management activities and ecosystem functions. JDSF can provide important opportunities for pure and applied research in these and other areas. Important applied research areas include testing potential regulatory measures for protecting forest ecosystem functions, or testing potential restoration approaches. These projects will be conducted on a multi-agency basis (e.g., Department of Fish and Game, North Coast Regional Water Quality Control Board, National Marine Fisheries Service, USDA Forest Service Pacific-Southwest Experiment Station). Multi-agency grant funding will be sought for these projects.

There is great potential to create a living forest laboratory, available for research and demonstration, by developing and maintaining a broad range of conditions within the Forest. Under this management plan, designated parts of the State Forest will be managed to produce a high level of forest growth and timber production while maintaining and restoring natural ecological processes, providing opportunities to conduct research and demonstration on the relationship of these goals. The scientific community recognizes that landscape-level patterns are extremely important. Thus, it is critical for the Forest to represent a broad spectrum of conditions, including older forest structure, healthy connected stream systems and associated riparian zones, and a range of habitat and structure conditions in order to meet research and demonstration needs and maintain ecosystem health.

As one means of demonstrating resource sustainability practices, JDSF will seek certification of its forest management under the programs of the Forest Stewardship Council and the Sustainable Forestry Initiative.

The Management Plan and its Implementation

This Management Plan accomplishes the goals of synthesizing the knowledge of current resource conditions on JDSF[1], articulating the desired future structure of the Forest, defining a path to that future condition, and establishing abundant opportunities for future research and demonstration activities. It will guide forest management in a number of key areas, including research and demonstration, sustainable forestry operations, monitoring and research, road management, recreational opportunities, and protection and restoration of wildlife habitat. Chapter 3 provides the details on desired future conditions and planned management for JDSF. Chapter 4 focuses specifically on the research and demonstration program. Chapter 5 addresses monitoring and adaptive management.

Recognizing ongoing concerns regarding timber management on JDSF, the Management Plan provides for an initial implementation period during which provides the Board and the Department with an opportunity to obtain detailed input on the plan, and allows for consensus recommendations on potentially controversial management issues. Thus, during the initial implementation period, standards will be in place to limit harvest intensity by setting targets for basal area retention and average stem size. Post-harvest conifer stocking (basal area) levels will be approximately 70 percent

[1] See also the Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan (California State Board of Forestry and Fire Protection, December 2005) and the Recirculated Draft Environmental Impact Report for Alternative G (California State Board of Forestry and Fire Protection, May 2005).

or more of pre-harvest levels, and average tree size as determined by quadratic mean stem diameter will be approximately equal to or greater than pre-harvest levels. This equates to a relatively light stand thinning or selection harvest. Also, efforts will be made to limit the extent of harvest in areas that have had little or no harvest entry since 1925 (or that currently have at least 10 trees/acre greater than 30" in diameter (see Map Figure 8), particularly where those areas have not already had work done to prepare timber harvesting plans.

During the initial implementation period, JDSF advisory bodies will review and potentially recommend changes to certain elements of this Plan, including the forest structure conditions, usage of silvicultural systems, and spatial allocations of the Forest to various forest structure goals.

Chapters 3 and 4 provide details on how harvesting operations will proceed during this initial implementation period and on advisory body processes. The initial implementation period will sunset within three years, during which time the advisory process is expected to complete a review of the described Plan elements and the Department completes and the Board approves any Plan revisions made in response to the advisory process recommendations. Advisory processes will involve the re-establishment of the Board of Forestry and Fire Protection's Committee on Forest Research, the establishment of a new JDSF-specific advisory body, and the Department's existing Demonstration State Forest Advisory Group.

Research and Demonstration

The Department intends to manage JDSF, as well as the rest of the Demonstration State Forest system, as a demonstration of sustainable forest management, as directed by statute and Board policy, which includes production of forest products and protection of values related to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic values. This approach will create and maintain a diverse forest laboratory available for research and demonstration on a vast array of subjects. Informational needs associated with forest management are very large and changing. Clients for research results and demonstration efforts are expanding beyond the traditional clientele group of small and industrial forestland owners to include nonprofit and governmental entities interested in restoration of a wide range of forest resources. Research on JDSF should include applied research on a variety of topics (see discussion below), as well as basic research in such areas ecological and biological forest processes.

A number of special management needs exist for a research and demonstration forest such as JDSF. These needs, which are particularly important for implementing a long-term research plan, include:

- Increasing quantification of the forest (e.g., a wide range of biological information).
- Paying close attention to experimental design and the detailed documentation and quantification of changes due to treatments.
- Development and strengthening of cooperative relationships with university, governmental, and nongovernmental research institutions.
- Pursuing opportunities to secure research funding from a wide range of grant and other sources.
- Creation of a varied landscape, consistent with approved management plans, to support a broad range of research and demonstration.
- Utilization of the Internet to make large quantities of data and research results available to the research community, forest landowners, and other interested parties.

- Continued and increasing monitoring of various aspects of the forest environment to enable assessment of trends and conditions. Efforts will be made to move away from qualitative assessments to scientifically defensible quantitative tests of individual practice effectiveness. This adaptive management feedback loop will provide a mechanism to alter existing and proposed management practices where necessary.

Increasing resource allocation to each of these activities over time will be key to the ultimate effectiveness of the state forest system. CAL FIRE's intent is to accomplish this through internal funding, grants, and cooperative arrangements with various partners.

Forest staff has identified a number of research and demonstration priorities for the planning period that will be considered together with priorities identified by other sources, including advisory bodies. These priorities include:

- Quantitative assessment of the effectiveness of the delineated upland and riparian corridors in providing habitat and expanding the forest occupancy for identified species of concern.
- Carbon sequestration as a management option, including the economic and social benefits in mitigating the greenhouse effect.
- Research on forest ecology, forest biological processes, and measurement of ecological health.
- Social science research on the structures, functions, processes, success, and failures of advisory entities associated with the management of JDSF.
- Develop partnerships and fund research giving priority to information gaps such as below-ground carbon cycles, fog drip utilization by tree and understory plants, methods to hasten development of older forest structure, and climatic tolerances of species and genotypes.
- Research on the short-term and long-term costs and effectiveness of various forest resource protection measures.
- Fisheries studies that include channel habitat, population dynamics, and off site conditions.
- Young stand management that includes stocking level and precommercial thinning studies.
- Riparian zone wildlife habitat relationship studies that include topics such as stream buffer enhancement and maintenance, and relationships between forest cover, wildlife connectivity corridors, and wildlife population trends.
- Watershed management that includes sediment yield, stream discharge, sediment sources, road abandonment, watershed rehabilitation, and harvest reentry studies.
- Upland zone wildlife and plant relationships that include habitat relationships, forest fragmentation, edge effects, connectivity, and forest corridors.
- Investigation of optimal amount and spatial configurations of structural elements retained during timber harvesting activities.
- Approaches to speeding up development of older forest or late seral forest characteristics in second-growth stands.
- Public education on forest resources, technologies, and issues.

- Forest growth model development that includes gathering data and improving existing models (CRYPTOS).
- Forest data systems development for creating, improving and maintaining a data bank on existing and new data that include both database and GIS data layers.

With potentially conflicting demands for research and demonstration existing, an ongoing process for identification of needs, prioritization, and allocation of funding is necessary. For advice on these matters, the Department will look to the Board of Forestry and Fire Protection's Committee on Forest Research, the Demonstration State Forest Advisory Group, and the new JDSF advisory body. See further discussion of advisory structures and processes, below.

Key Planned Management Areas

Desired Future Conditions

The JDSF Management Plan establishes Desired Future Conditions or targets for management. The central goal is not a particular level of timber harvest or a preferred method of harvesting but a set of forest structures that represent the breadth of forest conditions appropriate to direction from statue, Board policy, and Management Plan goals and direction.

Given the current low level of older forest in the redwood region, a significant portion of the structural goals are oriented towards accelerating the development of older forest structures. The plan specifies healthy, functional ecosystems, emulation of natural processes, and broad diversity of forest structures and habitats, while recognizing that humans are an integral part of the ecosystem. Utilizing a diverse set of silvicultural systems (including reserves with little or no management) is just one of the management tools that may be used to help achieve these Desired Future Conditions. The Plan emphasizes that restoration and maintenance of functioning systems is of high priority. A range of watershed management measures is required to reduce negative inputs to streams (such as fine sediment) and improve positive inputs (such as large woody debris). The Plan includes an aggressive road management plan and includes provisions to develop substantial areas of older forest structure and to recruit large woody debris, snags, and other characteristics of healthy, natural forest ecosystems.

This Management Plan presents a workable approach to create and maintain multiple seral stages, along with important structural habitat elements. It preserves all existing old-growth groves, augmenting most of them to provide large, contiguous areas of older forest habitat. It provides for recruitment of late seral habitat in the Mendocino Woodlands Special Treatment Area, upper Russian Gulch, and lower Big River, as well as along all Class I and II streams. It also provides for a broad corridor of forest with the structural characteristics of older forest that extends from the west to the east and the north to the south. The Plan protects individual large old-growth trees and smaller residual old-growth trees with unique habitat attributes. And it sets goals for increased retention of structural habitat elements such as snags, downed logs, and large green trees and their associated biodiversity values.

Planned harvest actions are set to achieve desired forest structural conditions, not simply to cut current growth or generate revenues. Careful application of silvicultural systems over space and time will achieve these conditions while also ensuring high growth rates and accumulation of high volumes of timber. Under this Plan, standing timber volumes (or "inventory") will continue to build over time, while providing a significant contribution to the local economy through the harvest and processing of timber. The average annual harvest levels during the next decade are estimated to be about 20-25 million board feet per year, and shall not exceed 35 MMBF per year. This level of harvest represents

less than half the total annual growth increment, or about one percent of inventory on an annual basis.

The Plan sets realistic monitoring goals and establishes an adaptive management framework (see Chapter 5). “Adaptive management” refers to a strategy where management outcomes are monitored and compared to established management goals. Where outcomes are found to not meet the goals, management actions will be changed to better achieve the goals.

The analysis used to develop the Management Plan was driven by simultaneous consideration of the multiple goals and objectives identified for JDSF (see Chapter 3). Areas of special concern that contain unique resource values were first identified (Appendix II) and protective management regimes were tailored to the resource values of each (Chapter 3). Special concern areas contain unique resource values, including rare habitats (such as pygmy forest), habitat for species of concern (such as Marbled Murrelet), riparian areas, older forest structure zone, late seral development areas, recreational areas, areas near residences and State Parks, research areas, water supplies, and sensitive slopes (see Map Figure 5).

With the special concern areas identified, a plan was formulated to maintain or enhance ecological functions in all areas, to create diverse forest types, to produce high levels of sustainable timber growth, and to create the diverse range of forest structures, from early to late successional, required to realize a high quality research and demonstration program. The forest was divided into management areas roughly corresponding to watershed boundaries (see Map Figure 5). Each watershed area not covered by special concern areas was designated to receive a range of potential management regimes designed to accomplish the goals identified in the Management Plan. Some watershed areas will be selectively harvested, while others will incorporate a component (in limited cases, a significant component) of even-aged management dispersed in time and space to maintain a variety of forested habitats. Still other watershed areas may be left unmanaged for short or long periods to act as controls for experiments.

Forest Structure Goals

The tables below summarize planned forest structure conditions that the Plan sets out to develop on JDSF over time and the silvicultural systems that will be applied to attain these conditions.

The Management Plan provides long-term goals for the establishment of particular forest structure over time, as presented below in Table 1. The major purpose of the forest structure condition goals is to provide forest stand conditions and management histories in the Forest suitable to a wide range of research investigations and demonstration opportunities, as well as a broad range of valuable habitats. One-third of the forest is designated for older or late seral forest conditions. The illustrations below provide an indicator of what the different structure conditions will look like.

Silvicultural Methods and Restrictions

Table 2 presents the allocation of silvicultural methods to be implemented. These allocations are indicated spatially in Map Figure 5. The silvicultural methods identified in Table 2 will be used, in part, to attain the long-term forest structure goals identified in Table 1. Special restrictions are imposed on the use of even-aged management and clearcutting in particular, as discussed in the next section.

Further restrictions on the rate of cut and area devoted to forms of even-aged management

Even-aged management will be used as necessary to achieve the forest structure conditions needed over space and time to accommodate an adequate range of research investigations (see Table 1). Within this context, even-age management also may be used to address forest health and problematic regeneration conditions, as well as immediate research and demonstration purposes. Of the desired conditions shown in Table 1, mature and large trees (5-15 percent of Forest acres) and

regeneration and pole-size younger trees (10-20 percent of Forest acres) typically arise from even aged management.

Table 1. Desired Future Forest Structure Conditions.

Forest Structure Condition	Acres	Percent of Forest Area
Late seral or old-growth	7,300-12,200	15-25
Older forest structure	4,900-9,800	10-20
Mature and large trees	2,400-7,300	5-15
Mixed age and size	14,600-19,500	30-40
Regeneration and pole-size younger trees	4,900-9,800	10-20
No specific structure assigned	0-4,900	0-10

Table 2. Planned Distribution of Silvicultural Methods.

Silvicultural Method	Acres	Percent of Forest Area
No harvest (old-growth groves, pygmy forest, cypress groups, Conservation Camps)	1,350	3
Late seral development and older forest structure prescriptions	15,801	33
Uneven-aged; single tree or cluster selection	8,933	18
Uneven-aged; group selection or single tree/cluster selection	7,325	15
Uneven-aged or even-aged; single tree/cluster selection, group selection, variable retention, two-aged or one-aged	12,788	26
Unclassified [research areas (variable silvicultural treatments) and power line right-of-way]	2,455	5
Total	**48,652**	**100**

Strict limits are in place on the rate at which even-aged management may be utilized. The total area receiving any form of even-aged silvicultural treatments shall not exceed 2,700 acres per decade (or 5.5% of Forest area). Clearcutting is to be conducted only where strictly necessary for purposes of research, demonstration, addressing forest health, or addressing problematic conditions for regeneration. Clearcutting for these four purposes is limited to a cumulative maximum of 100 acres (or 0.2 % of Forest area) per decade. Up to an additional 400 acres (or 0.8 % of Forest area) may be clearcut per decade, but only for specific research purposes that cannot be reasonably met through any other method.

In addition, consistent with the research-driven focus of the Management Plan, the extent of the use of even-aged management, at both the project and Forest-wide level, (a) will be tied to the Forest condition it is intended to produce and (b) will be necessary and appropriate to accommodate research investigations either immediately or at a later time. The foregoing constraints do not apply to even-aged management where necessary to address forest health or problematic regeneration conditions. All proposed even-aged management, with the exception of research-related harvesting in

the South Fork of Caspar Creek, will be presented to the appropriate advisory committee(s) for review and recommendation prior to implementation.

In general, use of even-aged management is to be restricted to purposes of research, demonstration, addressing forest health, addressing problematic conditions for regeneration, or achieving the long-term forest structure condition goals identified in Table 1.

The broad range of forest conditions or habitat types discussed above is essential for providing the necessary range of conditions for research and demonstration activities. Within each management regime, there is wide latitude for variation in timing and type of silvicultural practices applied during on-the-ground implementation.

Use of Herbicides

Chapter 3 describes in detail the substantial measures that the Management Plan requires to restrict the use of herbicides. There are four management situations where herbicides have been used in the past at JDSF. The Management Plan explicitly limits two past management uses of herbicides (road maintenance related treatment of native vegetation and reforestation treatments that target native shrubs, (see Chapter 3) and significantly limits use for the remaining two management purposes (control of hardwoods to adjust conifer/hardwood stocking rations and control of invasive weed species as part of an Integrated Weed Management program). A total ban on herbicide use would compromise the research and demonstration value of the Forest and could result in adverse environmental consequences, such as expansion of the area, on and off of the Forest, occupied by invasive species. Herbicides and other vegetation control methods may be used in individual research and demonstrations that are scientifically designed.

In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks. JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions.

Road System Management

A very important element of the Plan to protect and enhance the resources of the Forest will be the effective management of the road system (Appendix IV), which can be a significant source of sediment for the Forest's watercourses. The road system serves as the main point of public contact with the forest and also serves as the conduit for management activities including the transportation of staff, researchers, equipment, and forest products. Important elements of the road management plan include a road inventory, priority setting for improvements, maintenance provisions, construction standards, and a decommissioning schedule for roads in poor locations that result in ecological damage.

Recreation

Recreational opportunities are recognized as an important and compatible use within the Forest. JDSF has achieved a significant expansion of recreational facilities over the past 15 years, and this Plan (Chapter 3) proposes to maintain a rustic outdoor recreational experience, with expansion of the trail system to create more hiking, mountain biking, and horse-riding opportunities, including a long main trail through the Older Forest Structure Zone. Additional and improved signage will help direct visitors to the campgrounds and day-use facilities while maintaining a rustic outdoor experience. Production and distribution of enhanced Forest road and trail maps and information brochures will increase public awareness of and access to recreational opportunities.

The Plan also proposes the completion of a user-needs study to guide the creation of a recreation plan for future recreational development that is compatible with research activities and the

demonstration of forest management. Also, the Plan calls for Forest staff to meet and consult with local recreational users and user groups on a periodic basis to obtain advice and collaboration on the management of recreational resources. It encourages the direct involvement of Forest users in trail design and maintenance.

Forest Learning Center

The research and demonstration program may be augmented by the expansion of the recently-built Forest Learning Center, a place where the public can come to learn more about forest ecology and management. The Learning Center is expected to attract greater numbers of scientists to do important research work on the Forest. In addition to on-site facilities, the Center also will use the internet to allow for remote access to an increasing range of digital and video information. Research priorities will be set through consultation with CAL FIRE staff, the Board of Forestry and Fire Protection, designated advisory entities, various colleges, universities, research institutions, forestry extension specialists; forest landowners; resource professionals; local parties, and the general public.

Monitoring and Adaptive Management

One of the most important elements of the Plan is the provision for a monitoring and adaptive management feedback system (Chapter 5). Knowledge gained will be continually re-evaluated, and management actions will be modified as necessary in response to the results that are observed. This approach will help to keep the Plan implementation in step with new science and management techniques. Elements to be monitored include streams, habitats, botanical resources, forest growth, selected fish and wildlife species, recreational uses, timber production, and roads.

Protection and Restoration of the Environment

As described in part above, the Management Plan contains numerous elements to protect and restore environmental conditions on JDSF. Key Plan elements to these ends include:

- Creation of a contiguous 6,803-acre corridor, extending across JDSF from west to east and north to south, composed of an Older Forest Structure Zone, Old-growth Reserves, and Late Seral Development Areas.
- Management of riparian zones on Class I and II streams for the development of late successional habitat and the recruitment and placement of large woody debris.
- Conduct of an Accelerated Road Management Plan to survey road conditions, identify steps needed to improve or decommission, set priorities for improvements and decommissioning, and then implement these changes in priority order.
- Marbled Murrelets and their habitat will be addressed in part through recruitment of late successional habitat along Class I and Class II streams, designation of Upper Russian Gulch (Murrelets have been detected in Lower Russian Gulch on State Park property) as a Late Seral Development Area, and a proposed multi-agency assessment process to further assess the best approach to recruiting and protecting potential Murrelet habitat on JDSF.
- Restriction of clearcutting to a cumulative maximum of 100 acres (or 0.2 % of Forest area) per decade and only for purposes of research, demonstration, addressing forest health or addressing problematic conditions for regeneration. Up to an additional 400 acres (or 0.8 % of Forest area) may be clearcut per decade, but only for specific research purposes that cannot be reasonably met through any other method.
- Total area receiving even-aged silvicultural treatments may not exceed 2,700 acres per decade (or 5.5% of Forest area). In general, use of even-aged management is

to be restricted to purposes of research, demonstration, addressing forest health, addressing problematic conditions for regeneration, or achieving long-term forest structure condition goals identified in Table 1.

- Designation of one-third of the forest for maintenance or development of a range of older forest conditions. All old-growth groves and aggregations will be protected.
- During the first decade of Plan implementation, expected annual harvest levels represent less than half the total annual growth increment, or about one percent of inventory on an annual basis.
- Specific measures for the protection of species of concern, including salmonids, Northern Spotted Owl, Marbled Murrelet, Osprey, Northern Goshawk, and Sonoma red tree vole.
- Measures for the recruitment and protection of snags and down wood to provide wildlife habitat benefits.
- Assessment of slope stability, restrictions on operations on steep and/or unstable slopes, and utilization of a Certified Engineering Geologist.
- Expanding staff to include professionals in disciplines such as wildlife biology, botany, fisheries biology, geology, and hydrology, pending necessary budget authority, which the Department has committed to seeking.
- Planned discussions with neighboring conservation-oriented landowners (The California Department of Parks and Recreation and the Conservation Fund) about how to manage the collectively-owned 70,000-acre landscape for protection and restoration of environmental conditions

Consistent with the California Environmental Quality Act (CEQA). The environmental conditions and functions of the Forest have been described and discussed in detail in the Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan (California State Board of Forestry and Fire Protection, December 2005), the Recirculated Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan Alternative G (California State Board of Forestry and Fire Protection, May 30, 2007), and the Final Environmental Impact Report for the Jackson Demonstration State Forest Management Plan (California State Board of Forestry and Fire Protection, January, 2008). These programmatic documents also evaluate the potential environmental impacts from implementation of this Plan. Impact mitigations and additional management measures identified in these CEQA documents have been directly included in this Plan or are incorporated by reference. The Final EIR concluded that implementation of this Plan would not result in significant adverse environmental impacts and identified a number of beneficial effects that would result from implementation.

The FEIR cited above is a programmatic EIR, thus, it is important to note that many of the activities conducted under this Plan will be subject to further CEQA evaluation at the project level. The project level CEQA documents typically will “tier” to the Final EIR.

Key Differences between the ADFFMP and the DFMP (Alternative C1)

The above summary was based on the Executive Summary of the ADFFMP, which is based on Alternative G. The following are the key changes that ADFFMP makes to the DFMP:

- Establishes specific forest structure goals with an emphasis on older forest conditions.
- Establishes a 6,803-acre older forest structure zone;

- Designates an additional 1,549 acres for the development of late seral forest conditions to provide potential habitat for the marbled murrelet;
- Reduces the area of the Forest available for evenaged management and increases the area limited to uneven-aged management;
- Establishes significant limits on the rate of cut and area treated with forms of evenaged management, including clearcuts in particular;
- Places further limits on the use of herbicides;
- Increases the road or trail area that will be buffered by a road and trail corridor;
- Establishes two silvicultural demonstration areas;
- Establishes three riparian restoration demonstration areas;
- Establishes harvest limitations during an initial implementation period;
- Reduces the expected annual average timber harvest level from 31 million board feet per year (MMBF) to 20-25;
- Provides direction for the establishment of a JDSF advisory body;
- Creates a large-tree overlay to guide future consideration of old forest development.

General Response 3: Insufficient Analysis of Potential Impacts

Summary of Comments
Comments generally claim that that the DEIR fails to meet its legal obligation to provide the information and/or analysis needed to make informed judgments on the environmental impacts of the DFMP relative to the alternatives.

Response to Comments
The DEIR and RDEIR provide a comprehensive environmental analysis completed by professionals in their fields. The DEIR and RDEIR were completed in good faith and represent full disclosure of environmental impacts using the best available scientific information. The documents cannot and are not required to use every known method of analysis or analyze every imaginable alternative (CEQA Guidelines §§ 15088, 15204).

The standards for determining the adequacy of an EIR are stated in the CEQA Guidelines (CCR §15151):

> An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

In addition, the Guidelines §15003(i) states:

> CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document.

The level of detail and analysis is appropriate for a programmatic EIR. Planning documents, such as the DFMP or ADFFMP, generally contain a lesser level of detail than would be found at the individual project level. Planning documents are less determinate, subject to many variables over time (e.g., levels of funding, policy and administration changes, environmental factors, etc.), whereas a site-specific project can be described with a greater degree of certainty. The DFMP and ADFFMP are a blending of both general planning elements (policy direction and goals) and proposed specific projects (future management activities), and therefore the DEIR and RDEIR focus on the impacts that may arise given the general direction of the proposed Plans or alternatives, as well as the types of projects that may reasonably be expected to occur.

The DFMP, ADFFMP, and the EIR alternatives, establish management goals and direction for the future activities of JDSF (see Section VI of the DEIR or Section II of the RDEIR for a discussion of the alternatives). Future activities carried out under the management plan may be both numerous and varied. The DEIR and RDEIR analyze the potential impacts that may occur as a result of implementing the Plans, or one of the alternatives, but does not purport to fully analyze all future site-specific projects that may occur. Site specific analysis will be implemented at the project level where appropriate. The level of specificity of the analysis in an EIR is dependent upon the level of specificity found in the project description (CCR §15146).

A discussion of the alternatives, including policy direction and management goals, can be found in Section VI of the DEIR and Section II of the RDEIR. DEIR Table VI.1 and RDEIR Table II.4 present the alternatives in a detailed, comparative format. Resource Specific Analysis of the potential impacts of the proposed project and the alternatives can be found in Sections VII and VIII of the DEIR and Sections III and IV of the RDEIR. The Board contends that the potential environmental impacts of the proposed Plan, and the alternatives, have been adequately addressed in the DEIR, RDEIR, and FEIR.

Subsequent actions in the Forest will be examined in the light of this EIR to determine whether:

- other laws require further analysis [i.e., Forest Practice Rules (FPRs) for Timber Harvest Plans (THPs)],
- the action will be consistent with the final Plan and the program EIR,
- the action requires mitigation measures identified in the EIR,
- new significant environmental effects might be involved,
- new mitigation measure might be necessary, and
- an additional environmental document must be prepared.

Some projects, where the specific activities proposed are within the scope of the final EIR, may proceed without any further environmental analysis. Projects that include activities that were not covered, were only partially covered, or were covered at a programmatic level of specificity in this EIR will require further CEQA analysis. For example, the Forest Practice Rules require that Timber Harvest Plans provide a functional equivalent CEQA analysis, which will be tiered to the programmatic EIR analyzed here.

General Response 4: The Range and Feasibility of Alternatives Analyzed

Summary of Comments

Comments generally claim that the range of alternatives analyzed is insufficient or that none of the alternatives has the correct combination of elements. Some comments express the opinion that ruling out certain alternatives as infeasible is disingenuous and circumvents the EIR process.

Response to Comments
As discussed in Section VI of the DEIR, CEQA Guidelines (15126.6) states that a lead agency need not consider every conceivable alternative or infeasible alternatives, nor must it "consider an alternative whose effect cannot be reasonably ascertained or whose implementation is remote and speculative." In addition, the lead agency need not consider alternatives that fail to mitigate one or more of the projects potentially significant effects. A "rule of reason" is employed in determining the range of alternatives considered in an EIR with the intent of stimulating "meaningful public participation and informed decision making." The lead agency may eliminate alternatives that: fail to meet most of the basic project objectives; are infeasible; or don't avoid environmental impacts.

The selection of a reasonable range of alternatives began with an evaluation of a broader range of possible alternatives as developed by the Board in consultation with other agencies and based on extensive public scoping comments. From this broader range several suggested alternatives were eliminated from further consideration because they were determined to: be infeasible; be redundant – in part or in their entirety with the other alternatives; failed to meet most of the basic project objectives (see DEIR section III.2); and/or not mitigate the project's potentially significant effects. The alternatives considered, but dismissed from further consideration are discussed in Section VI.2 of the DEIR.

The eight alternatives (A, B, C1, C2, D, E, F, and G), including the proposed project, selected for further impact analysis were designed to span a wide range of possible management objectives and activities. Each alternative incorporates various levels of commodity management, forest management demonstration and research, wildlife habitat protection and management, and recreational use. A detailed impact analysis revealed that elements of several of the final alternatives under consideration (A, D, E, and F) may be infeasible in part (see DEIR Table VI.1 or RDEIR section II.5 and Table II.4) due to the fact that they may not be consistent with the Public Resources Code, regulations, or Board policies. A clear discussion of the statutory framework from which the state forests are managed is contained in Section II (Introduction) of the DEIR and a detailed compilation of relevant statutes, regulations, and Board policies is provided in DEIR Appendix 5. Altering the legislative mandate and Board policy is beyond the scope of the DEIR and RDEIR. Therefore, absent a change in legislation or Board policy, some of the alternatives may not be able to be adopted in their entirety, but elements from those alternatives can still be incorporated into the final management plan at the discretion of the Board.

The Board has subsequently developed a management plan derived from components of the proposed project and several of the alternatives (see Section II of the RDEIR and the Administrative Draft Final Forest Management Plan). The Administrative Draft Final Forest Management Plan is designed to balance demonstration and research, production of timber products, and public concerns, while improving the overall health and ecosystem function of the forest. The Board believes that the Administrative Draft Final Forest Management Plan and FEIR have sufficiently addressed the potential environmental impacts and, in addition, allowed the flexibility needed in a management plan to monitor and adjust management activities as needed.

General Response 5: The Size of the DEIR Document and Length of the Public Comment Period

Summary of Comments
Comments generally expressed frustration with the size and/or the cost of the document. This was seen by some individuals as an impediment to public participation. Some comments suggest that the comment period was insufficient.

Response to Comments
The DEIR and RDEIR are intended as a public disclosure and decision making tool to be used by the Board to analyze the significant potential effects arising from implementing the draft JDSF Draft

Forest Management Plan (DFMP) and the Administrative Draft Final Forest Management Plan (ADFFMP), to identify alternatives, and to disclose feasible measures to reduce or avoid significant impacts. The lead agency, in this case the Board, is obligated to produce a comprehensive document that addresses the full range of potential significant environmental impacts in sufficient detail that a determination of significance can be made with regard to the proposed project and the alternatives. The size of the document is largely determined by the complexity of the potential effects of the proposed project, plus the alternatives, and the requirement of CEQA that the EIR adequately address those potential effects. This is in no way designed to discourage public participation, but rather to provide a comprehensive assessment of the potential effects.

Public participation has been encouraged throughout the development of the DFMP, Alternative G, the ADFFMP, and the overall CEQA process. This process included the Board and Department's receipt of substantial, detailed comments from the Mendocino Working Group, which resulted in a number of that group's recommendations being included in Alternative G and the ADFFMP. A detailed history of the opportunities for public comment can be found in Section II, page 19-20 of the DEIR, Section I of the RDEIR, and Section I of the FEIR.

As lead agency, the Board was required to approve the administrative draft prior to its distribution for public comment. The Board provided another opportunity for public comment at the time of that consideration. Following the Board's consideration of the administrative draft DEIR, the Board released the DEIR for public comment and agency review. There is a minimum 45-day public and agency comment period required on this draft EIR (PRC § 21091). The Board chose to use a 60 day comment period and subsequently extended the period for an additional 15 days for a total of 75 days. Comments received during the comment period have been responded to in writing by the Board (PRC 21092.5; CCR §15088) and incorporated into the final EIR (CCR §15132).

In an effort to include the public in the comment process for the DEIR, two public hearings were held where comments could be presented orally or in writing. The DEIR document was made available for public viewing free of charge at an extensive list of public libraries locally, statewide and in Washington, D.C. Electronic copies were also made available free of charge through the Board of Forestry and CAL FIRE Websites. In addition, copies of the DEIR on compact disc (CD) could be obtained free of charge, including postage, by contacting the Board. Finally, paper copies were made available for purchase at three local print shops.

A similar process was utilized for the RDEIR. The RDEIR, which relied substantially on the analysis contained in the DEIR, was a much shorter document. A 45-day public review and comment period was held for the RDEIR, and included two public hearings convened by the Board.

General Response 6: Thresholds of Significance

Summary of Comments

Comments generally debate the significance of environmental impacts related to the project. Most comments of this nature claim that a significant impact to a certain resource will result from an action proposed in the DFMP, in another alternative, or in the Administrative Draft Final Forest Management Plan (ADFFMP), but generally lack supporting evidence for the claim. Some comments suggest that the consideration of other methods of impact analysis or existing resource studies may change the impact analysis in the DEIR.

Response to Comments

CEQA provides the Lead Agency, the BOF in this case, the authority to determine "threshold of significance" for impacts on environmental resources based upon qualitative or quantitative standards. Compliance with existing regulatory standards generally results in less than significant impacts to resources. CEQA Guidelines, Section 15064.7, Subdivision (h) guides the Lead Agency to "rely on the vast body of regulatory standards" that have already undergone rigorous public agency

review in determining thresholds and significant impacts. Subdivision (h), however, also establishes flexibility for the Lead Agency to establish whether existing regulatory standards are sufficient to protect an environmental resource from any significant impact that may result from the proposed project. The basis for the Lead Agency's determination of whether a standard applies in a particular case must be based on "substantial evidence in the record that [the] standard is inappropriate to determine the significance of an effect." The Lead Agency is not required to base their determination of applicable standards on information presented by project opponents that a standard is or is not appropriate or effective to protect a resource. A detailed description of significance criteria and thresholds of significance for specific resources can be found in Sections VII and VIII of the DEIR and Sections III and IV of the RDEIR.

It is important to note that the general goal of the JDSF Management Plan is to achieve net improvements of environmental conditions over time, in comparison to existing conditions. This has been a long-term goal, having been implemented since the property was acquired by the State in the 1940s and 1950s. The site was acquired in a degraded condition, but over time, has notably improved in most of the resource categories. Clearly, the relative significance of each resource and the management priority associated with improving that resource is highly subjective. The ADFFMP represents a good faith effort to guide the integrated use and protection of the Forest's resources, to meet the requirements of legislation and Board policy, and to address local, regional, and statewide issues.

The ADFFMP meets or exceeds all applicable standards. In addition, a monitoring and adaptive management program has been incorporated within the management plan as a mechanism to modify management direction as new information becomes available. Subsequent projects, such as Timber Harvest Plans, will be tiered to the Forest Management Plan Environmental Impact Report, and will undergo additional environmental analysis during the THP preparation and review process. This process will allow further input from the public and review agencies.

General Response 7: Herbicides

Summary of Comments
Comments generally suggest the discontinuation of the use of herbicides as a management tool due to a concern that their use will result in a significant environmental impacts. All comments relating to the elimination of herbicide use that do not provide any specific evidence of a potentially significant adverse environmental impact are referred to this general response.

Response to Comments
Partially due to public concern, the use of herbicides on JDSF has declined substantially in recent years, and proposed future management of invasive plant species will rely on an integrated pest management program [see Chapter 3 of the DFMP or the Administrative Draft Final Forest Management Plan (ADFFMP); Section VII.8.2.2 and Appendix 13 in the DEIR; and Section II.2 in the RDEIR for details on proposed use]. This prevention oriented, ecologically based program will utilize a combination of control methods and the use of herbicides will be minimized by using them primarily where cost and effectiveness precludes the use of non-chemical control approaches. One component of the forest management plan will be to conduct research and demonstration projects on an integrated approach and alternatives to herbicide use, including an evaluation of the costs and effectiveness of various methods.

There are several management situations where herbicides have been used in the past at JDSF. The ADFFMP would eliminate two historic uses of herbicides (treatment of native species for road maintenance purposes, and reforestation treatments that target native shrubs (see ADFFMP Chapter 3). Other uses will be limited, including the control of hardwoods to adjust conifer/hardwood stocking rations, and control of invasive weed species as part of an Integrated Weed Management program. A total ban on herbicide use would compromise the research and demonstration value of the Forest and

could result in adverse environmental consequences, such as expansion of the area of the Forest occupied by invasive species. Herbicides may be used on individual research and demonstration installations that are scientifically designed. In an operational context, JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions.

Adjusting the conifer/hardwood stocking ratio by utilizing herbicides will be limited to specific reforestation situations on the east side of the Forest. On the east side of the forest where tanoak has a negative effect on native conifer establishment and growth, treatments may be undertaken using a range of techniques, to achieve both short and long term objectives. Hardwood species will be maintained as a component of these stands, comprising an estimated 15% of total stand basal area consisting of hardwoods in a range of sizes. Herbicides will be used for this purpose only when other options are prohibitively expensive, overly damaging to conifer regeneration, or not likely to be successful.

Integrated Weed Management would consider herbicide use as a possible treatment only under limited conditions. No herbicide will be used unless it is integral into long-term ecological based management. This program will utilize a combination of control methods evaluated for environmental safety and effectiveness. Environmental and public safety as well as aesthetics will be part of the decision process for selecting specific treatments.

The Board and CAL FIRE believe that there are important benefits to be found in the limited herbicide use as part of an integrated pest management program, and that when properly utilized, herbicides do not present a threat to the environment or to human health. Limited use of herbicides on the forest can serve as a demonstration of the proper and appropriate use of chemical treatments in combination with non-herbicide methods for controlling invasive plants, an important regional problem in natural resource management. Herbicide use remains significantly less expensive and more effective than many other means for accomplishing these objectives and is expected to remain an important management tool on private lands. Research and demonstration projects have the potential to contribute to a reduction in herbicide use through application of improved silvicultural techniques, non-chemical control methods, and integrated pest management.

The U.S. Environmental Protection Agency regulates pesticide use nationwide and has exclusive authority over pesticide labeling. The California Department of Pesticide Regulation (DPR) regulates pesticides within the State of California and has legal authority to adopt restrictions on pesticide use going beyond the regulations of the U.S. Environmental Protection Agency (7 U.S.C.A. §136v). Under California law, pesticide products must be registered by DPR in order to be sold and used in California. DPR operates a statewide program of regulating pesticides and is the lead agency for regulating herbicide use under CEQA. DPR's program for regulating pesticides was certified by the Secretary of the Resources Agency as a functional equivalent program under Public Resources Code (PRC) § 21080.5.

In evaluating a substance before it is registered the first time as a pesticide, DPR examines all data required for registration regarding the chemical including its health and environmental effects. The department looks to see if the pesticide can be used safely and effectively and to determine whether limitations or use restriction would be necessary to protect health and environmental resources. By the terms of its certification, the program is prevented from approving the registration as requested if there are feasible alternatives or mitigation measures available that could lessen any significant adverse effects on the environment [PRC § 21080.5(d)(2)(A)]. Because the program is certified, DPR does not prepare environmental impact reports (EIRs) but prepares other documents in the place of EIRs [PRC § 21080.5(d)(3)].

The DEIR (VII.8-15) includes direction that would be applied at project level that will ensure risks are minimized. "Where herbicide use is proposed for use under the DFMP CDF will review the herbicide's intended use and its possible environmental effects. …CDF will also check for significant new information showing changes in circumstances or available information that would require new

environmental analysis. … CDF will look for simple and practical ways to avoid or mitigate potential new significant effects on the environment. Cumulative impacts are unlikely because herbicide uses related to different control projects are separated in time and distance so that their individual effects do not reinforce or interact with each other. Herbicide use under the DFMP is neither widespread nor frequent." Thus any herbicide use will utilize materials that had been reviewed at federal and state levels, comply with state and county direction and the requirements in the ADFFMP.

Under the California Environmental Quality Act, the determination of a significant effect must be based on substantial evidence in the record (PRC § 21082.2). Controversy or intensely held opinions not based on substantial evidence will not justify deciding that an effect is significant. Due to the absence of substantial evidence that pesticides, when properly used in accordance with the direction provided in Alternative G or the ADFFMP, present a threat to the environment or human health, this EIR has concluded that pesticide use on JDSF is not a potentially significant effect on the environment under Alternative G or the ADFFMP (see DEIR section VII.8.3 and Table VII.8.6 for impact analysis, and section VIII.5 for cumulative effects analysis; see RDEIR section III.8, Table III.12, and section IV.4).

General Response 8: Old Growth Concerns

Summary of Comments
In general, there is support for old growth protection measures included in the Draft Forest Management Plan (DFMP), Alternative G, and the Administrative Draft Final Forest Management Plan (ADFFMP), but concerns were expressed that they did not go far enough. Specifically, the comments indicated the DEIR should have identified that the cutting of any old growth tree would result in a significant environmental impact.

Response to Comments
The Board recognizes the importance of old growth trees, late seral forest conditions, and older forest conditions for ecosystem function, wildlife habitat, recreation, and aesthetic enjoyment. As a result, the management plan protects all old growth groves. There will be no harvesting in the old growth groves. The management direction will be to develop an extensive contiguous area of older forest structure, late seral, and old growth forest that will connect most of the existing old growth groves across watersheds (see RDEIR page II-7 and Map Figure 1). The wildlife habitat, recreation, and aesthetic values of the old growth groves will be enhanced through the management of these contiguous stands.

A related forest wide objective is to retain individual old growth trees, and small aggregations of old growth trees within larger young growth stands, to maintain and enhance the ecological value of these stands.

The following summary of planned management relating to old growth as described in the ADFFMP is provided:

> **Old Growth Forest:**
>
> Existing old growth groves will be retained, as will aggregations of old growth trees. Individual old growth trees found outside of stands or aggregations and exhibiting specified characteristics will be retained, with limited exceptions, such as where the tree presents a public safety issue or retention would result in the potential for greater long-term environmental damage. Old growth retention and recruitment measures are presented below. In addition, refer to DEIR section VII.6.3 Timber Resources for a discussion of the old growth protection measures.

Old Growth Management Objectives and Definitions

The management objectives for old-growth stands and trees are to:

- Protect existing old-growth groves and improve their value as wildlife habitat, and manage selected second-growth forest stands for old growth and late seral attributes.
- Retain small aggregations within larger young-growth stands to maintain and enhance the ecological value of these stands for native species.
- Retain individual trees not found in groves or aggregations that are identifiable as old-growth trees based on specified characteristics.

An old-growth conifer tree is any live conifer, regardless of size or species that was present in the original stand before the first historic logging on JDSF (1860), based upon the professional judgment of JDSF staff. Characteristics often found in old growth trees that can help identify them are:

The bark is more deeply furrowed and more weathered on old growth trees than on young growth trees, often having a plated appearance. Bark scorching may be heavier on old growth trees, indicating that they were present during fires that occurred before the first logging in the Forest. A tree size that is larger than would be expected for the stand age, management history, and site quality may indicate an old growth tree. Limbs often significantly larger in diameter than expected for the stand age, site quality, and canopy closure may indicate an old growth tree. Limbs often extend from the trunk at more of a downward angle than is common in younger trees.

Old-growth conifers that also have one or more of the following structural characteristics will be retained unless specified otherwise in the Plan:

a) DBH greater than 48 inches.

b) Goose-pen (an opening one foot or more in diameter inside and above the top of the trunk opening).

c) Platform branches greater than 8 inches in diameter.

d) Exfoliating flanged bark slabs.

e) Chimney top (hollowed upper stem)

f) Dead top at least 16 inches in diameter and 16 feet long.

Guidelines for Protecting Old Growth Trees and Reserves

Old growth conifers with any of the attributes described in a. through f. above will be retained in any prescription unless the tree presents a public safety issue or retention would result in the potential for greater long-term environmental damage, including but not limited to issues related to road and landing sites, soil instability, damage to aquatic resources, or cable yarding requirements.

Since it is often difficult to visually distinguish between young growth and old growth hardwoods, size will serve as a surrogate for age. All hardwoods 36"

DBH + will be considered for retention, as will other hardwoods that appear to be old growth and possess characteristics similar to those in a. through f. above. Where forest stands appear to have greater hardwood site occupancy than in the past, hardwoods of any age may be removed to restore former species balance, favoring old growth hardwoods for retention whenever appropriate.

In addition to these measures, areas designated for late seral or older forest structure conditions will be managed on an uneven-aged basis specifically designed to provide for the recruitment of older forest or forest with structural characteristics of older forest (for a more detailed description of these management objectives, see RDEIR, page II-7 and the Late Seral response below).

While old trees with specific characteristics will be retained, it is not reasonable to include a mitigation measure that would require every old growth tree be retained regardless of all other considerations. For example, removal of individual trees may be considered in order to prevent significant impacts associated with public safety and resources such as water quality and slope stability. In addition, many smaller trees, though they may be old in years, are essentially indistinguishable from young trees, and possess no unique structural characteristics of value to wildlife.

The creation of an Older Forest Structure Zone, which connects many of the old growth groves and augmentation areas, and the designation of additional late seral habitat specified in Alternative G and the ADFFMP will provide additional protection and enhancement of this resource. Based on the analysis in the DEIR and RDEIR, no significant adverse environmental impacts are expected.

General Response 9: Late Seral and Mature Young Growth Concerns

Summary of Comments
A general concern expressed in many comments is that the late seral management measures included in the DFMP fail to prevent significant environmental effects to late seral habitat. A related issue is the commonly expressed opinion that the existing mature young growth on JDSF is a significant resource independent of any late seral habitat that it may provide, and that harvesting mature young growth would result in a significant environmental impact. Some comments suggested that JDSF should be managed primarily or entirely for late seral conditions and that failure to do so would result in a significant environmental impact.

In relation to the RDEIR and ADFFMP, many comments suggested that the changes in management measures designed to enhance late seral conditions fail to adequately address the need for late seral conditions and connectivity.

Response to Comments
The ADFFMP addresses late seral forests at several levels. Goals and Objectives of the management plan have been modified. Goal #2 (Forest Restoration) now reads: “Work towards active restoration by managing the forest to promote and enhance forest health and productivity.” The objectives include:

- Increase the amount of older forest structure and late seral forest available for terrestrial wildlife, including areas adjacent to aquatic habitats.
- Improve habitat connectivity and reduce forest fragmentation, including the concept of corridors and contiguous habitat

Specific areas in the Forest are identified and mapped as Special Concern Areas (SCA) (see Map Figure 1 in the RDEIR) that will be managed for the development of late seral forest. This includes a large contiguous block in the Mendocino Woodlands STA, areas adjacent to three of the old growth

groves and along the class I and II watercourses. Alternative G designates an additional 1,549 acres in the area of upper Russian Gulch and lower Big River for late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1). Late seral habitat will be developed over time through light thinning, selective management, no harvest, or other management activities designed to promote late seral characteristics. There will be an emphasis on the retention and recruitment of snags and downed wood.

The late seral development areas associated with Class I and II watercourses will provide connectivity between habitats and bordering upslope timber stands, most of which will be managed on an uneven-aged basis.

The analysis found that the late seral management and development practices would result in an increase in these habitat values due to recruitment of a substantial area of this form of forested habitat. The establishment of control stands has the potential to enhance the evaluation of late seral habitat development strategies.

The ADFFMP also addresses connectivity by designating a contiguous 6,803-acre area extending across much of the forest from west to east and north to south, as an Older Forest Structure Zone (see RDEIR Map Figure 1). The objective of this form of management is to produce structural characteristics of older forest which includes large trees, snags, down logs and a high level of structural diversity, across a large contiguous area that also includes existing old growth groves and several late seral development areas (see ADFFMP Chapter 3; Desired Future Forest Structure Conditions). The Older Forest Structure Zone will also be managed for timber production and serve as a demonstration of structure development coincident to periodic timber harvest.

The ADFFMP allocates approximately one-third of JDSF to some form of older forest structure development. The Plan indicates that general forest areas managed on uneven-aged basis will eventually develop some elements of structure associated with late seral forests. The ADFFMP specifies retention standards for snags and down logs, which are important characteristics of late seral habitat.

The Executive Summary of the ADFFMP states:

> This Management Plan presents a workable approach to create and maintain multiple seral stages, along with important structural habitat elements. It preserves all existing old-growth groves, augmenting most of them to provide large, contiguous areas of older forest habitat. It provides for recruitment of late seral habitat in the Mendocino Woodlands Special Treatment Area, upper Russian Gulch, and lower Big River, as well as along all Class I and II streams. It also provides for a broad corridor of forest with the structural characteristics of older forest that extends from the west to the east and the north to the south. The Plan protects individual large old-growth trees and smaller residual old-growth trees with unique habitat attributes. And it sets goals for increased retention of structural habitat elements such as snags, downed logs, and large green trees and their associated biodiversity values.

Timber harvest levels will continue to be set well below growth, resulting in an ever increasing forest inventory, including a significant component of larger and older trees.

As previously stated, the DEIR and RDEIR found that the DFMP and ADFFMP provisions to manage for late seral habitat would prevent an adverse impact and would actually provide a beneficial impact on late seral habitat—this would be both direct impacts and cumulative impacts. The general concept put forward in some comments is that that JDSF should not harvest young-growth that has been characterized as “mature” or greater than a specific age, because other landowners in the region have harvested substantial areas of this young forest. This concept is based on the assumption that

harvesting this young-growth on JDSF would result in a significant cumulative impact. This is primarily an issue of potential impacts to wildlife and wildlife habitat. The analysis in the DEIR and RDEIR indicated that the proposed management on JDSF (i.e., the DFMP or ADFFMP) would not result in a significant environmental impact with respect to wildlife and wildlife habitat. The management direction provided in the DFMP and ADFFMP will ensure that JDSF will, at a minimum, provide young-growth forest over a range of age and classes, and increasing amounts of older forest, late seral forest, and old growth forest over time .

General Response 10: Clearcutting and Even-Aged Management

Summary of Comments
The comments generally express disagreement with the even-aged management and clearcutting proposed in the Draft Forest Management Plan (DFMP), Alternative G, or the Administrative Draft Final Forest Management Plan (ADFFMP). Some comments go on to fault the DEIR or RDEIR for not concluding that clearcutting would result in significant adverse environmental effects. Many comments indicate that there are large areas already clearcut that should be used for research, rather than cutting more areas. Others indicate that there are no benefits to be gained from additional clearcutting for research and demonstration. Several comments indicate a perception that areas designated to allow the use of even-aged management would be entirely clearcut.

Response to Comments
One of the goals of JDSF is to maintain a diverse range of timber and habitat conditions, including the creation of young recently regenerated stand conditions and stands of various ages and densities, to promote a diverse research program. Many species of wildlife prefer conditions that are created by even-aged management, since it can produce conditions similar to natural disturbances such as fire and windthrow. The Administrative Draft Final Forest Management Plan (ADFFMP) designates up to 26% of the Forest as being available for even-aged. During an interim period of up to three years, the use of even-aged management will be minimal, and the Jackson Demonstration State Forest Advisory Committee is expected to participate in a review of plan implementation and policy. Following the interim period, clearcutting will be restricted to a cumulative maximum of 100 acres per decade and only for purposes of research, demonstration, or addressing problematic conditions for regeneration. Up to an additional 400 acres may be clearcut per decade, but only for research purposes that cannot be met through any other method. The total area receiving even-aged silvicultural treatments shall not exceed 2,700 acres per decade. In addition, even-aged management will be tied to:

1. the Forest condition it is intended to produce
2. necessity and appropriateness for accommodating research investigations either immediately or at a later time.

These two constraints do not apply to even-aged management necessary for addressing forest health or problematic regeneration conditions.

The management plan does not preclude the use of even-aged management in areas designated for even-aged management. In areas designated for the use of even-age management, stands may be managed with a variety of even-aged treatment prescriptions, including variable retention and a limited amount of clearcutting. In addition, where even-aged prescriptions are applied, there will be a goal to retain important habitat elements such as large woody debris (LWD), snags, and individual trees with structural characteristics that provide habitat value, such as broken tops. Approval of the ADFFMP will not result in the immediate removal of the standing timber from 26% of the land base. The application of even-aged management will occur incrementally, in order to create and maintain

even-aged forest stands at various stages of development, and varying in age from newly established regeneration to stands over 100 years of age.

Much of the dense second growth forest present on JDSF is the product of historic clearcutting on a broad scale, as described in the DEIR. In recent years, the use of clearcutting has declined within JDSF. Table VII.6.3.2 of the DEIR indicates that 1,913 acres have been clearcut on JDSF since 1980, with less than 300 acres of this total occurring after 1990.

The ADFFMP provides a description of the desired future condition of the even-age management areas (see Table 1). The long-term target structure is expected to include 10-20 percent of the Forest in stands of regeneration and pole-sized trees, and approximately 5-15 percent of the Forest in even-aged stands of mature and large trees. Even-aged management, as practiced on the Jackson Demonstration State Forest will generally produce two-storied stands, consisting of a main canopy layer of trees grown to the designated rotation age, and an overstory of a few to several trees per acre retained from the previous stand to provide a legacy of wildlife habitat elements.

Even-aged management has specific economic and silviculture advantages that make it an important silvicultural method in the redwood region. One of these advantages is that harvesting is concentrated in both space and time, resulting in a reduced area affected by harvest operations, which has both economic and ecological advantages. This silvicultural method will continue to be widely used by both small and large landowners. Developing alternative even-age silvicultural practices that maintain the economic and silvicultural advantages, while minimizing the potential adverse environmental impacts, would be a significant achievement. JDSF is the largest forest in the redwood region dedicated to the development of this sort of information.

Comments suggesting that the use of clearcutting and other forms of even-aged management on JDSF are based solely on the desire to maximize economic returns are unsupported. The allocation of even-aged silvicultural prescriptions under the ADFFMP is based primarily on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program (refer to RDEIR Table II.1 or ADFFMP Table 1). Even-aged management can also be utilized when necessary for addressing specific forest health issues or problematic regeneration conditions.

Some comments pointed out that nearby industrial timberlands are “demonstrating” clearcutting, so there is no need for JDSF to demonstrate this method. However, the industrial lands are not demonstrating, they are utilizing the method. Industrial owners are unlikely to commit tracts of land to long-term research as is required to demonstrate a silvicultural method, nor are they likely to make these stands available for public access and examination. Industrial landowners’ focus typically is on maximizing the economic and silvicultural benefits of management method, rather than utilizing these areas for research or developing alternative even-aged methods. University researchers have reported to the Board the loss of long-term research projects on industrial forestlands when the owners have made a change in management direction.

The demonstration of various rotation ages and structure tree retention levels as proposed in the ADFFMP will be beneficial for many landowners in the redwood region. Examples of what could be learned from the continued use of the even-aged silvicultural system as proposed in the ADFFMP include:

- What is the most advantageous arrangement or orientation of retained structure trees?
- What wildlife species use clumped trees verses single widely spaced trees?
- What is the best size clump of trees to leave?
- How does slope and aspect affect wildlife use of retained structure?
- How does retained structure affect tree growth and stand development?
- What are the long-term effects or watershed scale effects of even-age management with structure tree retention verses uneven-aged management?

- Can retention of structure trees mitigate visual impacts of clearcutting?
- What post harvest silvicultural prescriptions, such as thinning, will accelerate the development of late seral stand characteristics?
- How will various silvicultural treatments affect the production of timber?
- What management practices will most effectively mitigate possible environmental impacts of even-age harvest systems?

These sorts of questions can only be answered if even-aged management areas are included in the management of JDSF.

In addition to the more direct timber management oriented research and demonstration questions listed above, the relatively simple stand structures created through the use of even-aged management also can facilitate certain types of ecological research. Gaining an understanding of ecological systems and the processes which drive them is inherently difficult due to the complexity of these systems and the myriad of confounding factors. Therefore ecological research is often an iterative process based on incremental steps that build on knowledge and understanding. Creating a more simplified stand structure allows researchers to reduce the complexity of the system, thereby facilitating isolation and quantification of the component parts. This knowledge can then be applied to achieve a greater understanding of more complicated ecological systems.

Research on trees and forest ecosystems presents special difficulties. Many types of biological research can utilize organisms that have a relatively short life cycle, thus enabling the development of a detailed research plan and the ability to modify the design on a relatively short-term basis. This is often not true of forest research. Due to the extended life span of trees and forest systems it is often not possible to simply follow the process over extended periods (perhaps decades or longer) as trees and stands develop. The complete response to a management input, such as thinning, may take decades. The researcher is often forced to rely on finding existing stands that best meet the desired characteristics. If a researcher is interested in the effect of growing space on tree growth and structure as a tree develops, the researcher must locate stands at various ages and grown at various densities to try to gain insight into the effect of growing space on the development process. The key with regard to current management strategy is to provide a varied landscape that facilitates this type of future research effort. This approach is necessary for both the large long lived organisms - trees as well as smaller organisms that live among them.

A laboratory setting allows for a great deal of environmental control, thereby eliminating or reducing the confounding effects of many variables to gain insight into the effects of a single or limited number of variables. For instance, temperature, light levels, soil type, moisture regimes and genetic stock can be controlled to allow a scientist to better isolate the effect of each variable. Forest research does not allow this level of control. In order to understand the effect of slope and aspect for example, the researcher must find stands with similar characteristics (e.g., stand age, density, soil type, and management history) except for the variables of interest, in this case slope and aspect. Forest research often relies on the natural variation of topography, soils, and climatic influences that are found on a landscape scale to control for a particular variable or set of variables.

Replication is a fundamental tenant of nearly all research. There is a need to provide a landscape that allows for replication in the study design. The required sample size for a given level of confidence is based on the variability of the sample. This is often unknown prior to establishment of the research project. There is also inherent “noise”, such as variability in annual rainfall, in ecological systems. Sample size needs to be sufficient to tease out the effect of the variable(s) of interest from this background noise.

The allocation of an adequate percentage of the land base to allow various forms of even-age management is also needed to allow landscape level sampling techniques and assess the effects of even-aged management approaches at the landscape level. Significant gaps remain in our knowledge of forest ecosystem functions as well as the interactions between management activities

and ecosystem functions. By developing and maintaining a broad range of conditions at the landscape level JDSF can provide important opportunities for pure and applied research, including testing potential regulatory measures for protecting forest ecosystem functions, or testing potential restoration approaches.

Numerous wildlife species, including many species of special concern, use clearcuts and other forest openings to fulfill one or more of their biological requirements. These species will likely benefit from the landscape level habitat diversity created by utilizing evenage management as proposed in the ADFFMP. While extensive clearcuts have proven detrimental to many species due to removal of extensive blocks of habitat and key habitat elements, clearcuts and other forms of evenage management in today's environment can be of value as long as other forms of forested habitat remains or is developed in the vicinity. For example, the primary prey of the northern spotted owl in coastal California is the dusky-footed woodrat, a species that is found in abundance within young stands similar to those produced within a few years after clearcutting. Spotted owls still require large dense patches of forest for nesting and roosting, but they also benefit from stand conditions produced by evenaged management techniques. The purple martin, a California Species of Special Concern, prefers to nest in large snags located within forest openings. Although few sensitive species nest in clearcuts, many prey items and hunting opportunities occur in and along the edges of clearcuts. At the landscape level, maintenance of diverse habitats while retaining key habitat elements, such as snags and old growth, is beneficial to most species.

The impacts of the proposed evenaged management, including clearcutting, were assessed in the DEIR and RDEIR. The DEIR and RDEIR found that, as proposed in the DFMP and Alternative G, respectively, and as mitigated, even-aged management would not have a significant adverse impact on the environment. Mitigations were developed to address the visual impacts of clearcutting.

Although many members of the public may have an unfavorable opinion of clearcutting, the DEIR and RDEIR analysis indicated that when appropriately designed and mitigated, the use of clearcutting and other forms of even-aged management is not expected to have a significant effect on the environment.

General Response 11: Aquatic Resources and Water Quality

Summary of Comments

The comments received express both support and opposition to, the Draft Forest Management Plan (DFMP), Alternative G, or the Administrative Draft Final Forest Management Plan (ADFFMP) in regards to protection of aquatic resources. Comments that oppose the proposed project generally claim that the proposed management plan fails to adequately protect watercourses, water quality, or aquatic habitat.

Response to Comments

Historic land management practices, such as dam construction, unregulated logging activities in or next to streams, agricultural development, urban and rural development, road and railroad construction, in combination with an absence of erosion control, has created a legacy of significant aquatic habitat impairments that persist today and may be in various stages of recovery. The Board recognizes that proposed land management activities, such as those proposed in the DFMP and ADFFMP, need to be considered in the context of existing conditions, recovery processes, and planned management activities. A detailed discussion of aquatic resources, including habitat elements, current conditions, proposed habitat protection and restoration measures, and an impact analysis can be found in Section VII.6.1 of the DEIR and Sections III.6.2, III.120, and IV.3 in the RDEIR. Additional discussion of issues relating to water quality and aquatic resources can be found in other sections of the DEIR: VII.7 Geology and Soils, VII.10 Hydrology and Water Quality, and VIII Cumulative Impacts, as well as Appendices 10-12.

The goal of the JDSF riparian and stream management program is to maintain or restore "properly functioning" riparian and stream ecosystems, i.e., systems that provide essential ecological function. JDSF's management strategy will go beyond simply preventing significant detrimental effects to aquatic and riparian habitats. The goal is to ensure that the aquatic and terrestrial resources and the ecological functions of riparian areas are protected and improved or restored. JDSF will manage forested stands in stream protection zones to promote their ecological succession to late-successional forest conditions. JDSF will retain and enhance the vertical structural diversity of these stands, and protect riparian zone special habitat elements such as snags and large woody debris (LWD) to improve habitat values.

Individual project stream and riparian protection and management measures will be determined on a site-specific basis and be designed to attain or maintain properly functioning condition as described above. A variety of conservation measures are available to avoid degradation and improve aquatic and riparian habitat. For example, LWD may be recruited to the stream by recruitment from adjacent stream buffers and upslope areas. In order to develop an integrated conservation approach, it is necessary to identify stream and riparian conditions that may already be degraded and could be affected by planned operations. As these areas are identified, measures will be developed that are intended to improve conditions, especially in regard to shade canopy, recruitment of large woody debris, bank stability, and sediment supply. As part of the research and demonstration mandate, the LWD placement trials implemented on stretches of Parlin Creek, Lower Casper Creek, and Hare Creek in cooperation with DFG will continue to be monitored to assess the effectiveness of this restoration approach.

The DFMP incorporates watercourse protection measures, including several practices that supplement the Forest Practice Rules. The specified watercourse protections will significantly minimize equipment work near stream channels. Vegetation requirements for watercourse protection zones will also minimize sediment delivery to the watercourses. In keeping with the research and demonstration mandate, there will be varying levels of buffers and management constraints employed across JDSF to allow for the study of the effectiveness of various watercourse protection strategies. Except as modified to support research conducted under appropriate authorities, watercourse protection measures will comply with applicable rules and will incorporate the following standards:

- Class I–150 foot WLPZ; class II–50 to 100 foot WLPZ. Zone widths are to be expanded where appropriate (e.g., unstable areas, etc.).
- Timber operations within channel migration zones will not occur (except as allowed in the Forest Practice Rules).
- Class I inner band–0 to 25 feet from the watercourse transition line: No-cut (except for harvest of cable corridor trees where needed) or limited entry to improve salmonid habitat through use of selection or commercial thinning silvicultural methods. At least 85 percent overstory canopy (where it exists prior to harvest) is to be retained within 75 feet of the channel.
- Class I outer band–remainder of WLPZ: High basal area and canopy retention zone. Basal area retention will remain high through the use of the all-age large tree and single tree selection silvicultural systems. Vertical overstory canopy (measured with sighting tube) at least 70 percent (where it exists prior to harvest) is to be retained in the outer band.
- Within Class I and Class II WLPZ, retain a minimum of 240 sq. ft. conifer basal area following completion of timber operations.
- Reentry–No more frequently than every 20 years for Class I WLPZs.
- Class I/II: Ten largest conifers per 330 feet of stream channel retained within 50 feet of the watercourse transition line.

- Class II inner band–0 to 25 feet from the watercourse transition line: No-cut (except for harvest of cable corridor trees where needed) or limited entry to improve salmonid habitat through use of selection or commercial thinning silvicultural methods. At least 85 percent overstory canopy (where it exists prior to harvest) is to be retained within 25 feet of the channel.
- Class II outer band–remainder of WLPZ: High basal area and canopy retention zone. Basal area retention will remain high through the use of all-age large tree and single tree selection silvicultural systems. Overstory canopy will be retained to prevent water temperature increases and allow for adequate canopy recovery where required.
- Class III–ELZs will be at least 25 feet on side slopes less than 30 percent, and 50 feet on slopes greater than 30 percent. These zones will be expanded where site-specific investigations reveal that additional protection is merited for preventing sediment movement into Class III channels.
- Class III–Burning will be conducted so that the majority of large woody debris is left within the ELZ. Fuels are not to be ignited within 50 feet of Class III channels.

The recruitment of LWD to the stream environment over time and consequent influence on the formation of pool habitats is also achieved through a variety of other habitat conservation strategies. The following strategies will be applied where they overlap with stream environments:

- Retain native hardwoods in the WLPZ except where species imbalance has occurred.
- Old-growth groves and residuals are protected per the JDSF old-growth conservation strategy.
- Salvage of dead or dying trees will not occur within the WLPZ, old-growth augmentation area, species-specific management area described in a Habitat Conservation Strategy, or other area specifically identified. Exceptions may exist in response to large-scale occurrence of fire, insect attack, windthrow, or threat to infrastructure.

Other habitat protection measures include:

- Natural springs and seeps that may provide habitat for non-fish aquatic species are provided the same protections as Class II streams
- LWD within the WLPZ will be retained and recruited to the stream system unless it presents an imminent risk to drainage structures.
- Selected roads within the WLPZ will be abandoned and decommissioned as described in the Road Management Plan. Construction and abandonment will be consistent with the standards described in the Road Management Plan.
- Road construction and harvesting proposed in inner gorge areas may be approved only after conferring with a Certified Engineering Geologist.

Forest roads are recognized a major potential contributor of management-related stream sediment. The DFMP includes a program to inventory and improve the road system. The ADFMP accelerates the timeline for implementing the Road Management Plan (see General Response 13).

Hillslope management is another element of the overall aquatic resource and water quality protection program. As stated in the DFMP, “forest management activities with the potential to destabilize

slopes and/or damage aquatic habitat will be mitigated to help maintain stability of hillslope areas and control sedimentation. Special attention will be given to areas where mass wasting tends to occur. Site-specific measures will be developed and applied in THP design and implementation for potential high hazard areas. The goal is to limit management related input of sediment into stream channels that could affect aquatic habitat and water quality."

As with other resources, the protection of water quality and aquatic habitat is based on goals, monitoring and adaptive management. A description of the Monitoring and Adaptive Management goals are presented as Chapter 5 of the DFMP or the ADFFMP. Under the heading "Watershed Resources," five goals are presented that are aimed at hillslope management, reduction of sedimentation impacts, channel form and function, water temperatures, and aquatic species populations. Monitoring is described as "the process used to evaluate progress toward the stated goals in the management plan for JDSF." Adaptive management describes the "management strategies that will be implemented if analyses of monitoring results indicate that resource conditions begin to deviate from the desired trajectory."

Significant impacts to aquatic resources are not expected to occur. The implementation of the DFMP or Alternative G was found to have beneficial impacts related to several of the associated elements including: water temperature, LWD, potential barriers to migratory fish and wildlife populations, instream habitat and streambank stability, fish and amphibian populations, and the number and ranges of rare or endangered aquatic species.

General Response 12: Wildlife and Wildlife Habitat

Summary of Comments
Comments generally call for increased emphasis on protection of wildlife and wildlife habitat.

Response to Comments
The maintenance and development of species populations and habitats is an important component of the management plan.

In addition to the provisions of the management plan, management activities on the forest are guided and directed through a variety of programs and policies to protect and manage California's wildlife resources. These include:

- California Environmental Quality Act (CEQA)
- California Forest Practice Rules
- California Fish and Game Code
- California State Endangered Species Act (CESA)
- Federal Endangered Species Act (FESA)

Wildlife and wildlife habitat management policies on JDSF will integrate and comply with these regulatory programs (refer to section VII.6.6.2 for a complete discussion of the regulatory framework for the protection of wildlife).

The DFMP and Administrative Draft Final Forest Management Plan (ADFFMP) include specific measures intended to provide for maintenance or development of valuable habitats and habitat elements. These include the following:

- Riparian Areas: Refer to General Response 11.

- Old Growth and Late Seral Forest: Refer to General Responses 8 and 9.

- Hardwoods: JDSF will maintain the naturally occurring hardwood components in

riparian stands (WLPZs) and other special concern areas when consistent with the objectives of that area. Maintaining and recruiting hardwoods on JDSF, including larger size classes, will enhance not only wildlife species diversity but also forest structural diversity.

- Snags: A goal for the entire forest is to attain one snag per acre (on a 160-acre sub-watershed scale) that is at least 30 inches DBH. The desired future condition for snags in all wildlife special concern areas is to have three snags per acre, of which two are at least 20 inches DBH and one is at least 30 inches DBH, averaged over a 160-acre sub-watershed area. Periodic sampling will be utilized to monitor snag density, as part of the CFI inventory system. Snags will be unevenly distributed across the forested landscape in both riparian and hillslope areas. The distribution pattern of snags will include grouped and scattered single trees. JDSF also will recruit snags through indirect measures, such as retention of larger conifers (at least 30 inches DBH) in select areas to provide wildlife habitat.

- Large Woody Debris (LWD): JDSF will manage for a minimum of two downed logs per acre that are at least 20 feet in length with a diameter of 16 inches on the large end and one log per acre at least 24 inches in diameter on the large end and at least 20 feet long. Log densities are averaged over a 160-acre subwatershed area. WLPZs and special concern areas will contribute a greater proportion of downed logs. To provide LWD to streams, the ADFFMP includes a management measure for the survey, recruitment and placement of LWD.

- Species of Concern: The DFMP includes general riparian protection measures for the Yellow Warbler and Olive-sided Flycatcher. The ADFFMP includes specific protection measures for the Northern Spotted Owl, Osprey, Snag and Cavity Dependent Species of Concern, Marbled Murrelet, Northern Goshawk, Cooper's Hawk, Vaux's Swift, Purple Martin, and Sonoma red tree vole. For other species, JDSF will evaluate the potential for individual land management actions to have a significant impact on listed (rare, threatened, or endangered) species. In those cases where that impact may be significant, appropriate survey and mitigation measures will be implemented. Although individual project circumstances will dictate the procedures to be used to determine degree of project associated impacts, in general, a scoping process followed by surveys and mitigation development will occur. An assessment area that extends beyond the boundaries of the planned activity also may be required for some species. For unlisted species identified as sensitive, evaluation and mitigation practices are likely to vary according to identified need, the current state of species knowledge, and through consideration of input provided by CDFG.

Management of wildlife resources often requires balancing conflicting habitat needs. Management activities designed to enhance habitat values for one species may reduce habitat values for another. Individual species may have different habitat requirements for foraging, cover and nesting. In other words, habitat that is well suited for nesting may be less favorable for foraging. Adding to the complexity is the effect of patch size and distribution. Fragmented forests with small patch size have a high ratio of forest edge to interior forest conditions when compared to forests with large patch size and a high level of connectivity. The relative proportion of edge to interior forest conditions may be favorably correlated with some species and negatively correlated to others. The JDSF approach is to provide a diverse mosaic of habitat conditions with varying habitat patch size and connectivity characteristics. This includes the provision for a contiguous 6,803-acre area, extending across JDSF from west to east and north to south, composed of a Older Forest Structure Zone, Old Growth Groves, and Late Seral Development Area.

Structural diversity can be viewed at various scales. Retention and recruitment of structural habitat elements, such as snags, within a particular habitat type can be utilized to increase the structural diversity. The ADFFMP includes a measure to retain all snags within all timber harvest areas until snag targets are met, with the exception of snags that pose a fire or safety hazard, or are within the alignment of roads proposed for construction. The largest snags, including residual old-growth snags, should have priority for protection until the snag retention goals are met. The ADFFMP designates approximately two thirds of the Forest to late seral, older forest structure, and other uneven-aged management strategies.

The DFMP and ADFMP have been developed to minimize the potential for adverse impacts to sensitive wildlife species. Species at risk often rely on habitats or key elements that are uncommon in young forests. The DFMP and ADFMP seek to protect, recruit, or enhance habitats and habitat elements of value to species of concern.

The analysis concluded that Alternative G, as mitigated and proposed in the ADFFMP, are not expected to result in significant adverse impacts to wildlife and wildlife habitat.

General Response 13: Roads

Summary of Comments
The comments generally express concern that the environmental degradation caused by the current road system is not being adequately addressed or that the Road Management Plan lacks adequate funding.

Response to Comments
The Board and CAL FIRE recognize the need to inventory and improve the JDSF road system to reduce the sediment production associated with management activities. As noted in the Draft Forest Management Plan (DFMP) and DEIR, numerous studies have shown that forest roads are a major source of management related stream sediment. Much of this sediment originates from points at which or near where streams are crossed by roads, from inside ditches, and from large fill failures. The DFMP, Alternative G, and the Administrative Draft Final Forest Management Plan (ADFFMP) include programs to inventory and improve the JDSF road system.

The current transportation system relies, in part, on a road network that reflects a history of various transportation technologies and forest practices. Beginning in the 1870s, railroads were used to transport logs in some watersheds; many railroad grades were located along or adjacent to streams. The current road system still utilizes several segments of these old railroad grades. Most of the roads on JDSF were constructed from the 1950s to the 1970s. Roads of this period often included inboard ditches and cross drains. Concentrated runoff from these types of roads has been shown to be a major source of fine sediment, because inboard ditches are often connected directly to channels that can carry the sediment to fish-bearing streams.

The intent of the Road Management Plan is to provide a systematic program to ensure that the design, construction, use, maintenance, surfacing and abandonment of the Forest's roads, landings and road crossings will be conducted to avoid, minimize, or mitigate significant adverse impacts to aquatic habitats that support anadromous fish, amphibians, and other aquatic organisms, as well as significant adverse impacts to water quality beneficial uses. The focus of JDSF's road management program will be to minimize the volume of sediment that enters watercourses, rather than to maximize the number of miles of road treated per year. The plan includes a comprehensive road inventory to assist managers in identifying problems and roads that require proper abandonment, assigning maintenance and mitigation priorities, and identifying the most effective designs for roads, landings, and stream crossings.

Although the Board does not directly control the operating budget of JDSF, the Board and Department are aware of the need for funding to appropriately manage the Forest. A Budget Change Proposal approved for the 2006/07 fiscal year increased the funding level authorized for JDSF management activities such as the Road Management Plan; these funds are generated through timber harvesting on the Demonstration State Forests, particularly JDSF.

The Road Management Plan includes the following six major components (note: although the numbered items below quoted from the DFMP specify a 5-year inventory of the road system, this period has been reduced to 3 years by the Board, as reflected in ADFMP Appendix IX):

1. Inventory. The inventory of roads and stream crossings will provide the basis for upgrading and mitigating the road system at JDSF. It will allow the Forest staff to: a) identify problems that can be corrected through routine maintenance activities; b) assign maintenance and mitigation priorities to planning watersheds, road segments, and crossings; c) identify the most effective designs for roads, landings, and culvert problem sites; and d) identify roads to be properly abandoned. During the first five years, all existing roads will be inventoried (approximately 100 miles per year). Following a reconnaissance level screening for problem sites, staff and other consulted experts will develop site specific mitigation measures for identified significant potential or existing problems.

2. Design and Construction. Road, landing, and crossing design will follow the current state of the practice, such as is currently described in the Handbook for Forest and Ranch Roads (Weaver and Hagans 1994), or as suggested by JDSF RPFs and CEGs where a THP has been submitted. Existing and new roads needed to accommodate cable yarding on slopes steeper than 40 percent will generally be located on or near ridge lines (although mid-slope roads will remain). The goal for the final transportation network is to establish roads in low risk locations that will accommodate appropriate yarding and silvicultural systems. A specific target road density, however, will not be used. Roads in unstable areas will be avoided whenever possible and are only to be built if a CEG finds it unlikely that mass wasting will deliver sediment to a watercourse.

    a. Use Restrictions. Wet weather operations on JDSF will be minimized. Specific measures include:
    b. no truck hauling when greater than 0.25 inch of precipitation has fallen during the preceding 24 hour period (applies to the entire year);
    c. no hauling/vehicle access when road rutting is occurring at a rate greater than that found during normal road watering,
    d. resumption of hauling only after rain has ceased for 24 hours and no turbid water produced from road surface runoff is observed in ditches along the roads where hauling may occur, and
    e. seasonal closure or surfacing for roads located in WLPZs if they are subject to moderate to heavy log truck traffic during the winter period.

3. Inspection and Maintenance. Proper maintenance is a key to reducing the long-term contribution of road related sediment. Permanent and seasonal roads will be inspected at least once annually to ensure that drainage facilities and structures are functioning properly. Two types of inspections will be used: 1) formal inspections, and 2) rapid ad hoc inspections. During formal inspections, all crossings and roads will be carefully observed every two years, and problem sites will be recorded on road/crossing inventory forms. To cover the period between detailed inspections, a rapid ad hoc inspection will be made by JDSF

Foresters and other staff during normal activities. "Storm patrol inspections" of known or anticipated problem facilities will be triggered by large winter storm events. Abandoned roads will be inspected at least twice following the completion of the decommissioning process.

4. Abandonment. Information for identifying and prioritizing road segments requiring abandonment will come from the road inventory, which will be completed over the first five years of the Road Management Program. The actual number of miles that will be proactively abandoned will depend on the results of the inventory, but it is estimated to be between 50 and 100 miles. Some of the criteria that will be used to identify candidate roads to proactively abandon include: 1) unstable areas, 2) roads in close proximity to a watercourse (particularly Class I watercourses with anadromous fish habitat), 3) roads not needed for management purposes, and 4) roads with excessive amounts of perched fill on steep slopes or in close proximity to watercourses.

5. Schedule. The locations of critical habitat for coho salmon and steelhead will be used to prioritize the sequence of the road inventory work. Secondary factors will include existing rates of sediment delivery to sensitive watercourse channels, based on gradient and degree of confinement, and likely hazards such as high density of riparian roads or stream crossings.

A detailed discussion of the Road Management Plan can be found in Appendix VI of the DFMP. Additional discussion of the subject can be found in the DEIR (Sections: VII.6.1, VII.10.6, VII.10.7, VIII.3, VIII.4, VIII.7 and Appendix 8 and 11).

The DFMP proposed a 5 year timeline to complete the inventory and evaluation of all roads on the Forest. The ADFFMP proposes to accelerate the implementation of the Road Management Plan to the extent feasible. The major components of the accelerated plan include: completion of the road inventory and evaluation in 3 years rather than 5; until completion of the road inventory, survey and evaluate all appurtenant roads as part of each Timber Harvesting Plan (THP), and complete the identified needed road upgrades as part of the THP. The feasibility will be determined by availability of JDSF staff and contractors, availability of funding, and by the ability to include road upgrade work as part of timber sale contracts.

Implementation of the road management plan is expected to result in a reduction of management related stream sediment and an improvement of water quality and aquatic habitat over time. Additional measures to address sedimentation, including hillslope management and minimizing the use of tractors in and near WLPZs, should further reduce sediment inputs. Therefore, the impact analysis in the DEIR and RDEIR found that the DFMP and Alternative G, respectively, with regard to these resources, would have a less than significant adverse impact.

Additional protection measures relating to mass wasting, surface erosion, road management, and riparian vegetation can be found in Chapter 3 of the DFMP or ADFFMP, and also are discussed in various sections of the DEIR (VII.6.6 Wildlife and Wildlife Habitat, VII.7 Geology and Soils, VII.10 Hydrology and Water Quality, and VIII Cumulative Effects) and RDEIR.

General Response 14: Recreation

Summary of Comments

Comments generally suggest increased emphasis on recreational values. Some suggest that JDSF should be managed primarily for recreation. Related to this issue is the suggestion that the recreation and tourism industry will provide a more sustainable economic base and should therefore replace the timber industry. Some of the comments are concerned with the proposed management methods in

the Jackson Demonstration State Draft Forest Management Plan (DFMP) and do not directly apply to the impacts analysis conducted in DEIR.

Response to Comments
Regulations governing the management of state forests must conform with forest management practices which are designed to meet "maximum sustained production of high-quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment (PRC section 4651). Board policy emphasizes that the primary purpose of the State Forests is to conduct demonstrations, investigations, and education in forest management (Board Policy 0351.3). Additionally, Board policy recognizes recreation as a secondary, but compatible use of the forest (Board Policy 0351.5). Alternative G and the ADFFMP identify Research and Demonstration as Goal #1 for JDSF and Recreation and Aesthetic Enjoyment as Goal #5 (see Appendix 1 in the RDEIR).

The ADFFMP provides greater emphasis on the protection and restoration of public trust resources when compared to previous management plans. The management plan sets harvest levels well below growth, protects old growth trees and stands, and provides for the development of late seral habitat and older forest structure. JDSF will manage forested stands in WLPZs to promote their ecological succession to late-successional forest conditions (see General Response 11). Commenters have identified older forest conditions as having high recreational and aesthetic values. The plan also calls for a reduction in the overall use of evenage management and incorporates mitigation measures to reduce the possible impacts to aesthetic and recreation resources (see General Response 10). Further, Alternative G and the ADFFMP call for a substantial increase in the miles of road and trail subject to the aesthetic and recreational protection of a Road and Trail buffer. These management strategies are expected to enhance the recreational resource value of JDSF.

The recreation program at JDSF will continue to make camping and day-use facilities available free of charge. JDSF complements the more protective and restrictive state parks by allowing free access and a wider range of activities, including horseback riding, hunting, and mountain biking. A purpose of the recreation program is to demonstrate that recreational use and timber management are compatible land uses. A recreation survey to assess current use and future needs is planned. Upon completion of the survey, recreation corridors will be defined explicitly where possible for integrating the recreation program with resource protection, timber management, demonstration, education, and the neighboring community. An emphasis will be to increase opportunities for recreation by adding to the existing trail system. Another objective will be to increase the involvement of interested local persons and groups in the location, design, construction and maintenance of the new recreational trails. The Department will form and consult with a local recreational user-group. Maintenance and expansion of the recreation facilities will be limited by the availability of funds and will not exceed the carrying capacity as determined in the management plan.

An analysis of the economic effects of attempting to replace the timber industry with recreation and tourism can be found in Section III of the DEIR. The results of that analysis indicate that, at the regional level, a continued decline in the timber-based economy will not be offset by growth in economic activity associated with redwood parks or in other segments of the tourism industry. There are several factors that are relevant. The 2003 Occupational Employment Statistics survey for the North Coast region, which includes Del Norte, Humboldt, Lake and Mendocino counties, found that based on samples of representative jobs, each tourism type job pays only 62%($19,700 vs. $31,721) of the annual wages of a timber industry job. Tourism also tends to be concentrated on the coast and is highly seasonal. Del Norte County, which has some of the most impressive redwood parks, is illustrative of the difficulties associated with transition from a timber-based economy to a recreation economy. The work force there has declined since 1997, and it still has the highest unemployment of the region.

The impact analysis in the DEIR and RDEIR found that the DFMP and Alternative G, respectively would have a less than significant adverse impact on recreation.

General Response 15: Sustainability and Future Generations

Summary of Comments
A number of comments indicated a concern that the management plan as proposed does not adequately protect this public resource so that future generations can enjoy it. These comments range from those who believe that the proposed management plan is an assault on the protected status of a "pristine wilderness" to those who feel that the forest is currently in a degraded condition and that updated management plan will not adequately address a legacy of ongoing resource degradation.

Response to Comments
JDSF is not a park or wilderness area. The management of the Demonstration State Forests differs from that of the more preservation oriented management of state parks and wilderness areas. The legislative mandate that led to the creation of the state forest system included a provision to purchase one area in each of the forest practice districts for the "purpose of demonstrating economical forest management" (Public Resources Code § 4531). The main portion of JDSF was purchased by the State over a period of years between 1947 to 1951. At that time, most of the lands were in a cut-over condition. Additional lands were added to the Forest in 1968, while specific areas of the Forest were sold or traded to private timber companies to help finance the purchase of lands for the state park system. The resulting 48,652-acre forest is managed by CAL FIRE under the policy oversight of the Board.

About 460 acres of old growth remain in isolated stands on the forest (see General Response 8 in regard to old growth protection measures). Through management and reforestation efforts, the remainder of JDSF has developed into a healthy young growth forest ecosystem consisting primarily of redwood, Douglas-fir, and hardwood tree species. CAL FIRE has invested in an extensive inventory system, and the most recent round of forest inventory data collection occurred in 2005. The Department has consistently harvested well below the level of growth of the forest, resulting in an increasing forest inventory and an increase in carbon storage. By providing research opportunities and demonstrating responsible and innovative forest management techniques, JDSF influences management practices well beyond its boundaries. A summary of the history, purpose, guiding legislation and management direction of JDSF can be found in General Response 2.

The Administrative Draft Final Forest Management Plan (ADFFMP) represents significant advancement in the management practices aimed at protection and restoration of environmental resources when compared to previous management plans. One of the primary goals of the JDSF Management Plan is to achieve net improvements in environmental conditions over time. Management goals stated in the ADFFMP include Research and Demonstration, Forest Restoration, and Watershed and Ecosystem Process (see Appendix I in the RDEIR).

The DFMP, Alternative G, and the ADFFMP all incorporate monitoring and adaptive management feedback systems (see DFMP or AFFMP Chapter 5). Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary in response to the results that are observed. This approach will help to keep the Plan implementation in step with new science and management techniques. Elements to be monitored include streams, habitats, botanical resources, forest growth, selected fish and wildlife species, recreational uses, timber production, and roads.

As discussed in detail in General Response 8, the management plan protects all old growth groves. The plan provides for the development of a large contiguous area of older forest structure, late seral, and old growth forest, which will connect most of the existing old growth groves across watersheds (see RDEIR page II-7 and General Response 9). Late seral development areas will augment several

old growth groves. The wildlife habitat and aesthetic value of the groves will be enhanced through the use of these adjacent stands.

Requests to manage the entirety of JDSF for a single purpose, such as development of late seral and old growth stand conditions, while important, would severely limit the research and demonstration potential of the forest, and would be in conflict with the legislative direction for the forest. The diverse habitats created by a broad spectrum of management practices have allowed, and will continue to allow, for flexibility and opportunity for research as the issues and concerns involved in forest management have evolved over the past 60 years.

The Board and CAL FIRE are committed to sustainable management practices. This includes protection and improvement of non-timber resources. As one means of demonstrating resource sustainability practices, JDSF will seek certification of its forest management under the programs of the Forest Stewardship Council and the Sustainable Forestry Initiative.

The analysis contained in the DEIR and RDEIR found that the adoption of the ADFFMP would not result in significant adverse environmental impacts and would have beneficial effects on many resource categories. In addition, the research and demonstration mandate can lead to improved management practices and a reduction in land use conversion beyond its borders. See also General Responses 8, 9, 11, 12 and 14 for resource specific responses relating to old growth, late seral and older young growth, aquatic resources, wildlife habitat, and recreation.

General Response 16: Timber Harvesting

Summary of Comments
The Board has received a broad range of comments relating to planned harvest levels, ranging from those who feel that the harvest level should match current growth to those who feel that no harvesting should occur on state owned forests. Some comments have indicated that timber harvesting on JDSF equates to exploitation and destruction of a public resource for short-term financial gain.

Response to Comments
The legislative mandate that led to the creation of JDSF was to purchase one area in each of the forest practice districts for the "purpose of demonstrating economical forest management" [Public Resources Code (PRC) § 4531].

The legislated intent for Jackson Demonstration State Forest foreshadowed the importance of managing young growth forests, long before the harvest of young growth trees surpassed that of old growth during the 1980s. Public Resources Code section 4631 states:

> It is hereby declared to be in the interest of the welfare of the people of this state and their industries and other activities involving the use of wood, lumber, poles, piling, and other forest products, that desirable cutover forestlands, including those having young and old timber growth, be made fully productive and that the holding and reforestation of such lands is a necessary measure predicated on waning supplies of original old growth timber.

In managing states forests, the California State Legislature stated: "It is further declared to be in the interest of the welfare of the people of this state, that the state do all of the following: retain the existing land base of state forests and timber production for research and demonstration purposes." (PRC § 4631.5)

Board policy, Chapter 0350, identifies the value of the state forest system to the public:

> To attain proper management of private timberlands in California, there is a need to investigate, develop, and demonstrate new and improved forest management methods to timberland owners and the public. The State forests serve this purpose while contributing to the economic stability of local communities by providing high yields of forest products, which sustain local employment and tax bases. Outdoor recreation is an important benefit of state forests.
>
> The significance of the State forest program in demonstrating improved practices will increase as the demand for forest products increases and as public interest in forest management practices intensifies. Demonstrations of the compatibility and conflicts involved in multiple use of forest land are essential as population and development pressures increase on California's forest lands.

Board policy 0351.2, Program Purpose and Land Use Priorities, states:

> The primary purpose of the State forest program is to conduct innovative demonstrations, experiments, and education in forest management. All State forests land uses should serve this purpose in some way. In addition:
>
> A. Timber production will be the primary land use on Jackson, Latour, and Boggs Mountain State Forests. Timber production will be subordinate to recreation on Mountain Home State Forest;
>
> B. Recreation is recognized as a secondary but compatible land use on Jackson, Latour, and Boggs Mountain State Forests. Recreation is a primary use on Mountain Home State Forest as prescribed by Section 4658, Public Resources Code:
>
> C. State forest lands may be used for Department administrative sites when such use will benefit State forest programs or protection;
>
> D. Special uses primarily benefiting non-forestry and/or private interests will have low priority. Such uses that conflict with State forest objectives are discouraged

PRC § 4651 states:

> The management of state forests and the cutting and sale of timber and other forest products from state forests shall conform to regulations prepared by the director and approved by the board. These regulations shall be in conformity with forest management practices designed to achieve maximum sustained production of high-quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment. The sale of timber and other forest products is limited to raw materials only.

As described in the California Forest Practice Rules, maximum sustainable production (MSP) is achieved in part by balancing growth and harvest over time (14 CCR § 913.11).

The Board developed of the Administrative Draft Forest Management Plan (ADFFMP) to balance public concerns while remaining consistent with the legislative mandate and Board policy for the Demonstration State Forest system (see General Response 2). The timber harvest level and allocation of silvicultural prescriptions under the Alternative G and the ADFFMP are based on providing a varied landscape with a diverse set of forest structures designed to support a world-class forest research and demonstration program, rather than to achieve a particular level of timber

production. The research conducted on JDSF will help to improve our understanding of forest ecosystems and to guide the development of improved management practices and future forest practice rules. A summary of the history, purpose, guiding legislation and management direction of JDSF can be found in General Response 2.

As detailed above, the legislative intent for the state forests includes sustainable harvesting of timber. As part of the process to ensure that proposed timber harvests are sustainable, JDSF is required to collect high-quality forest inventory data and to conduct a detailed analysis to demonstrate maximum sustained production of high-quality timber products over a 100-year planning horizon (California Forest Practice Rules requirements for "maximum sustained production of high quality timber products," 14 California Code of Regulations § 913.11). The estimated long-term sustained yield of JDSF under Alternative G or the ADFFMP is 56 million board feet annually (RDEIR Table II.4 pg 28-29). The expected average annual harvest level during the next 10 to 15 year is estimated to be 20 to 25 million board feet (MMBF), although the ADFFMP would authorize an allowable cut of up to 35 MMBF/year. It is expected that the growth produced by forest management will provide for an increase in the current level of production over time, subject to constraints produced by other forest values..

Timber sales are the primary source of funding for management of the State Forests, including, road maintenance and improvement, stream restoration, timber stand improvement, research, recreation, and staffing. Income from the sale of timber, tax payments, and both direct and indirect timber related employment, are expected to have a positive economic effect on the county and the region. Rather than providing only a "short term financial gain," sustainable management of JDSF under the ADFFMP is expected to be a long-term sustainable source of both economic and natural resource benefits.

The concept that all timber harvesting inherently causes a significant impact to, or "destruction" of, other resource values is not supported (see General Response 6). For example, the Board recognizes that timber operations can lead to temporary impacts to aesthetic values, so the plan includes mitigation and project planning will include a site-specific assessment of these potential effects, in order to avoid significant impacts. The resource-specific analysis performed for the DEIR found that application of several mitigation measures would reduce the potential negative impacts associated with various management practices to a level less than significant (see Administrative Draft Final Forest Management Plan, Appendix IX for a summary of mitigation measures). Timber harvesting as proposed in the management plan, will meet or exceeds all regulatory standards. Future forest management projects, including timber harvest plans, are subject to further analysis on a site-specific basis.

In addition to providing detailed direction for timber management, Alternative G and the ADFFMP emphasize that restoration and maintenance of functioning ecological systems are of high priority. The commitment to monitoring and adaptive management will ensure that other timber related resource conditions are on the correct trajectory to meet the stated management goals.

The analysis provided in the DEIR and RDEIR indicate that significant adverse environmental impacts related to timber harvesting are not expected to occur under Alternative G or the ADFFMP.

General Response 17: Timber Industry

Summary of Comments
Comments indicated a concern that the harvesting of timber is a subsidy to the timber industry at the expense of the public or that the timber industry exerts undue influence over the management direction of JDSF.

Response to Comments
The EIR and management planning process provides an opportunity for public input regardless of affiliation or management preference. The management planning process is not influenced by any industry, though members of any industry may comment upon the management plan. The management direction for JDSF is taken from legislative statute, regulation, and Board of Forestry and Fire Protection policies. A discussion of the legislative mandate for the state forest system can be found in Section II of the DEIR. See also General Response 2.

The comments generally provide no supporting documentation of the claim that harvesting on JDSF provides a subsidy for the timber industry. Available timber is sold on a competitive basis, representing fair market value. The minimum bid is set by the Department according to the calculated appraisal value. This does not constitute a subsidy. The sale of timber results in both direct and indirect timber-related employment, but that does not equate to a subsidy. Public tax dollars do not subsidize harvest operations. In fact, timber sales are the primary source of funding utilized for management purposes on the State Forests, including road maintenance and improvement, stream restoration, timber stand improvement, research, and recreation.

General Response 18: Provisions for a JDSF Advisory Body

Summary of Comments
Comments indicated a concern that an advisory body is needed for JDSF to ensure that there is adequate opportunity for ongoing public input regarding the management of the Forest, particularly from local interests. Some also expressed an interest in advisory body input from researchers and technical experts. A range of views was expressed on whether a JDSG advisory group should be appointed by the CAL FIRE director, the Board of Forestry and Fire Protection, or some hybrid thereof.

Response to Comments
There is an existing statewide Demonstration State Forest Advisory Group, appointed by the CAL FIRE director. Membership is composed of elected local government officials, including Mendocino County, an environmental organization representative, university-affiliated scientists and an extension specialist, a hydrologist, fisheries and wildlife biologists, a Registered Professional Forester who works with small landowners, a high-level staff member for an industrial forest landowner, and a Board of Forestry liaison.

The Board of Forestry and Fire Protection has indicated that it will be re-establishing its Committee on Research, which has been dormant for some time. The latter entity has broad responsibilities with respect to review of ongoing research programs; advising the Board on research needs, priorities, and policy; playing a leading role in improving the coordination and cooperation of the various public and private entities engaged in forest research; and recommending a system of collection, maintenance, dissemination of forestry research project information.

The Draft Forest Management Plan (DFMP) was silent on the subject of advisory bodies for JDSF, while Alternatives D, F, and G contained varying provisions for the establishment of one of more advisory bodies (see, e.g., Table II.4 in the RDEIR. Following the Board's direction, the Administrative Draft Final Forest Management Plan (ADFFMP) builds on Alternative G's direction for a JDSF advisory group and provides for the following:

- The charter and membership composition of the advisory body is to be proposed by the CAL FIRE director and approved by the Board;
- The membership is to include persons with knowledge of forest resource issues; be drawn from a variety of interests, including local and beyond, environmental,

timber management, and recreational; have expertise in relevant scientific disciplines, e.g., forestry, botany, ecology, fish biology.

- Members do not "represent" particular interests – they are chosen for knowledge and are to represent the public interest.
- The director will appoint the members of the advisory body, and these appointments will be subject to the Board's approval;
- The advisory body will advise the director/department and the Board on possible changes to the new management plan, matters of management plan implementation, and policy;
- During an initial implementation period, the advisory body will review the new management plan an make recommendations to the director and the Board with respect to any changes the advisory body believes should be made to the plan, particularly with respect to issues of:

    - long-term research goals and actions under the management plan;
    - proposed significant management activities;
    - forest structure goals and utilization of various silvicultural systems;
    - reviewing and making recommendations regarding the new management plan during the initial implementation period, which will last up to three years

Board staff and the Department are to assure consistency/coordination among three committees described above.

The existence of an advisory body has no per se effect on the potential environmental impacts of the DFMP or ADFFMP. However, it may have an influence on the manner in which the management plan is implemented or in changes made to the management plan over time.

IV.1 Responses to Individual DEIR E-Mail Comments E-1 to E-26

This section presents responses to individual public comments (i.e., not form letter or form letter based) received via e-mail. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

E-1

From: wrismart@mcn.org
Posted At: Wednesday, February 01, 2006 5:50 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I strongly oppose the proposed management plan for Jackson State Forest. It is a slap in the face to the taxpayers who provided ample public comment and support of alterations in the Public Resource Code that would have changed the purpose of Jackson State Forest. The Preferred Alternative devolves to the original proposal, without any consideration of expert public comments from agencies and scientists that would have (among other things) increased protection for endangered Marbeled Murrelet habitat, and decreased group
2 selection in the oldest second-growth stands. The Preferred Alternative is justified on the premise that it "meets the goals of the public resource code" when Legislative Action championed by Senator Wes Chesbro, which would have changed that purpose, was strongly supported by taxpayers, but opposed by the forest industry and the appointed (not elected) Board of Forestry. If this plan is adopted without modification, it is a clear signal that the public comment process is unimportant to the appointed Board of Forestry and Governor Schwarzenegger.

3 I do not oppose all logging in Jackson, but I do oppose treating this public treasure as merely a tree farm. Its values go well beyond that, both economically and ecologically. The taxpayers own the forest, not the California Department of Forestry, nor the Board of Forestry. The Proposed Alternative is insulting, inappropriate, and violates the intent and purpose of the acts that have promised that public comment and input will be taken seriously.

4 I oppose approval of the draft environmental document(Draft EIR). It fails to consider any of the less "tree farm"
alternatives and dismisses them out of hand. There is no compromise or modification proposed even though public comment and expert comment urged modifications and
5,6,7 compromises. Funding for non-logging purposes such as road repair, watershed protection and enforcement of logging plans is either limited or non-existent. Currently, there is
8 sometimes one, and often no road patrol in Jackson, allowing indescriminate dumping and OHV tresspass. There is no clear funding for repair and/or decommission of the hundreds of
9 miles of roads that pour sediment into salmon bearing streams. There is limited funding for any purpose other than timber sales. There is no remedy for the current state of poorly funded watershed protection resources and personnel. Alternative E is better, though it lacks a committment of funding to accomplish true restoration of streams and watersheds.

10 The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
Again, this mocks the valid and nearly successful attempt to change this law and policy. The fact that the industry kept the Governor from signing Chesbro's Bill that was passed well over margin in the legislature makes a mockery of the EIR process.

11 The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." There is no science to back up this statement. Studies by prominent scientists were ignored.
The Citizen's Advisory Council advice was ignored.

12 The draft environmental document seemed to attempt to obscure with its massiveness. Its 1500+ pages may seem to make it substantial until it is reviewed when it is apparent that much of it is irrelevant and unsubstantiated projections. Species lists were inadequate

1

and projections of species numbers were science fiction.

13 The Draft EIR states that all impacts are unimportant as they will be "mitigated" without clearly stating what those mitigation efforts will be, or who will fund them. It fails to meet its legal obligation to provide the information and analysis the public needs to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,

Tanya Smart
17660 Redwood Sp. Dr.
Fort Bragg, California 95437
cc:
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

2

Email Letter E-1

Response to Comment 1
Opposition to the DFMP noted. Please refer to General Response 1.

Response to Comment 2
The Board and CAL FIRE are responsible for developing a management plan that is consistent with existing legislation. Public comment was encouraged throughout the development of the DFMP and EIR/RDEIR process. Public concerns and their effect on management are discussed in the DFMP starting on page 28. Additional measures, such as increased Marbled Murrelet habitat protection, were incorporated into Alternative C2 based on public comments (see Section VII.6.6.4). The Administrative Draft Final Forest Management Plan (ADFFMP) designates additional acreage to late seral development, which is aimed in part at providing the structural characteristics necessary to provide Marbled Murrelet habitat (see General Response 2, 8,9,11 and 12).

There is no specific allocation for group selection in the oldest second-growth stands, but given the goal of increasing late seral and older forest structure on the Forest it is likely that the use of group selection in the oldest second-growth stands will be limited to prescriptions aimed at improving late seral structural characteristics. There will be additional opportunities for public input on a more site specific basis during the THP process.

Several of the alternatives analyzed were based on input from the public. Alternative D is based on input from the Citizen Advisory Committee and Alternative F was based on Senator Wes Chesbro's proposed Bill, SB 1648, along with detailed comments from the Sierra Club. The range of alternatives analyzed was designed to cover a wide range of management objectives and activities (see General Response 4). The ADFFMP has been developed using components of several alternatives.

Response to Comment 3
The Board contends that the DFMP and the ADFFMP provide for management of JDSF that goes well beyond that of a tree farm (see General Response 2). The Board recognizes that the citizens of California own the Forest, and that CDF manages the forest on their behalf under the guidance of the Board. The comment provides no support for the conclusion that the proposed project violates the intent and purpose of the public comment process.

Response to Comment 4
The EIR includes an analysis of potential effects associated with a broad range of alternatives and their associated management activities (see General Response 4). The ADFFMP contains elements from several alternatives, and reflects consideration of public input.

Response to Comment 5
The ADFFMP addresses the inadequacies of the previous management plans in regards to roads with the inclusion of an Accelerated Road Management Plan (see General Response 13). Timber sales are the source of funding utilized for management purposes on the State Forests.

Response to Comment 6
See General Response 11. Timber sales are the source of funding utilized for management purposes on the State Forests.

Response to Comment 7
Forest Practice enforcement is not funded through the Demonstration State Forest system. Timber Harvesting Plans implemented on JDSF are subject to all applicable CEQA requirements for resource protection, including enforcement.

Response to Comment 8
JDSF is open to public access and recreation. While most visitors to the Forest abide by all applicable rules and regulations, some do not. It is recognized that illegal activity, such as dumping and OHV trespass, occurs on the Forest. Damage caused by illegal activity is ultimately the responsibility of the person or persons conducting this illegal activity. CAL FIRE employs staff dedicated to law enforcement, but this limited staff is incapable of preventing all illegal activity. However, when individuals are encountered who are breaking the law, they are dealt with appropriately.

JDSF staff devotes a considerable amount of time, effort, and expense to the pickup and disposal of refuse dumped illegally within the Forest. A clean-up staff of three part-time employees, often in combination with a heavy equipment operator and a conservation camp crew, has loaded and hauled hundreds of cubic yards of illegally-dumped refuse from the Forest, in addition to dozens of abandoned automobiles, travel trailers, and miscellaneous household appliances. This is an on-going activity, conducted in response to illegal dumping within the Forest.

The funding for these activities must be balanced with other management activities. Timber sales are the source of funding utilized for management purposes on the State Forests. Implementation of the FMP is not expected to cause significant adverse environmental impacts.

Response to Comment 9
Timber sales are the source of funding utilized for management purposes on the State Forests.

Response to Comment 10
See General Response 4. The Board and CAL FIRE are responsible for developing a management plan that is consistent with existing legislation.

Response to Comment 11
See General Response 6. The comment provides no evidence to support the statement that "Studies by prominent scientists were ignored", so a reasoned response is not possible. The input from the Citizen's Advisory Committee led to the analysis of Alternative D and, while not implemented in its entirety, several elements of Alternative D have been incorporated into the ADFFMP.

Response to Comment 12
See General Response 5. State of the art, best available information was utilized in the EIR analysis. The comment provides no evidence to support the statement that projections were irrelevant and unsubstantiated or that species lists were inadequate. A reasoned response is not possible.

Response to Comment 13
The DEIR/RDEIR concludes that all potential adverse environmental impacts were either less than significant or less than significant after mitigation. Mitigations are discussed in Section VII, Resource Specific Analysis, under Impacts. See General Response 3.

E-2

From: Mark Watt [mdwatt@earthlink.net]
Posted At: Saturday, February 11, 2006 7:33 PM
Conversation: Jackson State Demonstration Forest Management Plan -- Comments

Subject: Re: Jackson State Demonstration Forest Management Plan -- Comments

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

I'VE DONE CONSIDERABLE HIKING IN JACKSON FOREST OVER THE YEARS AND PARTS OF IT STILL COMPRISE A FOREST OF GREAT BEAUTY AND DIVERSITY.
1 HOWEVER, I'M VERY CONCERNED ABOUT THE INCREASING DECLINE OF THE PYGMY CYPRESS TREES THAT I NOTICE EVERY TIME I HIKE AT JACKSON.

That's why I'd strongly encourage you to adopt the "Older Forest Emphasis" Plan (Alternative F), plan for future management at Jackson Demonstration State Forest. Jackson
2 is truly a unique forest that deserves to be enjoyed in as pristine a condition as possible by all hikers, especially future generations.

Sincerely,

Mark Watt
420 N Oakland Ave Apt 18
Pasadena, CA 91101-1421

1

Email Letter E-2

Response to Comment 1
The Forest Management plan identifies the Pygmy forest as a Special Concern Area. This area will be subject to management restrictions designed to protect sensitive resources and no harvesting will occur. A discussion of potential impacts, mitigation measures and associated regulations relating to the Pygmy Forest can be found in DEIR Section VII.6.2-34. Significant adverse impacts to this resource due to the implementation of the Administrative Draft Final Forest Management Plan are not expected. The DFMP states "JDSF will maintain the current distribution and species composition of this plant community and protect it from harmful human disturbance, while continuing to allow recreational activities."

JDSF does have ongoing protection activities for the pygmy forest area. These include:

- barricading or gating the access points from neighboring private lands or public roads;
- patrolling and enforcing the vehicle trespass laws;
- garbage removal;
- educating the adjacent landowners as to state forest ownership;
- and educating the public-at-large about the value, sensitivity and need to protect the pygmy forest.

Response to Comment 2
Preference for Alternative F noted. See also General Response 1 and 2.

E-3

Kraemer, Candace

From: Al James [blueroguehog@yahoo.com]
Posted At: Tuesday, February 28, 2006 11:48 AM
Conversation: Maintaining Jackson State Forest as a demonstration forest
Subject: Maintaining Jackson State Forest as a demonstration forest

Dear Sirs

My name is Kevin Lane and I am sending you this e-mail on behalf of my mother, my father and myself. We live at 28800 hwy 20... about a mile from Jackson State Forest.

We are in favor of the Jackson State Forrest (JSF) remaining under the control and guidance of the California State Forestry Department as a demonstration forest.

Our reasoning is based on the following logic:

1 1) As a demonstration forest JSF provides, in effect, a laboratory where various logging techniques can be evaluated. It is unreasonable to expect private industry to do the research as their outcomes will no doubt be influenced by the near-term bottom line. The responsibility therefore falls on the government.

We have three options.... log poorly, log well, or don't log at all. And while environmentalist may desire the last option, their continual interference may preclude the second, and ensure the first.*

2 2) Maintaining JSF as a demonstration doesn't preclude its use as a recreational area. We have lived near JSF for many, many years and enjoyed its recreational attributes barely noticing the logging that was taking place. I might also add, that while the short term effects of logging are not so esthetically pleasing, the longer term effects is to open up the forest to allow a greater diversity of environments [mammals such as deer, for example, prefer an area in which enough sunlight has been allowed in so as to promote ground level vegetation].

3 3) Allowing JSF to be maintained as a demonstration forest provides for a continued source of revenue. This money can be used for many things, including the maintenance and improvement of forested recreational area in both in JSF and in other state forests.

4 As a final note, it seems ironic that a family living just a stones throw away from JSF is arguing on behalf of continued logging while, I am sure the majority of you mail against continued logging comes from metropolitan areas far away from JSF. Could it be that they appreciate the beauty of a redwood forest more than us? I doubt it. I simply believe that they don't understand, or haven't been able to witness first hand the care with JSF has been maintained as a demonstration forest.

Thank you

Eleanor Lane
Roy Lane
Kevin Lane

*I wanted to include the following links which illustrate the point I am making far better than I could:

http://www.radicalmiddle.com/x_nature.htm

http://www.newts.org/~newtsweek/html/clearcuts_may_preserve_ecological_biodiversity.html

5/22/2006

Email Letter E-3

Response to Comment 1
The Administrative Draft Final Forest Management Plan places increased emphasis on the Research and Demonstration mandate. The JDSF management plan will maintain a viable outdoor laboratory by managing the Forest to create diverse stand and habitat types (see General Response 2).

Response to Comment 2
The Board recognizes recreation as a compatible use of the Forest (see General Response 14).

Response to Comment 3
The Board recognizes the importance of timber based revenue for the State Forest system, as well as the local and regional economy.

Response to Comment 4
A wide range of comments were received from locals, as well as people from distant urban centers. Many locals have submitted comments advocating a preservation oriented management plan.

E-4

Kraemer, Candace

From: Tom Smythe [toms@harwoodp.com]
Posted At: Tuesday, January 31, 2006 12:53 PM
Conversation: JDSF EIR
Subject: JDSF EIR

January 31, 2006

George D. Gentry
Exectuive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

RE: JDSF

Dear YG,

I support Alternative C1, the preferred Alternative. This management objective is necessary for JDSF to maintain demonstration forest practices practical to the private landowner and to generate revenue for the state and local governments. Whether industrial or small forest landowner, even-age managment is a viable method of management. In addition, if option D, or worse F, are chosen it is only a matter time when it will be imposed on the private landowner. The onerous buffers associated with the watercourse requirements of alternative F will make practical forest management impractical. The demonstration requirement in F that only apply to small landowners will be worthless when their are few small landowners conducting a timber harvest. 1

If recreation and tourism is the mantra for those that want little to no forest management with anybody making (God Forbid) money off cutting trees, then they better shut the place down, build a casino and a dock at Noyo Harbor for cruise ships full of Chinese tourists, because tourism in a redwood forest does not work. Redwood National Park is proof of that. 2

Thanks for taking my comment.

Tom Smythe, RPF 2653
PO Box 249
Laytonville, CA 95454

Email Letter E-4

Response to Comment 1
Preference for Alternative C1 noted. JDSF will continue to be managed as a research and demonstration forest. The JDSF management plan will maintain a viable outdoor laboratory by managing the Forest to create diverse stand and habitat types (see General Response 2). This will include areas that are designated to allow even-age management, including clearcuts (see General Response 10). As part of the adaptive management and research programs a variety of stream buffer strategies will be utilized on JDSF using the applicable Forest Practice Rules as a minimum, except as modified to support research conducted under appropriate authorities (see General Response 11). Demonstration of economic forest management will not be limited to those activities applicable only to small land owners.

Response to Comment 2
A significant level of sustained timber production will occur at JDSF. The Board supports a balanced multiple use concept and maximum sustained production of high quality timber products. The Board recognizes the importance of a diversified economy in the region, including timber (see Section III of the DEIR for a detailed discussion of regional economic impacts). See also General Response 14.

E-5

Kraemer, Candace

From: Debbie Fry [mwoodent@adelphia.net]
Posted At: Tuesday, February 07, 2006 3:32 PM
Conversation: JDSF comments
Subject: JDSF comments

Good Afternoon. I would like to submit my comments regarding the changes coming up @ JDSF. I am a citizen of Willits, Ca interested in the ongoing management of this forest. I work cocreatively with Nature and have done so in this forest for several years. It is a very special area. Your efforts are very much appreciated. My comments
1 are as follows: In general, **Alternative B** is, in our opinion, the way to go with a few exceptions, as follows:
2 RE: **Fire Protection**- Alternative E. Active, ongoing and regular burns are indicated.
3 RE: **Hardwood Management** - C1-no herbicides whatsoever. These are extremely toxic to the environment in ways we still are unaware of. The hardwood population is not that unbalanced at this time and regular burns should bring about an appropriate balance.
4 RE: **Wildlife Management** - re: marbled murrelet-- Use C1 alternative. It is important to protect the habitat of this bird.
5 RE: **Rare plants** - Use C1 alternative here as well. These are important in ways we don't understand yet and require care and management.
6 RE: **Invasive species control** - Use Alternative E here. No herbicides. If you think about it, most grasses and many plants could be considered to be invasive compared to pre-contact vegetation. The use of herbicides is toxic and eventually ineffective.
7 RE: **Riparian zones** - Use alternative E here as well. These are very delicate areas that need active protection and care.
I thank you for your consideration of my opinion. The work you all have done so far is quite impressive, and appreciated.

Debbie Fry

Email Letter E-5

Response to Comment 1
Support for Alternative B, with exceptions, noted.

Response to Comment 2
The Administrative Draft Final Forest Management Plan calls for the use of prescribed fire as resources allow (see Section VII.8.1 for a detailed discussion of fire related issues). Fire is recognized as a natural ecosystem process, however long-standing fire suppression policies have altered the fuel loading and forest structure characteristics on JDSF, which will alter the fire behavior characteristics such that reintroduction of fire on the landscape may not imitate naturally occurring fire intensity. There is potential for use of areas within JDSF for site-specific research in the use of fire as a management tool. The use of fire can facilitate fire hazard reduction, silvicultural and habitat research, and ecosystem management research. Prescribed fire requires careful implementation to avoid impacts to other resource values, such as rare plants, heritage resources and private property.

Response to Comment 3
Alternative C1 (or Alternative G) does not preclude the use of herbicides for hardwood management The Board has selected an approach that treats hardwoods only where specific criteria are met (REIR II-1); seeking to minimize the use of herbicides and employ alternative methods. The ecological basis and incorporation of a range of treatment options shares some attributes with Integrated Pest Management for invasive weeds (see General Response 7). The JDSF approach to invasive weeds will be prevention oriented. This ecologically based program will utilize a combination of control methods and the use of herbicides will be minimized. One component of the forest management plan will be to conduct research and demonstration projects on alternatives to herbicides and integrated approaches, including the cost and effectiveness of various methods.

On the east end of JDSF the hardwood component is approximately 30 percent of the basal area on average. Silvicultural prescriptions, including hardwood removal, will be utilized in this area to slowly shift the hardwood component toward the former pre-European conifer dominated conditions. See General Response 7 and the DIER for discussions of herbicide regulation.

Response to Comment 4
Preference for the provisions of Alternative C1 in regards to Marbled Murrelet noted. Increased Marbled Murrelet habitat protection was incorporated into Alternative C2 (see Section VII.6.6.4). The Administrative Draft Final Forest Management Plan designates additional acreage to late seral development, which is aimed in part at providing the structural characteristics necessary to provide Marbled Murrelet habitat (see General Response 8, 9, 11 and 12). Specifically, Alternative G designates an additional 1,549 acres for the development of late seral forest conditions to provide potential habitat for the marbled murrelet.

Response to Comment 5
Preference for the provisions of Alternative C1 in regards to rare plants noted. JDSF has committed to completing a scoping process, including rare plant surveys. Specifically, for timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000). On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.

Response to Comment 6
Preference for the provisions of Alternative E with regards to herbicides noted. See General Response 7.

Response to Comment 7
Preference for the provisions of Alternative E with regards riparian zones noted. See General Response 11.

E-6

Kraemer, Candace

From: Ron Michener [rmichener@gotsky.com]
Posted At: Monday, March 06, 2006 3:27 PM
Conversation: Jackson State Demonstration Forest
Subject: Jackson State Demonstration Forest

1 Small landowners like us really need the funding that JSDF provides via the CFIP program for forest land improvment.

In return we have much healthier forests and are able to supply wood products to the people of this State.

2 The JSDF has been successful for more than 50 years providing proven harvest,growth and other techniques.. it seems to us that by shutting it down we are punishing success and removing needed funding for private landowners!

3 We believe that the legal wrangling should cease and that JSDF should continue on with the good job that they have done in the past.

Respectfully,

Ron & Carol Michener

rmichener@gotsky.com

Email Letter E-6

Response to Comment 1
The Board recognizes the importance of funding for programs such as CFIP. However, revenue from the state forest system no longer funds the CFIP program. This program is now supported by the General Fund. Demonstrations and research that are conducted on JDSF will continue to provide valuable information for private landowners and contribute to the knowledge base for improved forest management throughout the Redwood region.

Response to Comment 2
The Board recognizes the value of the Research and Demonstration aspect of the JDSF management plan for private landowners. The ADFFMP places increased emphasis on the Research and Demonstration mandate. The JDSF management plan will maintain a viable outdoor laboratory by managing the Forest to create diverse stand and habitat types (see General Response 2).

Response to Comment 3
The Board agrees that JDSF has for the most part been historically well managed.

E-7

Kraemer, Candace

From: Dan Fisher [Dan.Fisher@fruitgrowers.com]
Posted At: Monday, January 30, 2006 5:26 PM
Conversation: Comment on JDSF
Subject: Comment on JDSF

Mr. George Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry:

Please accept this as my comment for the alternatives listed for the newly released Jackson Demonstration State Forest DEIS. JDSF was originally established as a demonstration forest for the benefit of the people of the state to gain knowledge from research conducted on public timberland. This knowledge would therefore help in the management of public and private forests throughout the state. Other very important contributions from JDSF are the revenues generated from harvesting and the products manufactured, the jobs related to these activities and those indirectly connected, and so on. If we are to improve our interactions with our environment, we need research to test applications on the small scale then move to the large scale when appropriate. JDSF is ideally suited to perform these tasks. 1

Because of the above, I am supporting Alternative C1 - the Preferred Alternative. I also have strong support for this due to the fact that California forestlands are facing huge pressures due in large part to over-regulation and population demands for housing, causing many forestland acres to be converted to other uses. Open space is intricately important to individual and public well-being and well managed forestland plays a significant role in providing this benefit. Federal lands are essentially unmanaged due to the perceived notion that the "public" does not want them to be managed. Let's not allow the State to follow suit by abandoning management and leaving their lands to the will of Mother Nature. I respectfully request the Board of Forestry support Alternative C1. 2

Thank you for this opportunity to comment on such an important issue.

Respectfully submitted,

/s/ Daniel J. Fisher

Daniel J. Fisher
Fruit Growers Supply Company
1216 Fruit Growers Rd.
Hilt, CA 96044-9710
(530)475-3453 (O)
(530)475-3398 (F)

Email Letter E-7

Response to Comment 1
JDSF will continue to be managed as a Demonstration Forest. The Board recognizes the important role that JDSF provides including, research and demonstration, sustainable production of high quality timber products, revenue generation, and employment (see General Response 2). By providing an area dedicated to demonstration and research, the State forest system plays a critical role in the development of improved forest practices.

Response to Comment 2
Support for Alternative C1 noted. The Board recognizes the pressure of land use conversion. JDSF will continue to be managed as a Demonstration Forest and will not be converted to other uses. The Forest will continue to be available for research purposes, including the development of functional Forest Practice Rules. The Board supports a balanced multiple use concept and sustained production of high quality timber products. The legislative mandate requires active management of the Forest.

E-8

From: Bob Kelley [bkelley@nrmcorp.com]
Posted At: Tuesday, January 31, 2006 9:16 AM
Conversation: JDSF public comment

Subject: JDSF public comment

Honored Board: As a practicing RPF in this state since 1981, I would like to offer my comment on the JDSF DEIS currently posted. In keeping with the legislative mandate and intent for the use of JDSF, Alternative
C1 - the Preferred Alternative, is the best option for the future of JDSFand our region. In addition to economic benefits and continued research opportunities associated with this alternative, I feel California already has more than enough land involved in Federal, State, County, City and municipal parks, dedicated open spaces, wilderness areas, recreation areas, non-producing conservation easements, National Forests, etc. already in place throughout the State including the North Coast. Those entities responsible for upkeep and maintenance of these existing properties and facilities are already facing a lack of adequate funding as evidenced by park closures, cutbacks in staffing, etc. We cannot afford to add to this problem. We need what little remaining land that is available for production and contribution to the forest products industry to continue in this use. It would be inexcusable to remove even more land from a productive and healthy condition to create yet another set-aside. We cannot afford this. Alternative C1 - the Preferred Alternative is the best choice.
Thank you for considering this comment.

Bob Kelley
P.O. Drawer 1247
Eureka, CA 95502
(707) 269-1367

1

Email Letter E-8

Response to Comment 1
Support for Alternative C1 noted. The Board recognizes the importance of generating revenue to support important management activities. The legislation that provided for establishment of the State Forest makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of Forest management. A significant level of sustained timber production will occur at JDSF. JDSF will not be converted to a park or other "non-producing conservation easement". Continued production of high quality timber products from the forests of California is encouraged by the Board.

The Board-developed Administrative Draft Forest Management Plan (ADFFMP) strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the Demonstration State Forest system (see General Response 2). The timber harvest level and allocation of silvicultural prescriptions under the Alternative G and the ADFFMP are based on providing a varied landscape with a diverse set of forest structures designed to support a world-class forest research and demonstration program, rather than to achieve a particular level of timber production. This diversity of conditions is needed for a broad range of research and demonstration activities. Among other things, the research conducted on JDSF will help to improve our understanding of forest ecosystems and to guide the development of improved management practices and future forest practice rules. A summary of the history, purpose, guiding legislation and management direction of JDSF can be found in General Response 2.

E-9

Kraemer, Candace

From: Thomaswsk@comcast.net
Posted At: Tuesday, February 14, 2006 7:05 PM
Conversation: Support of JDSF Plan Alternative C1
Subject: Support of JDSF Plan Alternative C1

Dear Board of Forestry and Fire Protection,

I am writing to voice my support for Alternative C1 of the Jackson Demonstration State Forest Draft Environmental Impact Report. This Preferred Alternative provides for an emphasis on forest management with enough built-in flexibility to mainain JDSF as working forest while protecting public trust resources. It is critical that JDSF maintain robust research and demonstration programs that include a wide range of forest management options. JDSF provides a unique living laboratory to test various harvesting practices and research watereshed responses to various treatments. Please maintian JDSF as valuable reseach facility and not a park-like reserve. 1

Thank you for your consideration,
Thomas Sutfin
425 Olson Road
Soquel, CA 95073

Email Letter E-9

Response to Comment 1
Support for Alternative C1 noted. The Board recognizes the value of the Research and Demonstration aspect of the JDSF management plan. The ADFFMP places increased emphasis on the Research and Demonstration mandate. The JDSF management plan will maintain a viable outdoor laboratory by managing the Forest to create diverse stand and habitat types (see General Response 2). The Board supports a balanced, multiple use concept and maximum sustained production of high quality timber products.

E-10

Kraemer, Candace

From: Robert Nuzum [robert.nuzum@yahoo.com]
Posted At: Tuesday, January 31, 2006 1:04 PM
Conversation: Support of Alternative C1 in the new Draft EIR for Jackson demonstration State Forest
Subject: Support of Alternative C1 in the new Draft EIR for Jackson demonstration State Forest

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire protection
P.O. Box 944246
Sacramento, Ca. 94244-2460

Dear Mr. Gentry:

As a member of the California Licensed Foresters Association and a professional resources manager with 35 years of experience practicing in this state I strongly support Alternative C1.

I assisted in blocking the very unwise legislation sponsored by Senator Chesbro that would have been an absolute disaster for sustainable forest management at JDSF.

And, while I find I cannot make the Ukiah or Sacramento Public Hearings I would ask you to make my feelings known to the Board of Forestry and other interested parties.

I find that the Association's comments for Alternative C1, as follows, are well reasoned:

1 a) Contrary to some viewpoints the very real threat of large-scale conversion of native forestlands to other, more environmentally degrading uses is unprecedented, unjustifiable from a natural resource management standpoint and it appears to be a growing problem.

b) The JDSF is a working laboratory to test resource managment hypotheses and to carry on projects necessary to compete in the global markeplace.

2 c) We cannot allow the other EIR Alternatives to shift the emphasis of management that will limit the value of the JDSF, thereby limiting its statewide value to a narrow segment of landowners and researchers.

d) It is a fact that rural jobs lost if sustainable forestry is not practiced on the JDSF cannot be replaced by adding recreation or tourism as some in lieu industry. Even in the urban centers of this state where

3 recreation workers are paid the highest salaries they usually make less then $10.00 per hour with minimal or no benefits. And, recreation pursuits are more volatile and seasonal then sustainable forestry which further erodes the regional economics of trading one industry for another with the expectation that working people and their families will be well served by the shift.

Sincerely,

Robert C. Nuzum

Applied Natural and Cultural Resource Management
1072 Juanita Drive
Walnut Creek, CA 94595

Email Letter E-10

Response to Comment 1
Please see response to comments in DEIR mailed comment letter P-6.

The Board recognizes the continuing and increasing pressures of land use conversion and the environmental degradation associated with the problem. The Board further recognizes the role of sustainable, economic forest management for maintaining natural land cover. The California Timberland Productivity Act of 1982 (PRC 51102) establishes as one of its goals to "discourage premature and unnecessary conversion of timberlands to urban and other uses". The management plan will continue the tradition of a working forest landscape that serves to demonstrate viable and sustainable forest management. It is hoped that by demonstrating economic alternatives to land use conversion this problem can be reduced.

Response to Comment 2
The JDSF management plan will maintain a viable outdoor laboratory by managing the Forest to create diverse stand and habitat types (see General Response 2). The ADFFMP places increased emphasis on the Research and Demonstration mandate. The legislation that provided for establishment of the State Forest system makes it very clear that demonstration of economic forest management and maximum sustained production of high quality timber products is one of the primary purposes of JDSF.

Response to Comment 3
The Board recognizes the importance of a diversified economy in the region, including timber. See Section III of the DEIR for a detailed discussion of regional economic impacts. See also General Response 14.

E-11

From: msmarytalt@aol.com
Posted At: Tuesday, February 07, 2006 6:01 PM
Conversation: Support draft EIR Alternative F

Subject: Support draft EIR Alternative F

Dear Members of the Board:

I urge you to do your job and adequately protect Jackson State Forest.
This is one of our precious and majestic redwood forests unique in the world only to
1 California. Our redwood forests are rapidly becoming polluted and unable to sustain the wildlife they once harbored. We need to do everything in our power to see these last remaining redwood stands are protected.

Jackson State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coast redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range. In the area
2 that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves according to an analysis published by the Save-the-Redwoods League in 2000. It is this context that brings a heightened urgency to management issues at Jackson.

If it were up to me, I would allow no logging of any kind in these last remaining stands
3 of redwoods. Unfortunately, political pressures make this very hard to accomplish. If the best you can do is adopt Alternative F, the "Older Forest Emphasis" plan, then so be it. California residents expect nothing less than the best you can do to protect our forests.

Thank you,
Sincerely,

Mary Altmann
1857 Lookout Drive
Agoura, CA 91301

1

Email Letter E-11

Response to Comment 1
See General Response 2. JDSF will remain a redwood forest. The ADFFMP establishes a high degree of protection to all of the associated resource values, including wildlife. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The current plan is based on a monitoring and adaptive management feedback system. Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary to insure that resource conditions are on the correct trajectory to meet the stated management goals. The management plan represents state of the art management practices and implementation is not expected to produce significant adverse environmental impacts (see General Response 6, 10 and 11)

Response to Comment 2
See Form Letter 6/6A Response to Comment 2

Response to Comment 3
See General Response 2. Qualified support of Alternative F noted. The likely result of further restricting the economical management of redwood forests would be to cause private holdings to be converted to other land uses, such as residential housing. Economic pressure to convert expensive redwood forest properties to other land use is ongoing and the desire to preserve redwood forests by further regulating timber production must be balanced with this reality. The Board recognizes the value of JDSF to reduce this trend, and the inherent environmental degradation, by providing demonstration of viable and sustainable forest management.

E-12

From: alebus@mcn.org
Posted At: Tuesday, February 07, 2006 9:06 PM
Conversation: Support draft EIR Alternative F

Subject: Support draft EIR Alternative F

Dear Members of the Board:

In 1988 I bought a home adjacent to the Forestry Fire Station on Little Lake Road, Mendocino. I had no idea that Jackson State Demonstration Forest was right in my back yard. This was definitely the forest no one knew about.

In 2001, thirteen years later, in conversation with Vince Taylor, I discovered that this forest belongs to all the people of the State of California. What is now known locally as "The Kendrick Trail" is a beautiful example of how spectacular the forest can be when left alone.
The feeling of being in a cathedral strikes me each time I enter this forest.

1 Now in 2006 I write you again to remind you of the treasure this State forest is. With most of Mendocino private timberlands severly cut over, the oportunity is here to demonstrate restoration. RESTORATION! Yes, I fully believe this is the way the forest can most serve the people of the state, along with the private timber owners who need to restore their lands to healthy forest. Jackson can be a model forest, demonstrating restoration while repairing or decomissioning roads, restoring healthy salmon habitat, finding ways to control invasive plants without herbicides.

2 Any money generated by the sale of timber from Jackson must go into restoration and maintenance. Improving recreation oportunities will add jobs and enjoyment for generations to come.

Preserving the integrity of Jackson State Forest is of utmost importance to the ecology of our area, from the air we breathe to the water we drink and even the climate of this unique coastal area.

Jackson State Forest is an important public resource belonging to all Californians. I am very concerned that Jackson Forest has not been managed in a way that adequately balances the needs of fish and wildlife and the desires of most Californians with the Department's desire to log the forest.

In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves according to an analysis published by the Save-the-Redwoods League in 2000. It is this context that brings a heightened urgency to
3 management issues at Jackson.

I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson. Given the legislative mandate under which the forest is operating, Alternative F balances a high level of environmental protection with a carefully implemented timber production program. A gently applied timber management program will be consistent with the existing legislative mandate while greatly reducing the long-running controversy at Jackson. At the same time, regionally scarce fish and wildlife habitat will be enhanced. Alternative F strikes a good balance.

For the past ten years there has been a high degree of dissatisfaction with Jackson's management. I urge you to adopt the meaningful reforms that are outlined in Alternative F, and finally put the controversy to rest.

Sincerely,

Annie LeBus
43151 Little Lake Rd.
Mendocino, CA 95460

1

Email Letter E-12

Response to Comment 1
The Board agrees that JDSF is well suited to demonstrate restoration. The ADFFMP has placed greater emphasis restoration, with the goal of improving all resource values. The management plan includes an accelerated Road Management Plan, higher levels of aquatic habitat protection, and plans for continuing research and demonstration of alternative methods to control invasive plants (see General Response 7, 11, 13, and 15).

Response to Comment 2
The Board does not control the operating budget for the forest. However, the Board supports the concept that the Forest be self sufficient, and develops sufficient funding to enable full implementation of the management plan. The management plan includes some expansion of the recreation opportunities, but economics of adding recreation based employment are not expected to replace timber based employment (see General Response 14).

Response to Comment 3
See Response to Form Letter 6/6A**.**

E-13

From: cmartins@mendolink.com
Posted At: Tuesday, February 28, 2006 9:23 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I oppose approval of the draft environmental document(Draft EIR)

1 From what I have been able to glean, I believe that Alternative D is the best choice for everyone. It allows a fairly large annual harvest but requires harvests to be made using the best science available instead of old, or irrelevent models of timber harvest practice. It forbids clearcutting. It goes a long way towards helping to protect aquatic habitat (spawning grounds etc...). I am unclear on how it relates to recreation but I believe that realistic preservation is more important now.

I believe that responsible timber harvest is beneficial to the forest. I believe that CDF is capable of implementing responsible timber harvest programs. I DO NOT BELIEVE THAT CDF is capable of writing a responsible timber harvest plan at this juncture.

2 The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

Chuck Martins
642 Stewart Street
Fort Bragg, California 95437
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

2

Email Letter E-13

Response to Comment 1
Support for Alternative D noted. The comment does not provide evidence that the DFMP represents the implementation of "old, or irrelevant, models of timber harvest". The ADFFMP represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts. See General Response 10, 11, 14, and 15.

Response to Comment 2
See Response to Form Letter 2 and General Response 5.

E-14

Kraemer, Candace

From: Scot [Alfista71@sbcglobal.net]
Posted At: Thursday, February 09, 2006 2:35 PM
Conversation: Comments on EIR for Jackson Demonstration State Forest
Subject: Comments on EIR for Jackson Demonstration State Forest

Dear Mr. Gentry:

Please record and respond to my comments on the Draft Environmental Impact Report for Jackson Demonstration State Forest.

1 - A. I have serious doubts as to the sincerity of the research and demonstration functions supposedly performed in the Jackson State Forest.
It is not necessary to demonstrate techniques that are already in common usage.
Where is all the research data from the last 58 years?

2 - B. The Executive Summary belies that fact that the CDF is biased in it's concept of proper forestry management. In fact, in Part I Section 2, The EIR equates management with logging saying, "Due to litigation, only minimal management has been conducted on JDSF since 2003.
There are currently no timber operations occurring on the forest."

3 - C. The Executive Summary also goes on to state (Section 6b) that the Jackson Demonstration State Forest is surrounded by nearby State parks that "provide substantial benefits in terms of preservation and potential old growth". We must not overlook or minimize those substantial benefits (I believe the EIR does) when managing the Jackson State Forest, especially when these benefits are magnified by a large contiguous area of old growth.

Regards,
Scot Kelly

15 Corte Saratoga
San Rafael, CA, 94903

Email Letter E-14

Response to Comment 1
Forest management and the regulations associated with timber harvesting have continued to evolve over time, so research and demonstration of forest management practices retains its value for both timberland owners and regulatory agencies. Often the research and demonstration is aimed at developing new and improved management practices that either mitigate potential adverse environmental impacts associated with timber harvesting or aid in the development of desirable stand characteristics. Some examples would be: studying the effectiveness of retaining various habitat elements from the original stand to improve wildlife habitat when implementing even-age management; testing the effectiveness of various strategies to protect aquatic resources; and testing the use of different management techniques to accelerate the development of late seral stand characteristics. Private industry cannot be expected to implement experimental management practices and dedicate tracts of land to long term research.

CDF is currently developing a website to catalogue the research and demonstration projects and/or publications that have been developed on the State forests (http://demoforests.net/). The website is incomplete, but the intention is to provide a means to disseminate information, including data sets, regarding projects on the State forests. The commenter is encouraged to visit the website. This website will be moved to the main CAL FIRE website (http://www.fire.ca.gov/) in the near future.

Response to Comment 2
The comment erroneously interprets the statement. While no harvesting has occurred, some limited management has occurred. The revenue from timber harvesting is utilized to fund other management activities. Therefore, absent harvesting, and the funding it provides, the other management activities have been limited.

Response to Comment 3
The exact meaning of the comment is not clear, but it is assumed that the comment indicates that the DEIR does not adequately address the benefits associated with managing JDSF for the development of old growth in the context of the surrounding State parks.

The ADFFMP presents a workable approach to create and maintain multiple seral stages, along with important structural habitat elements. It preserves all existing old-growth groves, augmenting most of them to provide large, contiguous areas of older forest habitat. It provides for recruitment of late seral habitat in the Mendocino Woodlands Special Treatment Area, upper Russian Gulch, lower Big River, and upper Thompson Gulch, as well as along all Class I and II streams. See General Response 9. It also provides for a broad corridor of forest with the structural characteristics of older forest that extends from the west to the east and the north to the south. The Plan protects individual large old-growth trees and smaller residual old-growth trees with unique habitat attributes. See General Response 8. And it sets goals for increased structure retention of snags, downed logs, and large green trees and their associated biodiversity values. The management of JDSF is therefore expected to augment the “substantial benefits” of the preservation based management of the State parks by increasing the connectivity of late seral and older forest habitat.

E-17

Kraemer, Candace

From: Bob MacDougall [rtmkvm@pacific.net]
Posted At: Tuesday, February 21, 2006 7:35 PM
Conversation: Jackson State Forest
Subject: Jackson State Forest

February 21, 2006

Mr. George Gentry, Secretary,
CA State Board of Forestry,
P.O. Box 944246,
Sacramento CA 94244-2460

My final comments as to the Management of Jackson State Demonstration Forest.

As a retired California industrial forester, active during these last sixty years of California logging in an allied Consulting business to the lumber industry which has been largely run by the lawyers and bookkeepers in a mode of 'cut out and get out', I can see that we idealistic foresters in timber management are now suffering the consequences of the 'get-rich-quick' disposition of the Corporate Executives of these recent years.

With the very recent higher Court ruling that the Water Quality Board should regulate logging on account of muddy water runoff, perhaps it is truly time for the State Board of Forestry to renege part of its responsibilities and turn certain regulations over such as to the Fish and Game for Endangered Species control and to the Water Quality agency for road layouts and maintenance.

The trees will grow, with fire control as a proper tool, with nice forest management. The resulting growth over a hundred or more years will let the future public get back to welcoming logging when the California forests are producing so much wood that the public will demand its use to satisfy society's need for lumber and fiber.

Please remember in your reviews of public policy the desired and taxable private ownership of the Forest resources. And remember the impact on recent timber use (logging) of the events of wrongful public tax policies of the 1940s to 70s, the natural 1962 Columbus Day storm which so affected the whole Redwood Region logging management, even the 1906 Earthquake resulting in 1910-era clear cuts of sections of the coastal forests and, at that same time, the extensive tie cutting for the USA Railroad development, along with many other natural and public policy events that have helped lead to

E-17

this present negative opinion of California logging. One should even recognize the inevitability of use as taught in Forestry 10 where a review is made of timber use since the 1620 Pilgrim colonization of North America. For more clearly understanding past public policy decisions I think such a study alone would be an interesting review for some of the Forestry Board members.

Page 2, MacDougall Comments 2/21/06

Part of the recognized aim of the Board Policies is to understand and guide timber growth in California including our Redwood Region. Jackson State Forest is so important in learning how to manage our Redwood forests in the long term use.

1 Whatever your decisions might be, please do not let Jackson State Forest be damned, close it down or cut it up for Housing, Parks, and scenery. I would encourage the idea of educated foresters at Jackson State to be using their trained minds for what the State Demonstration Forest can do to benefit those people in the hundred year future as to what timber management right now in 2006 is needed and can properly do for the future.

We all recognize the present public's poor regard towards logging because of our recent past. But to emphasis Recreation over Timber Management is so short sighted that it would be a shame to the
2 future, and failure of honor to the past, for this Board to deny the intent of the 1948 farsighted Jackson owners of Caspar Lumber Company - regardless of what the Taylors, the present Judicial Lawyers, and the three members of our Mendocino Board of Supervisors indicate to be their opinion.

A forester, and it seems to me the members of the State Board of Forestry, should be thinking in terms of the Forest with generations of humans ahead and not the short sighted and short lived present human viewpoint.

Robert MacDougall, Jr.
105 Barbara Street
Ukiah CA 95482

PS to YG

If the spacing on the above came up gibberish, please tell me and I will send a hard copy.

I recognize that you can take no position.

Sometimes I feel like the Seattle Sea Hawks. Good, but the other guy

E-17

is stronger. I hope Foresters can do some good on this one.

Bob

5/22/2006

Email Letter E-17

Response to Comment 1
JDSF will not be sold off, converted to parks or residential housing, or set aside as a reserve. The legislation that provided for establishment of the State Forest system makes it very clear that demonstration of economic forest management and maximum sustained production of high quality timber products is one of the primary purposes of JDSF. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet. Please see General Response 16.

Response to Comment 2
See General Response 14.

E-18

From: Bill Palmer-Taylor [edibleland@earthlink.net]
Posted At: Wednesday, February 15, 2006 3:31 AM
Conversation: Option D or more conservation minded for Jackson State Foerst

Subject: Option D or more conservation minded for Jackson State Foerst

1 I am concerned with the last several years' over cutting on Jackson State Forest. What needs to be demonstrated is long-term sustainability of a forest with old growth characteristics. Redwood's uniqueness as a material is in its rot resistance which is most significant in old growth logs. A redwood forest's habitat is even more important than the human use. The only way to develop this resource and to have the ecological 2 value old growth forest provides is to allow more of it to exist. To pay bills by cutting much of the forest just approaching old growth characteristics is bad policy. Putting off the revenue stream by leaving the oldest trees is good policy because it will demonstrate what is best for the forest, not just for this year's budget but for the budgets of the 22nd century. When much of Jackson is old growth, then a small percentage can be sustainably removed - and this small percentage will finally be a significant number of 3 trees. Please invest in the future by choosing option D or one which reduces the cut 4,5 further. Herbicide use and any large scale cutting (clearcutting, shelterwood and similar methods) need to end. Thanks.

Sincerely,

Bill Taylor
2400 Highway 128
Philo, CA 95466
707-895-2512
edibleland@earthlink.net

--- Bill Taylor
--- edibleland@earthlink.net
--- Enjoy the beautiful Earth today.

Email Letter E-18

Response to Comment 1
The comment provides no evidence of over cutting on JDSF. Average annual timber harvesting has never exceeded average annual growth over the "last several years". The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to "less than significant".

Response to Comment 2
See General Response 2, 8 and 9.

Response to Comment 3
Support of Alternative D noted.

Response to Comment 4
See General Response 7.

Response to Comment 5
See General Response 10.

E-19

Kraemer, Candace

From: A Morse [agmorse500@yahoo.com]
Posted At: Wednesday, March 01, 2006 4:54 PM
Conversation: JDSF Public Comment
Subject: JDSF Public Comment

Dear Chairman Dixon and Members of the Board,

I am writing to urge you to support Alternative C1, the Preferred Alternative, in the Jackson Demonstration State Forest (JDSF) Draft Environmental Impact Report. This Alternative will best support the research, demonstration, and forest management programs at JDSF that are so critical to the future of California's forests, while maintaining the many recreational opportunities valued by generations of Californians. 1

JDSF has contributed immeasurably to our body of knowledge about forest management, watershed processes, redwood ecology, and so much more. The research and exploration that has taken place at JDSF has been possible because of the management flexibility that has been allowed there, and Alternative C1 will maintain that flexibility. And as we face the future of American forest management, CDF foresters and independent researchers must be allowed to use all of the tools available to them to learn more about managed forests. Imagine if we had tied the hands of forest researchers just ten years ago: what would we have failed to learn about carbon sequestration, Sudden Oak Death, or water quality protection? 2

As you plan for the future of JDSF, I hope that you'll select an alternative that will allow for continued research and recreation, and an ongoing program of forest management that will ensure the production of sustainably grown forest products. I hope that you will support Alternative C1.

Thank you for your consideration.

Sincerely,

Andrew G. Morse

Yahoo! Mail
Use Photomail to share photos without annoying attachments.

Email Letter E-19

Response to Comment 1
Support for Alternative C1 and its inherent management flexibility noted.

Response to Comment 2
See Email Letter E-10, Response to Comment 2. See also General Response 2 and 14.

E-20

From: George Thompson [thompson@pangea.Stanford.EDU]
Posted At: Thursday, February 09, 2006 2:23 PM

Board of Forestry and Fire Protection

Dear Board Members:

1 We write in support of Alternative C1 for the Jackson Demonstration State Forest. Our family has 30 years of experience working on our Redwood-Douglas fir tract in the Santa Cruz Mountains. The dramatic improvements in this once heavily cut forest demonstrate the benefits of the JDSF model. Under the expert guidance of forester James E. Greig, our timber stand has evolved into a vigorous all-age stand with a great ecological balance. The JDSF has helped with economic support for timber stand improvements as well as showing the way to manage and build a healthy forest, including sustained yield harvests.

2 Similar areas near us are succumbing to subdivision and rural homes, usually without regard to deterioration of the forest. In contrast, good management and careful harvests enable the preservation of forest land for greenbelt and needed production. The JDSF is an excellent model and should be kept in production for esthetic, economic and ecological objectives.

Thank you,
George A. Thompson

Email Letter E-20

Response to Comment 1
Support for Alternative C1 noted. The Board recognizes the important role that JDSF fills by demonstrating sustainable forest management practices for private landowners.

Response to Comment 2
See Email Letter E-10, Response to Comment 1 and General Response 16.

E-21

From: nathanstout@earthlink.net
Posted At: Monday, February 13, 2006 8:22 PM

Dear George D. Gentry and other people at the Board of Forestry and Fire Prevention,

I want to say that I think our forests need to be protected for

1 1) biological diversity and native species protection,

2 2) recreation, and sustainable use and enjoyment.

I understand that people need to harvest timber for several reasons. The wood is needed for a number of industries, as well as the fact that trees need to be thinned in order to prevent forest fires that are not within the natural pattern. Sustainable harvest and
3 controlled burning may be good practices. Clear cutting is definitely not a good practice.

Some things that are wrong with the new, present approach to forestry at the Federal and State level are:

4 1) privatization of the industry of foresting and treating our public lands as commodities,

5 2) the possible liquidation of something, (the forests, the ecosystems, the organisms. etc.) that once was considered part of our national and natural heritage, and a source of the people's wealth in the true meaning of the word, which relates to enjoyment of life and its happenings.

Those are my points. Please take them into consideration as you make your decisions. Please do not clear cut or build unnecessary roads. Simply let the forests be.

Nathan Stout
1260 Hopkins Street
Apartment 40
Berkeley, CA 94702-1170

1

Email Letter E-21

Response to Comment 1
Please see General Response 2, 8, 9, 11, and 12.

Response to Comment 2
Please see General Response 14 and 15.

Response to Comment 3
Please see General Response 10.

Response to Comment 4
Privatization of JDSF and its forest resources is not proposed.

Response to Comment 5
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. Protection is provided to wildlife and plants, and significant impacts are not expected to occur. Please see General Response 2.

E-22

From: candace hale [cxh@well.com]
Posted At: Thursday, February 16, 2006 4:35 PM

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460
Re: Oppositio to Alternative C-1 in EIR for Jackson Demonstration State Forest

Dear Mr. Gentry:

I am a volunteer naturalist for Salmon Protection and Watershed Network in Marin County.

1 I note in dismay that Alternative C-1, the proposed project
2 described in the Draft Environmental Impact Report for Jackson
3 Demonstration State Forest, is woefully short on protection for wildlife habitat, precious old-growth forest, and the watercourses that feed the entire ecoysystem.

4 Conversely, it is inappropriately long on permission for logging.

You are the representative of the people who are trusting you to protect our precious natural resources. As the steward of Jackson Forest, you as well as I I how crucial its maintenance as an intact
5 ecosystem is to indigenous animals, migration corridors, venerable trees.

6 Clearcutting is simply not an acceptable management tool. Nor is
7 herbicide use or the harvest of old trees. Protection of water
8 quality, fish and wildlife habitat, and the general deep beauty of the forest for the generations to come should be your highest priority.

Once these forests are gone, we will never be able to replace them. Please go back to the drawing board and come up with a plan that will actually support the ecosytem rather than destroy it.

Thank you.

Sincerely,

Candace Hale

1

Email Letter E-22

Response to Comment 1
See General Response 12.

Response to Comment 2
See General Response 8.

Response to Comment 3
See General Response 11.

Response to Comment 4
See General Response 2.

Response to Comment 5
The ADFFMP establishes a high degree of protection to all of the associated resource values, including old growth trees and wildlife. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The management plan represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts. See also General Response 15.

Response to Comment 6
See General Response 10.

Response to Comment 7
See General Response 7.

Response to Comment 8
See General Response 8 and 9.

Kraemer, Candace E-23

From: Wortleysea@aol.com
Posted At: Tuesday, February 28, 2006 2:58 PM
Conversation: Support of Jackson Demonstration State Forest (JDSF)
Subject: Support of Jackson Demonstration State Forest (JDSF)

Attention:

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection

1 As a forest landowners in Mendocino County, we are very interested in and support the proposed management plan for the JDSF. The fact that sustainable annual sales of timber from JDSF alone (when allowed to log) produce $10 million to $14 million net revenue to the state, and that this money has traditionally been used to fund the state nursery, California Forest Improvement Projects (C-FIP) and pay for CDF costs to regulate timber harvesting in the state, begs that the management plan be approved.

2 As a forest landowner in Mendocino County, the biggest harmful impact to us is the likely loss of a sawmill within our working circle if the ban becomes permanent. JDSF's annual timber sale of 29 million board feet of logs represents the production capacity of a typical sawmill in our working circle. If the timber supply from the forest is permanently withdrawn it is expected that one of the current mills will close. The number of mills competing for logs is too small for comfort now; loss of another mill will likely have a downward impact on log prices.

3 We firmly believe that a well managed forest is occasionally, carefully logged, within the terms of an apporved NTMP, for the sake of perpetuating healthy growth, and for the "thinning" of excess undergrowth that helps in the development of an old growth forest

In addition, for us to continue to afford to hold an otherwise non income producing asset, the ocassional logging will hopefully provide badly needed funds for us to use in manageing and maintaining our property.

We certainly do not agree with the opponents of timber sales on JDSF that it is immoral for the State to derive a profit from the sale of natural resources!, especially when the funds are put to good use, benefitting the citizens of the State!

Thank you for your consideration.

Richard C. and Barbara E. Wortley
RANK's Forest LLC

Email Letter E-23

Response to Comment 1
The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan. The Board recognizes that the lack of timber production in recent years has resulted in the loss of revenue for the State and the valuable programs that it supports. Forest practice regulation is no longer funded by timber revenue from the State forest system.

Response to Comment 2
A significant level of sustainable timber production will continue at JDSF. A discussion of the economics of the timber industry is contained in Section III.5.4 of the DEIR.

Response to Comment 3
Active management is required by the legislative mandate that created Jackson Demonstration State Forest. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

E-24

Kraemer, Candace

From: Thembi T. Borras [thembi@mcn.org]
Posted At: Monday, February 06, 2006 9:35 AM
Conversation: JDSF DEIR Alternatives Evaluation and Comments
Subject: JDSF DEIR Alternatives Evaluation and Comments

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Jackson Demonstration State Forest (JDSF) Draft Environmental Impact Report (DEIR) Alternatives Evaluation and Comments

Dear Mr. Gentry:
Since 2001, timber harvest on JDSF has been suspended due to legal action; the DEIR for the proposed management plan is intended to move the status of management of JDSF from inactive toward active.

I evaluated the seven alternatives proposed in the DEIR based on silviculture, growth and yield and the use of herbicides, which I believe are essential issues.

Note: Uneven-Aged management includes prescriptions such as single tree selection and group selection. Even-Aged management includes prescriptions such as clearcutting, seed tree and shelterwood. Annual allowable harvest is projected out a minimum of 10 years.

Alternative A (minimal management)
Uneven-Aged Management/ Even-Aged Management: No harvest, no site preparation, no thinning, no planting.
Annual Allowable Harvest: Not applicable.
Herbicide Use: Limited for road maintenance.

Alternative B (continue 1983 plan)
Uneven-Aged Management: Yes.
Even-Aged Management: Yes.
Annual Allowable Harvest: 36 million board feet (MMBF)/year (nearly equal to the present estimated growth).
Herbicide Use: Yes.

Alternative C1 (CDF May 2002 DFMP, preferred Alternative by CDF)
Uneven-Aged Management: Yes, allowed on approximately 24,000 acres.
Even-Aged Management: Yes, allowed on approximately 11,000 acres.
Annual Allowable Harvest: 31 MMBF/year.
Herbicide Use: Yes.

Alternative C2 (CDF November 2002 Plan)
Uneven-Aged Management: Yes, allowed on approximately 22,500 acres.
Even-Aged Management: Yes, allowed on approximately 10,000 acres.

Annual Allowable Harvest: 31 MMBF/year.
Herbicide Use: Yes.

Alternative D (Citizens Advisory Committee proposal)
Uneven-Aged Management: Yes.
Even-Aged Management: No clearcutting. Other prescriptions restricted to limited demonstration.
Annual Allowable Harvest: 25 MMBF/year.
Herbicide Use: Herbicides would not be allowed in site preparation or vegetation control. There would be a three-year moratorium on chemical use for control of invasive species.

Alternative E (Late Seral Forests)
Uneven-Aged Management: Yes.
Even-Aged Management: No.
Annual Allowable Harvest: 8 MMBF/year.
Herbicide Use: No.

Alternative F (Older Forests Emphasis)
Uneven-Aged Management: Yes.
Even-Aged Management: No.
Annual Allowable Harvest: 19 MMBF/year.
Herbicide Use: Use herbicides only if other approaches fail.

Alternative D (Citizens Advisory Committee proposal), in my opinion, appears to have the greatest chance of successfully balancing environmental values, economic viability and public support. If there is enough public buy-in, then perhaps further legal wrangling can be avoided. Alternative D also best fits my vision of
1, 2 public forest management because it is strong on building inventory, strong on selection prescriptions and
3 does not suggest incorporating herbicide use as a customary part of forest management. Building inventory
4 and improving stand structure are cornerstones of sustainable forestry, although selection prescriptions do not inherently imply improved stand structure, this is only inherent in good decisions made on the ground
5 regarding which trees will be cut and which will be left. Selection prescriptions done well are opportunities to take value from the forest and improve the transportation infrastructure, at the same time keeping pre harvest habitat the same as post harvest habitat, improving aesthetics by maintaining a continuous forest canopy and encouraging fewer large stems and minimizing adverse watershed effects through a low level of canopy removal.

Sincerely,
Thembi Borras
Registered Professional Forester, #2700

Email Letter E-24

Response to Comment 1
Support for Alternative D noted. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in an expected average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. CAL FIRE has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Taken as a whole, the implementation of the ADFFMP is expected to have many beneficial impacts to the overall forest health of JDSF.

Response to Comment 2
The ADFFMP limits the use of even-age management to approximately 26 percent of the Forest (see General Response 2 and 10). Most of the remaining 74 percent of the Forest will be restricted to either no harvest or uneven-age management. Clearcutting is further restricted as described in General Response 10. The designation of 30% of the land base in the DFMP, and 26% of the land base in the ADFFMP, is designed to allow some flexibility when locating even-age silvicultural prescriptions. The area designated to allow the use of even-age management will include clearcutting and variable retention prescriptions, but will also utilize uneven-age management. The use of even-age management is not expected to result in significant adverse environmental impacts.

Response to Comment 3
See General Response 7

Response to Comment 4
See General Response 2, 8, 9, and 12.

Response to Comment 5
The Board recognizes the importance of “good decisions made on the ground” when marking selection prescriptions. The Board further recognizes the advantages of this silvicultural method when properly implemented to reduce some types of potential adverse environmental impacts associated with timber harvest. The proposed management plan uses a set of structural goals to guide planned harvest actions. The central goal is not a particular level of timber harvest or a preferred method of harvesting but a set of forest structures that represent the full breadth of forest conditions. See General Response 2.

E-25

From: James R. Strittholt [stritt@consbio.org]
Posted At: Monday, February 27, 2006 4:44 PM
Conversation: DEIR comments

Subject: DEIR comments

DEIR_Strittholt_comments2-06.d...

Please accept the attached comments for the Draft Environmental Impact Report SCH# 20040222025.

****
James R. Strittholt, Ph.D.
President - Executive Director
Conservation Biology Institute
260 SW Madison Ave., Suite 106
Corvallis, OR 97333
Phone: 541-757-0687
Fax: 541-752-0518
www.consbio.org

1

E-25

CONSERVATION BIOLOGY INSTITUTE

Conservation Biology Institute

260 SW Madison Ave., Suite 106 • Corvallis, OR 97333
Phone: (541) 757-0687 • FAX: (541) 752-0518
http://www.consbio.org

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

February 23, 2006

SUBJECT: Comments on the Environmental Impact Report for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan

To the Board of Forestry:

Please accept these comments regarding the Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan SCH#2004022025.

I am founder and Executive Director of the Conservation Biology Institute (CBI) located in Corvallis, OR with a satellite office in San Diego, California. CBI is a 501(c) (3) non-profit dedicated to conduct applied conservation biology research and transfer our understanding to the greater public through education and public service. We currently have 15 staff located in the two offices with many years of professional experience in conservation science. One of our strengths is applying computer mapping technologies to assessing natural resources (particularly forests) through descriptive and prescriptive planning. My professional qualifications include a Masters in population genetics and a Ph.D. in landscape ecology and conservation planning. I have authored numerous reports and peer reviewed papers on various topics including forest conservation planning using GIS, late seral forest mapping, and forest fragmentation. I co-authored sections in a book entitled, "The Redwood Forest: History, Ecology, and Conservation of the Coast Redwoods" and provided comments on the Jackson Demonstration State Forest Management Plan and 2002 Draft EIR.

Although I provided extensive comments during the last review process, two topics were of particular concern to me at that time – lack of consideration of the regional context and the treatment of cumulative effects. In light of my professional expertise, I will focus my comments on the Biological Resources and Cumulative Effects sections in the current DEIR report with some special emphasis on the GIS mapping aspects of the reported work.

1

OVERALL REPORT ORGANIZATION AND CONTENT

I have reviewed numerous EIRs during my career, and this one was the most difficult for me to review to date by far. The document is incredibly long and poorly organized (e.g., content related to the same topic scattered in multiple places throughout three volumes). More importantly, the document lacks proper balance – enormous amounts of background material are provided but painfully little logical synthesis offered. EIRs are expected to be read and understood by a broad, non-technical audience. This EIR is challenging for the most experienced professional to fully understand and critique. My guess is that most in the general public would find it virtually incomprehensible. The majority of the three-volume report is jargon-filled background material, and it reads like disparate pieces thrown together in outline form with little regard for thoughtful integration or synthesis. Background material is important, but so much of it in this report is unnecessary and often presented in such raw form as to make it virtually meaningless to most readers. Instead of being educated and informed, the reader is simply bludgeoned by tables, charts and descriptions that have little bearing on the impact assessment. It reminds me of my high school teaching days when some students would virtually copy entire sections from text books and try to pass it off as a thoughtful synthesis. They thought I would give them high marks based on the sheer length and depth of technical content (whether it was appropriate or not) and overlook the lack of critical thought and organization. There was obviously some new analyses carried out (some of which I comment on later in this review), but the document largely depends on existing studies that were then cobbled together to make forest management recommendations.

1.

ALTERNATIVE COMPARISON TABLES

I found the alternative descriptions to be quite vague, and I especially found myself wanting to see how alternatives compared to one another spatially. Maps were used throughout the DEIR that helped bring some focus for me (including a fairly lengthy Maps Section at the end of Volume 1B). It would have been more helpful to see the alternatives presented in map form as well.

2.

Also, I found the comparison tables at the end of many of the sections of little or no value. The impact levels – beneficial to significant – gave me little information to evaluate the alternatives. Out of 96 separate items that I found in the DEIR, 63 (66%) performed identically according to the impact levels. A better evaluation model would be constructed to help discriminate alternatives. For most of the items examined, the alternative plans would actually perform along some continuum, and that would be a much better way to report and evaluate them.

3

If we go back to what was presented in the DEIR, 30 items showed categorical differences between the plans, and the highest performing alternatives were Alternatives E and F – dramatically so in some instances. The tables clearly show the preferred alternative was inferior to many of the other alternatives for most of these 30 items and were the same for all of the others. I fail to see the function of having the comparison tables. If an evaluation and decision framework would have been developed ahead of time and presented for review, it would have allowed the assessment team to explain the pros and cons of each alternative more clearly and

explicitly. The DEIR lacks any comprehensive assessment and discussion of the alternatives. As it stands now, the comparison tables do little to help with understanding the plan differences pertaining to goals, values, and potential impacts.

AQUATIC RESOURCES

It is made clear by the background material provided that a number of the watersheds found within JDSF are experiencing serious environmental problems when it comes to overall aquatic ecosystem integrity and providing viable habitat to listed aquatic species (e.g., coho salmon) and other aquatic species of concern. The North Fork of the Noyo, the South Fork of the Noyo (including Parlin Creek), North Fork of the Big River (including Chamberlain and James Creek) and South Fork of the Big River have all been degraded significantly due to past forest practices and road building.

4

I found the background material in this section to be extremely erratic – for some topics (e.g., coho salmon) too much information was provided, and not always the most important pieces of information. For others (e.g., aquatic macroinvertebrates), not enough information was provided. Hard to grasp the importance of aquatic macroinvertebrates from the citation of a single paper that focused on Casper Creek. There is a good body of scientific work about the importance of macroinvertebrates and their usefulness in monitoring overall stream biological status (see Karr 1995 and Karr 1997).

5

There are other important omissions in the DEIR on other topics that should have been presented and considered in assessing the various alternatives. The complexity of how stream temperatures are regulated is a good example. The reader is being told that the primary driver to regulating stream temperatures is through riparian shading. While stream shading is one important factor, there are others such as ambient air temperature and ground water inflow. Bartholow (2000) found that stream temperatures are governed by a complex set of factors, not just one. So the overwhelming position taken by the DEIR that stream temperature is primarily governed by stream shading, and therefore only riparian management is required, is not accurate based on what the scientific literature states. Furthermore, Welsh et al. (2005) studying the Mattole River watershed found that the conversion of uplands to younger seral stages was likely altering ground water temperatures and thus contributing to elevated stream temperatures. Excluding these types of scientific inputs, which could have a significant impact on the final management decisions, is a serious flaw in the current DEIR. How are decision makers and the public supposed to understand the issues and fairly evaluate the merits of alternatives if all the pertinent facts are not presented.

In this section, there were approximately 90 pages of background information and 9 pages on the proposed management response which consisted of listing management guidelines within riparian strips and a very minimal discussion on monitoring hillslope conditions, stream channel conditions, stream temperatures, and selected fish and amphibian populations.

3

The conclusions presented at the end of this section stating project impacts would not require mitigation left me feeling like there was a serious disconnect between these conclusions and what I just read, what I know from the literature, and from my own experience. Addressing the very real issue of continuing aquatic degradation with sweeping generalizations about best management practices is totally inadequate. I would have much preferred to read a concise background section, a thoughtful synthesis of existing information with attention to spatial detail, and then a fully supported explanation about the conclusions presented. I see no meaningful watershed assessment for JDSF here.

6

With regard to coho salmon recovery, Bradbury et al. (1996) emphasize the need to secure existing strongholds and develop a restoration strategy anchored by these areas to bring the species back to sustainable recovery levels. Relying on data generated from KRIS projects on the Noyo River and Big River, Higgins (2002) reported that some of the last remaining regional stronghold watersheds are found inside JDSF. This type of regional contextual information helps provide guidance to any forest management plan for JDSF. Under these circumstances, any forest management activity carried out in the identified stronghold watersheds should be held to a higher standard because of its regional importance for maintaining this value. This is the kind of contextual information that I referred to that was missing in the original draft and in large part this deficiency still remains.

7

Using better management practices in the future will certainly be less damaging than many practices used in the past, but that does not equate to no significant impacts. The existing body of scientific literature unequivocally demonstrates that adding new stressors to already stressed systems (even if the severity of those stresses is lessened) will still result in added stress. The question is how much is too much, and too much for what? The DEIR states that State agencies (including CDF) has been directed to protect and manage California's aquatic resources through a variety of initiatives, including ESA, Clean Water Act, etc. This would be a place to start, but the DEIR lacks any clear direction about how to examine the inherent conflict between resource extraction and other values. I have intentionally focused on the biological and ecological values in my comments, but this would include other values as well (e.g., recreation, cultural, and aesthetics).

8

9

It appears from the background material presented in the DEIR that there are enough spatial databases and technical tools available to develop a functional GIS-based framework for monitoring activities on the forest, evaluating impacts of management decisions (including cumulative effects) on selected values, and for carrying out prescriptive mapping that scientifically supports and assesses the risks of activities on the forest. In my view, there needs to be some spatially explicit underpinning for managing JDSF and that foundation is currently missing. Without it, we are left with a tremendous amount of speculation that in all likelihood will later be found to be grossly inaccurate, and there will be real ecological costs associated with these inaccuracies.

10

BOTANICAL RESOURCES

In spite of all the background provided by the DEIR, I still do not have a good sense of what managers know about their forest with regard to the various values of interest. Does JGSF have its own species survey data? Stand-level data? I assume so, but I am not sure. If it does, why
11 does the DEIR rely so much on the CNDDB for rare plants? Standard practice should be to do pre and post harvest quantitative plant surveys and monitor impacts for a selected set of species. Species that are known to be sensitive to logging practices such as some perennial forbs are good candidates. Plant surveys should also pay particular attention to listed species or species of concern, and carefully monitor invasive exotics. Findings from these surveys should be incorporated into a GIS database so it can be easily included with other data to determine the type and magnitude of environmental impacts from various management activities.

Old Growth and Late Seral Forests

Botanists and ecologists have attempted to describe successional stages of forest communities for a very long time. This reached a fever pitch in the Pacific Northwest during the development of the Northwest Forest Plan, particularly with regard to defining and mapping old growth conifer forests. There is no one precise definition to what old growth is between or even within different forest community types. Furthermore, old growth is not simply a function of mean forest age – it also includes aspects of structural condition – but researchers often describe seral stages by assigning approximate ages that roughly correspond to when a particular forest type is expected to possess particular characteristics for each seral stage, including old growth. For Douglas-fir, Franklin (1982) specified ranges for several seral (or successional) stages: herb and shrub (30 years), young forest (30-100 years), mature (100-200 years), and old growth (>200 years). Bingham and Sawyer (1991) characterized redwood stands in the central redwood region (the location of JDSF) as young (40-100 years), mature (100-200 years), and old growth (>200 years). With these age classes serving as approximations, it is important to point out that there is tremendous variability on the actual expression of these forests in terms of size and density of trees, amount of downed wood, and detailed expression of layered substrata. The physical expression of these forests depend upon many factors, including stand history, site condition, and disturbance history (Sawyer et al. 2000).

In the scientific literature, late seral (or late successional) usually refers to forests that are both mature and old growth (see Jiang et al. 2004 and Strittholt et al. In Press). This is pertinent in the DEIR since there appears to be considerable confusion about this issue. In order to evaluate the
12 management alternatives for JDSF, it is important to know the approximate ages of the forest stands throughout JDSF and to have this mapped. Only then can the alternatives be compared and impacts fully assessed. The DEIR provided detailed spatial information on the size and location of the remaining old growth, and I assume data exists for other seral stages as well. One particularly important seral class to consider carefully is the "mature" category for two reasons. First, mature forests support a large number of species in their own right. Second, mature forest is the forest stage class closest in time to possessing old growth characteristics and thereby

become the immediate building blocks for meeting an important regional and forest conservation and forest management objective – increasing the area of functional old growth.

This is and deserves to be a major consideration because of how far the region has diverged from natural condition. Roughly 96% of the original, old-growth redwood forests are gone (U.S. Fish and Wildlife Service 1997) and the remaining forest is highly fragmented. It is not surprising that many old growth dependent species have been greatly reduced in number and distribution with some on the verge of regional extirpation. Much of the redwood forest region today is dominated by young forest, which is favored by generalist species. These species have value too, but the plant and animal species of most concern are those that evolved with the physical and
13 biological conditions of the old forests. Retention of existing and recruitment of new old growth is a conservation imperative for this region and should be prominently featured in the JDSF plan.

WILDLIFE AND WILDLIFE HABITAT

The wildlife habitat modeling conducted for the DEIR relies on Wildlife Habitat Relationships (WHRs) as originally attributed to vegetation databases such as FRAPVEG, which targets the entire State of California at an intermediate spatial scale. For contextual purposes it is reasonable to generate some basic potential habitat maps for species of interest, but it is scientifically inaccurate and inappropriate to rely on these relatively coarse (both thematically and spatially)
14 relationship models to predict status or changes for the size area of JDSF or its larger assessment area. And although the DEIR states on page VII.6.6.-2 that all analyses involving vegetation found of the JDSF were done using the JDSF vegetation layer and all vegetation outside JDSF from FRAPVEG, I found the maps provided based only on the more coarse vegetation database (FRAPVEG). Having worked at producing species-habitat relationship maps throughout different regions in California using FRAPVEG, we have found it necessary to significantly modify any WHR results with additional ancillary data and occurrence records (if possible) to more accurately reflect species use of habitat. This trend of overestimating wildlife habitat has been observed across the nation through efforts such as U.S. Geological Survey GAP. All second generation products from this project are showing a dramatic reduction in habitat potential for most wildlife species.

The results presented in the DEIR indicating how the different alternatives would affect the
15 percent of suitable habitat for wildlife species are extremely unreliable. Even as gross generalizations, they would have to be treated very carefully. There are always species who win and those that lose when conditions change on the ground, but the models presented fail to
16 provide adequate insight into those changes under the different alternatives and fail to put the stressors that alter habitat in any logical framework to compare alternatives spatially. The quality of the models cannot be properly evaluated by viewing the tables alone, but the few sample maps
17 provided in the Maps Section speak volumes to this problem. For example, the habitat suitability map provided on the marbled murrelet makes little sense. The map shows that the majority of James Creek is fully suitable for murrelets; however, it is unlikely that murrelets would travel that far inland to nest and when you look closely at the vegetation management classes presented

6

in Map Figure 8 in the original draft management plan, you find that the majority of the watershed does not meet the forest structure criteria to support this species even if they did travel there. The colored polygons obviously came from the FRAPVEG database as shown in Map Figures J and K even though the DEIR states the models run inside JDSF used a different (assumingly a more spatially accurate database), the examples provided do not support this claim.

18 The landscape measures section (starting on page VII.6.6-21B) looks at eight species (including marbled murrelet). From the outset, it is seriously flawed because it relies (as input) results from the habitat relationship models. The assessment team then ran FRAGSTATS (a fragmentation computer software) on the polygons from the habitat models using the results inside JDSF and outside JDSF as separate landscapes from what I can tell. The different suitability classes (low, moderate-high, and fully suitable) were treated as different classes in the FRAGSTATS program.
19 A handful of metrics out of the approximately 70 possible FRAGSTATS generates were then chosen to describe the differences between alternatives. The metrics chosen included: total class area, percentage of landscape, number of patches, mean patch area, mean nearest neighbor, and total edge index.

There are several serious problems with this approach.

20 1. The species inputs for the fragmentation assessments were spatially coarse and largely unreliable. Starting with solid input data is fundamentally important to gaining additional knowledge from this added assessment.

21 2. The treatment of suitability categories as "classes" in FRAGSTATS is interesting but fails on several grounds. It is assumes the species chosen respond to their own habitat suitability in the same way, and they do not. It assumes that the resolution of the habitat input data is at an appropriate spatial scale for each species, and I would argue that in most cases it is not.

22 3. There was no explanation as to why the five metrics were chosen and what bearing they have on the biology of the species in question. Why not a metric on overall landscape permeability such as contagion? Why these five particular metrics? What was the assessment team trying to understand? For example, five out of the eight species chosen were birds. How should we view mean nearest neighbor results? Does it matter if one result is 500 m and another 1,500 m? For all of the birds, this difference in distance means nothing – they could just as easily fly 1,500 m as 500 m. Does the amount of edge change the survival of the species in some way? More edge means more competition and predation for northern spotted owls for example. Was that being tested? Rather than provide this level of thought and explanation, the reader is buried with tables of numbers that provide little meaning at all.

23 4. It would have been much more helpful to treat each planning unit (e.g., watershed) as the analytical landscape rather than compile results for all of JDSF as one unit and everything outside as another landscape unit. That would provide a more spatially explicit

understanding of how past, current, and future projects might make the region more or less suitable to species survival and movement. For example, it is possible that a handful of watersheds or planning units, if managed heavily for a number of years, could easily fracture the larger regional landscape for some species having a greater overall impact. Not only are scenarios like this possible but likely given the history of JDSF, but none of the information provided can give us this level of information.

24 5. Lastly, there is no attempt to incorporate thresholds for the species for the different metrics to help guide our understanding of the alternatives. Thresholds are a major aspect of cumulative effects and for the species chosen, some guidance on landscape thresholds do exist.

With all of the page volume, background information, and modeling attempts in this section, we are left with very little information about how the different alternatives might impact wildlife habitat for targeted species or any other.

CUMULATIVE EFFECTS

According to the Council on Environmental Quality (1997), cumulative effects analysis involves assessing the capacity of the resource, ecosystem, and human community to withstand the stress caused by the combined effect of a repeated action and/or the combined effect of multiple actions. California Environmental Quality Act (CEQA) guidelines are consistent with this definition (14 CCR §15355). Although conceptually straightforward, conducting cumulative effects assessments has been proven to be extremely complex. With the inherent diversity of values and impacts, no single approach has emerged as a standard over the past 25 years. Rather, numerous approaches have been proposed and tested with varied results. Analyzing cumulative effects on ecosystems requires a better understanding of the interrelationships of the various ecological system components and is typically spatially explicit in nature. A conceptual model of how to combine primary methods of gathering and examining data and information into a cumulative effects analysis provides a starting place for new applications (Figure 1). Out of the 100 or more applications that have been reviewed by researchers, two basic approaches have been identified – (1) **impact assessment approach**, which analytically evaluates the cumulative effects of actions against an identified threshold on a stated value, and (2) **planning approach**, which sets out to optimize the allocation of stresses on values spatially over a region (Canter 1994).

I provide this background information to acknowledge the difficulty in conducting cumulative effects assessments, but also to demonstrate there is a solid body of scientific literature and government guidelines to assist in the creation of a meaningful cumulative effects assessment. This is a rapidly growing field of research, and ecological forecasting, which relies on using past and present conditions to forecast ecological condition into the future, is providing many valuable tools and approaches at addressing cumulative effects.

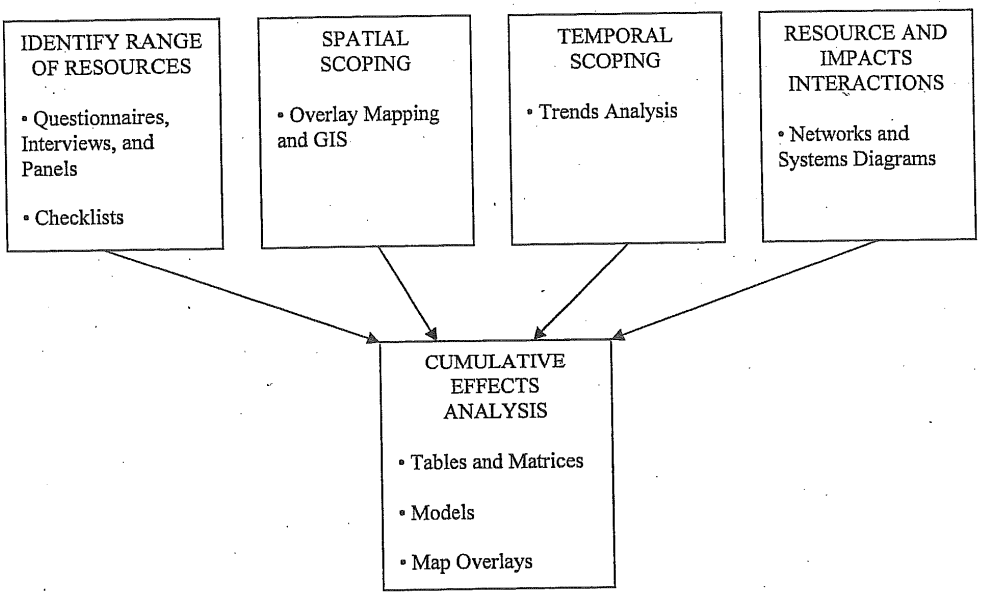


Figure 1. Conceptual model for combining primary methods into a cumulative effects analysis (CEQ 1997).

25 The JDSF DEIR has numerous serious shortcomings with regard to cumulative effects. First, there is no logical organizational framework presented explaining how cumulative effects were addressed in the DEIR. Instead, the topic of cumulative effects is addressed piecemeal (topic-by-topic) throughout the document without any clear attempt to combine the assessment of values [at-risk species (e.g., coho salmon, Northern Spotted Owl, Marbled Murrelet, etc.), special habitats (e.g., pygmy forest community), aquatic ecological integrity, terrestrial ecological integrity (including late seral or old-growth forests), wildlife, soil productivity, recreation, aesthetics, noise, traffic, air quality, and cultural heritage resources] with identified combined stressors [timber management, road building, water quality and quantity changes, herbicides/pesticides, and recreation]. Not even in Section VIII entitled "Cumulative Effects", can a logical organizational framework be ascertained.

26 The dominant stressor discussed throughout the DEIR is forest management, which is understandable but this is not the only important stressor that needs close consideration. Roads and the use of chemical treatments are not developed properly and definitely not integrated with forest management for a more holistic view. A cumulative effects approach is supposed to consider all dominant stressors collectively in order to better understand the cumulative impacts from them.

Roads

Roads have been shown to have major ecological impacts on both aquatic and terrestrial ecosystems (Trombulak and Frissell 2000). Roads contribute more sediment to streams than does any other land management activity including timber harvesting (Meehan 1991), and examples exist in the scientific literature on how to conduct a cumulative effects assessment combining both roads and logging (e.g., McGurk and Fong 1995). According to Table VIII.6b, JDSF contains slightly over 457 miles of roads at a density of 6.0 mi/mi^2. If you assume a 20 m direct impact zone width (road surface and cleared roadsides), approximately 3,600 acres of JDSF are impacted directly by roads, which is approximately 8 times more area than the amount of existing old growth. The overall road density of 6.0 mi/mi^2 is far above thresholds established in the scientific literature for long-term persistence of certain aquatic species such as salmonids (2.5 mi/mi^2; NMFS 1996). But one needs to be very careful not to over simplify the situation. If you calculate road density on a smaller analytical unit across the forest (subwatersheds or grid cells), there are some units that are higher and some lower than the average for the entire forest. This level of spatial clarity is important to know and to monitor to help guide effective road removals and new constructions. The lack of spatial clarity is common throughout the DEIR making it virtually impossible to evaluate the various alternatives in a systematic, thoughtful way. Furthermore, special attention must be paid to roads along streamsides as these are often the most problematic roads on aquatic systems.

27

Based on research in the Interior Columbia River Basin, Wisdom et al. (2000) identify more than 65 species of terrestrial vertebrates negatively affected by many factors associated with roads. Specific factors include habitat loss and fragmentation, negative edge effects, reduced densities of snags and logs, over-hunting, over-trapping, poaching, collection, disturbance, collisions, movement barriers, displacement or avoidance, and chronic, negative interactions with people. Certainly not all of these factors apply to JDSF, but this research illustrates the serious impacts roads have on terrestrial wildlife species as well as aquatic ones.

Roads are also well known to be important conduits for invasive species and that risk must be considered. Roads disturb the soil, open the forest canopy, and allow more light to reach the ground. Plants seeds disperse in many ways. But the quickest route is via rapid, efficient, and pervasive hitchhiking on radiator grilles and muddy tires. Many of the same noxious invasive plants that easily use roads to disperse also do extremely well on sites impacted by logging that exposes soil and increases light availability.

Not only does the scattering of information throughout the document make it extremely difficult to understand, it also suggests the lack of understanding or lack of resources to address cumulative effects in any comprehensive way. This is further supported by the way components of the stated cumulative effects categories are treated. For example, the various subcategories in the Watershed Cumulative Effects treatment are disaggregated and addressed separately.

10

28 Cumulative effects assessments need to try to integrate the various components (flow effects, water temperature effects, sediment effects, etc.) not break them apart, because of the reasonable possibility of components interacting with each other in some additive or synergistic way. By treating each one separately and dismissing the components that are deemed not significant, the assessment team is missing the point. The serious lack of organization in the document and frequent illogical mixing of background materials, assumptions, and management generalities makes it extremely difficult to sort it all out and allow for constructive comments to be made.

The assessment team obviously did not choose to follow an impact assessment approach that would have relied on an analytical (quantitative) assessment with known thresholds even though some values stated in the DEIR (e.g., coho salmon) do have known tolerances (e.g., lethal water temperature thresholds). Also, the assessment team did not follow a planning approach, because there was no attempt to evaluate the distribution of stressors spatially over time in any optimal fashion. Some GIS modeling was performed, which I will address more later in this review, but nowhere was a framework provided to help the assessment team or reviewers understand the relative importance of specific stresses and there interaction on stated values, which is the essence of a solid cumulative effects assessment.

29 Rather than cobble together whatever could be found that might have some bearing on cumulative effects, it would have been far more helpful to: (1) choose the values to be evaluated in advance; (2) map the identified stressors on these values using a meaningful geographic extent(s) and analytical unit(s); and (3) build a transparent knowledge base to evaluate the interaction of stressors on the values spatially over time. Tools are available that do this well such as Ecosystem Management Decision Support (EMDS), which is mentioned in the DEIR as part of an independent In-Stream Channel Condition modeling effort, but there was no obvious attempt to employ this type of logic to the larger cumulative effects challenge before JDSF. Putting resources in building such a decision support system for JDSF would have tremendous value far beyond the immediate need for assessing the latest management alternatives. One of the many benefits would be having an ongoing logical and programmatic framework from which 30 to organize management and monitoring for making more informed decisions and doing so in a way that is easily communicated to policy makers and the public.

According to CEQA guidelines, past, present and future project actions are to be considered in assessing cumulative effects with considerable emphasis on predicting future impacts. CEQA 31 does not explicitly state a specific time period for past projects, but the DEIR states that 10 years is the general rule-of-thumb. It would be more beneficial to decision makers to understand as much about the history of the region of interest as possible. While there is no legal obligation to go back any particular distance in time, it would be in everyone's benefit to go back as far as data exist to support the modeling. JDSF was formed in the late 1940s and underwent considerable management between then and the 1986 threshold chosen by the assessment team. This would help explain why some watersheds received considerable forest harvest activity and why others received very little. For example, places like Chamberlain Creek watershed saw very little forest harvesting from 1986-2004. This watershed is not intact but was harvested extensively prior to the 1986 cutoff date. Chamberlain Creek was also one of the watersheds of concern with regard to some watershed quality parameters (e.g., stream temperature). This level of detail and spatial

representation into an overarching cumulative effects framework is important if you are interested in becoming ecologically sustainable.

32 According to the DEIR, approximately 62% of the assessment area experienced some form of timber harvesting over the nineteen year window. Some of the sixteen watersheds were heavily impacted with over 80% of their area harvested over this time period (e.g., Noyo headwaters, Middle Noyo, and Big River). If you factor in the projected impacts into a ten-year future, ten of the sixteen JDSF watersheds will have greater than 20% of their areas impacted by some form of logging. Having a better understanding of when, where, and how this harvesting would be carried out is necessary as input into a cumulative effects assessment. Based on the information provided, I find it impossible to understand how anybody could conclude the combined impacts from this one activity would be less than significant. The information presented suggests otherwise.

33 The scattering of GIS models under cumulative effects are descriptive models not prescriptive ones, and explain nothing about how future projects are likely to impact values. Although the labels sound like they are thinking ahead by using terms like "recovery potential", there is really nothing prescriptive about these models and do not predict the impacts from future projects on values spatially over the planning period. Again, framing the overarching questions in advance would be hugely beneficial and necessary in my view to pass scientific review.

The handling of cumulative effects lacks a decision framework as well as clear statements of what is being assessed from both the value side and stress side. Without these deficiencies adequately addressed, sweeping conclusion statements, common in the DEIR, cannot be supported.

CONCLUSION

34 The question before the management board of JDSF is how to continue existing as a working forest landscape without causing further degradation to the many values present on the forest. Unfortunately the errors of the past now place an added burden and operational constraints on the future if these values are to be maintained. There are very real ecological costs to managing resources for human use, and these costs cannot be continually pushed into the future. Doing so results in many negative unintended consequences.

35 In spite of these constraints placed on JDSF, these issues are not unique as they pertain as much or more so to the majority of the northern California coast. This provides an incredible opportunity for JDSF to fulfill its stated mission of leading the way through demonstration and education on how to return ecological integrity to a degraded forest landscape and still maintain a steady and reliable economic return.

LITERATURE CITED

Bartholow, J. M. 2005. Estimating cumulative effects of clearcutting on stream temperatures. Rivers 7(4): 284-297.

Bingham, B.B. and J.O. Sawyer. 1991. Distinctive features and definitions of young, mature, and old-growth Douglas-fir/hardwood forests. Pp. 363-377 in L. F. Fuggiero, K. B. Aubrey, A. B. Carey, and M. H. Huff (eds). Wildlife and Vegetation in Unmanaged Douglas-fir Forests. Pacific Northwest Research Station General Technical Report PNW-GRT-285, Portland, OR: USDA Forest Service.

Cantor, L. W. 1994. Methods for Cumulative Effects Assessment. Environmental and Ground Water Institute, University of Oklahoma, Norman, OK.

Council on Environmental Quality. 1997. Considering Cumulative Effects Under the National Environmental Policy Act.

Franklin, J. 1982. Old-growth forests in the Pacific Northwest: An ecological view. In, Old Growth: A Balanced Perspective. Washington, DC, Bureau of Government Research and Service.

Jiang, H., J. R. Strittholt, P. A. Frost, and N. C. Slosser. 2004. The classification of late seral forests in the Pacific Northwest, USA using Landsat ETM+ imagery. Remote Sensing of Environment 91(2004): 320-331.

Karr, JR. 1995. Using biological criteria to protect ecological health. Pages 137-152 *in*DJ Rapport, C Gaudet, P Calow (eds), Evaluating and Monitoring the Health of Large Scale Ecosystems. Springer-Verlag, New York.

Karr, JR. 1997. The future is now: biological monitoring to ensure healthy waters. Pp. 31-36 in Streamkeepers: Aquatic insects as biomonitors. Xerces Society, Portland, OR. Reprinted Northwest Science 71: 244-247.

McGurk, B.J., and D.R. Fong, 1995. Equivalent roaded area as a measure of cumulative effect of logging. *Environmental Management* **19**: 609-621.

Meehan, W.R. 1991. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19. Bethesda, MD. 751pp.

Sawyer, J. O., S. C. Sillett, J. H. Popenoe, A. LaBanca, T. Sholars, D. Largent, F. Euphrat, R. F. Noss, and R. Van Pelt. Pp. 39-79 in Noss, R.F. (ed) The Redwood Forest: History, Ecology, and Conservation of the Coast Redwoods. Island Press, Washington, DC.

Strittholt, J. R., D. A. DellaSala, and H. Jiang. In Press. Status of Mature and Old-Growth Forests in the Pacific Northwest, USA. Conservation Biology.

Trombulak, S. and C. Frisell. 2000. Review of the ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14(1): 18-30.

U. S. Fish and Wildlife Service. 1997. Recovery plan for the marbled murrelet in Washington, Oregon, and California. Portland, Oregon: U.S. Fish and Wildlife Service.

Welsh, H.H., Jr., G.R. Hodgson, and N.E. Karraker. 2005. Influences of the vegetation mosaic on riparian and stream environments in a mixed forest-grassland landscape in "Mediterranean" northwestern California. Ecography 28: 537-551.

Wisdom, M.J., R.S. Holthausen, B.C. Wales, C.D. Hargis, and V.A. Saab. 2000. Source habitats for terrestrial vertebrates of focus in the Interior Columbia Basin: broad-scale trends and management implications. UDSA Forest Service General Technical Report PNW-GTR-485, Portland, Oregon, USA.

Electronic Comment E-25

Response to Comment 1
The DEIR and RDEIR are intended as a public disclosure and decision making tool to be used by the Board to analyze the significant potential effects arising from implementing the draft JDSF Draft Forest Management Plan (DFMP) and the Administrative Draft Final Forest Management Plan (ADFFMP), to identify alternatives, and to disclose feasible measures to reduce or avoid significant impacts. The lead agency, in this case the Board, is obligated to produce a comprehensive document that addresses the full range of potential significant environmental impacts in sufficient detail that a determination of significance can be made with regard to the proposed project and the alternatives. The size of the document is largely determined by the complexity of the potential effects of the proposed project, plus the alternatives, and the requirement of CEQA that the EIR adequately address those potential effects.

The DEIR is also responding to a judicial decision that required an expanded regional setting and cumulative effects sections. The DEIR is complex because it examines a number of complex issues. The use of existing studies is not an uncommon information source in EIR development. CEQA does not require the sole use of original research for alternative development and impact analysis.

Response to Comment 2
The DEIR alternatives are described generally in the text, then explained in a detailed, comparative fashion in Table VI.1.

DEIR pages II-10 to -14 describes the programmatic nature of the DEIR and its relationship to future projects. The DFMP contains both general planning elements and specific proposed projects. The programmatic nature of the DEIR focuses on planning documents that generally contain a lesser level of detail than that found for an individual project. The DEIR examines a series of potential future projects that are geographically similar, carried out under the same authority, and have similar environmental effects and are mitigated in similar ways.

For the DEIR, spatial comparison of Alternatives was not conducted beyond the first decade given the speculative nature of the precise location of land management activities in space and time under any particular Alternative. Where supportable, spatial analysis was conducted using harvest units and prescriptions identified for Alternative C1 over the first ten year planning period. Retention or removal of Alternative C1 harvest units and/or change in harvest prescription was done for each Alternative to spatially characterize each Alternative for the Wildlife and Wildlife Habitat Analysis (See DEIR page VII.6.6-216 Spatial Pattern Analysis for Species of Concern). The DFMP included maps (figures 5 and 7) that illustrated attributes of Alternative C1. In the DEIR the spatial attributes for action alternatives were included (Map Figures D & Z) as well as the alternative with spatially unique attributes, (F) was included, (Map Figure AA.) The RDEIR included Map Figure 1 to illustrate Alternative G.

Response to Comment 3
The comparison tables were developed to demonstrate similarities as well as differences between Alternatives. Consistent with CEQA guidelines, CAL FIRE evaluated a broad range of alternatives and used a matrix to summarize the differences among alternatives (Guidelines § 15126.6d). The impact levels used to characterize effects are required in environmental impact analysis reporting. While the check-boxes alone may appear to provide a somewhat coarse (but CEQA-compliant) ranking, the text within the tables provides finer-grained information about the performance of the various alternatives at addressing potential environmental impacts. Further discriminating information about the alternatives can be found in the text portion of the various impact analysis sections.

That there are only relatively minor differences in identified impacts after mitigation and management measures are incorporated is a positive result and not an indication that significant

impacts were not identified or ignored. Alternatives that are at the extremes of the spectrum of management activities will exhibit clear differences. Management activities that are more conservative or closely related on the spectrum will exhibit differences that are less distinct.

Apparently, the commenter used the comparison tables to inform the very analysis conducted by the commenter to identify the “highest performing alternatives” thereby demonstrating the utility of the tables. There is no CEQA requirement that the proposed project be environmentally "highest performing" than any of the Alternatives; either before or after mitigations are applied. CALFIRE identified Alternative E as being the "Environmentally Superior Alternative" (DEIR page VI-13).

Differences in alternatives’ goals and values are compared clearly and in detail in DEIR Table VI.1, which runs some 38 pages. The impact comparison tables at the end of each resource analysis section clearly compare (with check-boxes and text) the impact differences among the alternatives.

Response to Comment 4
The wide range of background information, varying at times in its detail or spatial comprehensiveness, is reflective of the information that was reasonably available for use in the DEIR. Taken as a whole, however, this information provides a robust picture of the aquatic resource conditions on JDSF, the larger watershed cumulative effects assessment area, and the broader regional setting. One intent of the DEIR was to provide the reader with a regional context that could then be applied specifically to considerations of JDSF. Threatened and endangered salmonids are of significant public concern. The Aquatic Resources section was arranged purposefully to respond to judicial direction to explicitly improve upon the setting section with additional information of a regional context. The section is arranged to examine the topics of habitat, populations, and the regulatory environment first at a regional scale, and then at the local scale of the JDSF ownership and adjacent ownerships. For example, section 6.1.2 provides a regional overview of aquatic habitat conditions followed by section 6.1.3 describing aquatic conditions within the JDSF ownership and by section 6.1.4 which examines aquatic conditions on adjacent watersheds and downstream areas. Similarly, section 6.1.6 examines salmonid population status in a regional context, followed by section 6.1.7 that examines fish distribution and status on JDSF proper. Finally, section 6.1.11 describes elements of the state and federal regulatory environment that guide JDSF management, followed by section 6.1.12 that describes specific regulatory and other specific management measures already incorporated in the JDSF management plan. Addressing aquatic resource setting issues at multiple scales for a programmatic EIR is clearly complex. That complexity was recognized early on and the DEIR aquatic resources section organized to minimize reader confusion. See also response to Comment 1.

Macroinvertebrate population composition and density is frequently considered as a measure of overall stream biological condition. That macroinvertebrates can be a useful indicator of overall stream condition is well known. However, one issue relative to their use for this purpose is the wide range of stream conditions occupied by species within the same family. The wide range of environmental conditions represented by macroinvertebrates that are not keyed to species and the general lack of macroinvertebrate data across JDSF and the cumulative effects assessment area led to the use of other metrics.

Response to Comment 5
The commenter does not specify which topics have “important omissions,” making a reasoned response difficult. Regarding the specific examples provided by the commenter, they are recognized in the DEIR. The DEIR focuses on riparian shading as an important determinant of stream temperature because it is the principle driver that can be influenced by management activities. A comprehensive review of stream temperature is provided in Appendix 12 of the DEIR. This includes a discussion of the implications of the research presented by Bartholow (2000). Appendix 12 (page 1) specifically identifies upland vegetation as a factor in stream temperature. The Mattole River watershed has experienced a marked increase in acreage

converted to early seral stages of forest development since the 1940s. Accepting the hypothesis that ground-water temperature increases with the extent of early seral acreage, it is likely that project-associated effects would result in a decrease in ground water temperature on JDSF, since the proposed Administrative Draft Final Forest Management Plan will increase the area of later seral stages on JDSF. Site-specific results of extensive (>50% of watershed area) even age harvests specifically at JDSF in NF Caspar resulted in small, temporary increases in temperature that were within the tolerable range for coho salmon and steelhead (DEIR VII-6.34).

Regarding monitoring of hillslope conditions, stream channel conditions, stream temperatures, and fish and amphibian populations, Chapter 5 of the DFMP or ADFFMP provide further details, beyond the information provided in the DEIR, on monitoring plans for each of these areas and more.

Response to Comment 6
The commenter is apparently basing his concerns and observations only on review of DEIR Section 6 (Biological Resources), and more specifically Section 6.1 (Aquatic Resources) as a stand alone watershed assessment. DEIR sections VII.7 (Geology and Soils), VII.10 (Hydrology and Water Quality), VIII (Cumulative Effects), Appendix 10 (Peak Flow Analysis), Appendix 11 (Sediment Studies), and Appendix 12 (Stream Temperatures), also provide important watershed analysis elements for JDSF and informed the evaluation of project impact. Given the complexity of watershed processes and aquatic ecosystem functions, it was necessary to both integrate and split the various resource analysis elements. The basic conclusion reached by the analysis and independent research reported in these sections is that aquatic conditions are not "continuing to degrade" but are improving and are expected to continue to do so.

Response to Comment 7
The relative value of certain watersheds found on JDSF to the sustainability of coho in a regional context is acknowledged in the DEIR. The distribution of coho salmon is illustrated on DEIR page V-16 (Environmental Setting). Similarly, the value of JDSF as a provider of important aquatic habitat for coho and other species is noted on DEIR pages V-29 (Environmental Setting), VII.6.1-2 (Aquatic Resources), VII.6.1-31 (Habitat Suitability Overview), VII.6.1.53-64 (Regional Salmonid Population Status) and VII.6.1.85-87 (Critical Habitat). The commenter's own GIS analysis (Strittholt et al. 1999) to identify focal areas for redwood ecosystem conservation was used in the DEIR and provides information on the relative condition and intact nature of JDSF watersheds in a regional context (DEIR pages V-26 to -29 and VII.6.6-26 to -28).

Another example of how the DEIR identifies watersheds with high value for fisheries is found in section VIII.7.1 of the DEIR. Here, a GIS model is used to identify watersheds with the best riparian habitat indicators and the lowest sediment delivery potential. This model provided one indicator of the watersheds within the cumulative effects assessment area with some of the best potential habitat conditions for salmonids.

In addition to the programmatic measures provided in the DEIR/RDEIR and ADFFMP, forest management activities that are conducted in a "stronghold watershed" or other area of recognized importance to salmonids would be provided protection on a site- and project-specific basis that may exceed programmatic requirements. These protections would be commensurate with the resource values requiring protection and would be determined following a detailed analysis of potential impacts. Project and site-specific management planning is part of a tiered approach to environmental review that will result in greater detail and identification of potential impacts and mitigation.

Response to Comment 8
The commenter does not recognize the evidence provided in the DEIR analysis that ecosystem processes on JDSF and adjacent ownerships are in a state of recovery, and recovering at a rate that is greater than that added by expected future disturbance (Section VIII Cumulative Effects). That adding new stressors to already compromised systems results in a net negative is broadly

recognized where that system is in a state of decline. The aquatic environment on JDSF and surrounding ownerships is considered to be improving under current management. The degree of impact associated with new and added stressors was determined to be markedly less than the net effects of natural recovery processes and the application of proposed mitigation and management measures to protect and enhance aquatic values.

Response to Comment 9
See response to Comment 7 regarding the programmatic nature of the DEIR. The California Environmental Quality Act (CEQA) provides direction regarding the examination of negative and positive influences of land management activities. The DEIR clearly addresses a broad range of resources that are potentially affected by timber harvesting and other management activities. One of the primary functions of the Demonstration State Forest is to examine the potential conflict between timber management and other resources.

The broad range of alternatives considered in the DEIR and the detailed analysis of their potential environmental effects provides a clear evaluation of the tradeoffs between various levels of forest resource utilization (e.g., annual average harvesting levels ranging from zero to 36 million board feet per year).

Response to Comment 10
The central thrust of the comment appears to be the identification of the need for a monitoring and adaptive management approach for JDSF. Chapter 5 of the DFMP or ADFFMP provides information on the extensive monitoring and adaptive management approach for the Forest. This approach will provide the information needed to evaluate, over time, the changes in environmental conditions on the Forest, thus providing an opportunity to validate the environmental impact conclusions made in the DEIR and RDEIR. Where departures from anticipated environmental indicator values are found, steps will be taken to identify and address the causes for the departures. To the extent feasible, a GIS will be use to store, present, and evaluate the monitoring information that is collected over time.

The commenter does not articulate a specific concern regarding the need for “spatially explicit underpinnings for managing JDSF.” We do not believe that “spatially explicit underpinnings” are missing from JDSF management. The commenter’s contention that data must be spatially explicit to inform management decisions is not supported. The DEIR went to significant lengths to avoid the speculative interpretation of available data “that in all likelihood will later be found to be grossly inaccurate…” whether those data were spatial or non-spatial in nature.

With respect to the level of GIS-based analysis already included in the DEIR, see the response to Comment 2 and other comments below. Where spatial information existed and was not considered overly speculative, a spatial analysis of Alternative impacts was conducted. For example, see DEIR Pages VII.6.6-216-240 Spatial Pattern Analysis for Species of Concern and DEIR Pages VII.7.1-43 Geology and Soils.

Response to Comment 11
For rare plants JDSF has both a GIS layer and list of occurrences on JDSF**.** CAL FIRE provides all new CNPS list 1& 2 occurrence information to CNDDB so that this information can be formatted in a standard manner and shared. JDSF has draft quality floristic lists for upland areas of the forest that could be affected by timber management. For individual projects the information has varied historically from full floristic lists to general descriptions. JDSF also maintains plant lists from several research projects focusing on plant occurrence and ecology.

Species survey requirements for plants are described in the RDEIR page II-38 and in the ADFFMP. The survey process will include pre-harvest qualitative surveys (DFG 2000 Protocol). Monitoring is also described in Chapter 5 of the ADFFMP.

Response to Comment 12
The definitions of the terms "late seral" or "late successional" are broadly recognized to include both mature and old-growth forests. Current "old-growth" forest stands are identified and mapped in the planning process. The late-successional development areas are described in the ADFFMP (Chapter 3): "Late seral stands are dominated by large trees and have multiple canopy layers, relatively few trees per acre, and substantial amounts of large, down wood". In addition, individual old-growth tree characteristics are defined. "Late successional" or "late seral" as used in the ADFFMP when referring to late-seral development areas is meant to identify those forest stands that will be managed toward those conditions. The intent of the language used was, in part, to avoid confusion with current identified and mapped "old-growth" stands on JDSF that are recognized by the public.

It is not determinable what proportion of late seral (successional) stands would be considered "mature", "over-mature", or "old-growth" over the 100-year planning period and within the designated recruitment areas given the forest structure underpinnings of the terms definition and their related positions along the continuum of forest development-- although all of these forest conditions can be represented in the more general "late successional stage" of forest development.

The commenter discusses the broadly understood limitations of age as a basis for assigning forest acreage to a successional stage but then suggests that age is an important forest variable to map in order to evaluate Alternatives. Age is less important as an ecological variable than is structural condition (tree size, canopy closure, presence of special habitat elements etc.) in an assessment of ecological function. The latter was mapped and reported in detail which formed the basis for a habitat assessment by Alternative. The US Forest Service sought to identify ecological characteristics for a number of forest types in the early 1990s (US Forest Service. 1992. Old growth definitions/characteristics for eleven forest cover types. Pacific Southwest Region, California. Memo and report compilation from Regional Forester Ronald F. Stewart, Director, USDA Forest Service Pacific Southwest Experiment Station, to Forest Supervisors, Albany, CA. June 19, 1992.):

> Successional stages are most often recognized by structural characteristics such as size of trees, distribution of tree sizes, presence and size of snags and logs, understory composition and heterogeneity, and horizontal diversity in structure. Late successional forests in general contain trees that are large for their species and the site, often a variety of tree sizes, large snags and logs, and a developed and often patchy understory. While the structural features of late successional forests, or old-growth, are generally recognizable, a myriad of community and ecosystem interactions (or functions) may also be diagnostic but are more difficult to measure and describe.… Stand age is often considered less important than structure in describing late successional forests because the rate of stand development depends more on environment and stand history rather than age alone.

Stand age can be roughly estimated from harvest history maps kept at JDSF. However, the results should be considered only as an estimation, because some relatively historic harvest operations were not mapped, and other non-harvest events that impact stand development (e.g. stand replacement fires) have not been recorded. The CWHR maps provide a better description of stand conditions than an age-based map.

Response to Comment 13
The DEIR recognizes the regional conservation value of old-growth retention and recruitment and clearly describes the effort to meet this long-term management objective. The ADFFMP provides for:

- Protection of all old growth groves and aggregations;

- Creation of a contiguous 6,803-acre Older Forest Structure Zone, extending across much of JDSF from west to east and north to south, composed of older forest structure development area, old growth reserves, and late seral development areas;
- Management of riparian zones on Class I and II streams for the development of late successional habitat and the recruitment and placement of large woody debris;
- Upper Russian Gulch/Lower Big River (1,549 acres) designated as a late seral development areas for Marbled Murrelets and their habitat and
- Designation of most the Woodlands Special Treatment Area (2,207 acres) for late seral development;
- Overall, designation of one-third of the forest for maintenance or development of a range of older forest conditions.

Response to Comment 14
The commenter may be confusing the application of two different habitat data sets. Table VII.6.6.1 is found in the Regional Setting section and uses the California Wildlife Habitat Relationships System (CWHR) to describe extent of habitat types. In order to provide a relative comparison of habitat types for JDSF and the region in general a common and regionally derived vegetation coverage was necessary. FRAP Veg was utilized for this purpose and reference to the mapping methodology used is noted in the footnote DEIR Page VII.6.6-2.

Table VII.6.6.18 describes the extent of CWHR habitat types on JDSF derived from vegetation mapping and forest plot sampling. The habitat type mapping completed at the scale of JDSF was used for alternative analysis and wildlife habitat relationship modeling. Locally derived data were utilized as the preferred option wherever possible.

Contrary to comment, CWHR was explicitly developed to be applied to areas of the size of JDSF and its larger assessment area. The limitations, benefits, and assumptions inherent in a variety of wildlife habitat relationship modeling tools were considered prior to application to alternative analysis. The CWHR was judged to be the best modeling system available to examine trend in habitat capability for as many terrestrial vertebrates as were likely to occur within the project area. As required, ancillary data and occurrence records specific to JDSF were also utilized to refine species occurrence outputs of the CWHR model.

CWHR is the most comprehensive wildlife information system for vertebrates in California today -- containing life history, geographic range, habitat relationships, and management information on 692 species of amphibians, reptiles, birds, and mammals known to occur in the state.

Development of the CWHR System started in the late 1970s. The California Interagency Wildlife Task Group (CIWTG) was formed in 1981 to provide guidance for system development, with a final Memorandum of Understanding (MOU) signed by sixteen total state and federal resource agencies and public universities in 1985. CIWTG continues to meet quarterly on scientific research and policy issues related to CWHR. The System represents nearly 30 years of work by wildlife biologists, vegetation ecologists, geographers, land managers and planners, computer programmers, Geographic Information Systems (GIS) analysts, statisticians, modelers, database managers, research writers, and wildlife artists working in a wide array of public and private organizations devoted to resource protection.

There are currently approximately 900 professional users of the CWHR System, representing biologists, environmental scientists, researchers, and land managers from public and private organizations throughout California.

The CWHR System is managed by professional biologists and GIS analysts in the Biogeographic Data Branch (BDB) within the California Department of Fish and Game (CDFG). BDB actively

acquires, integrates, improves, and distributes biological resource data sets in support of conservation needs. CWHR represents its most analytical tool, predicting species presence based upon geographic location and habitat conditions. It complements data representing wildlife sightings, such as the California Natural Diversity Database (CNDDB), because it predicts the presence of species in locations or habitats where they are likely occur but for many reasons have not been seen. Many species are difficult to detect and many places in the state have not been surveyed often for wildlife. A model such as CWHR can alert land managers to the potential presence of a species that may otherwise be missed in a resource assessment based solely upon wildlife surveys and databases of positive wildlife sitings.

The DEIR recognizes some of the complexities of using CWHR modeling, especially for late seral habitat. (VII.6.6-19).

Response to Comment 15
See response to Comment 14. The CWHR model is clearly described as are important model assumptions. The comment does not suggest an alternative modeling approach that would provide more accurate results nor is it specific regarding the habitat or species predictive error that leads to an "extremely unreliable" conclusion.

Response to Comment 16
The Board believes that non-spatial CWHR model outputs provide a reasonable assessment of trend in habitat capability (as derived from reproduction, foraging and cover requirements) for a wide range of species potentially occurring in the project area. The CWHR model considers all habitat types and stages used by the terrestrial vertebrate species expected in the project area. However, the Board recognized the inability of the CWHR model to explicitly report which habitat type and structural characteristics were primarily responsible for the modeled change in habitat capability and made model output adjustments to capture that information. Habitat type and structure changes responsible for marked change in species habitat capability are described for many taxa and for each Alternative.

CWHR is a non-spatial model and as such should not be expected to provide insight into a spatial evaluation of Alternative impacts. A spatial representation of habitat capability was developed using the BioView model described on DEIR Pages VII.6.6-219-221. See also response to Comment 17.

Response to Comment 17
The limitations and assumptions associated with the spatial representation of Marbled Murrelet habitat are clearly described on DEIR Page VII.6.6-78-79 and Page VII6.6-238-239. This species requires very specific forest stand and individual tree characteristics that are not readily mapped or captured with the CWHR habitat classification system. It would be incorrect to assume that the species specific habitat issues identified by the commenter and reported in the DEIR for the potential Marbled Murrelet habitat map (Map Figure R) would also extend to the other species that were considered in a spatial context in the DEIR.

The following explanation can be found on pages VII.6.6-78 to -79 (Marbled Murrelet):

> In addition to old-growth stands, other forest stands of various CWHR classes may provide suitable habitat in the form of single or small groups of large old-growth residuals. However, specific data is not available. Therefore, for purposes of this analysis, JDSF provides 459 acres of old-growth and numerous scattered residuals that are considered potential murrelet habitat (DFMP Appendix V, Table 2). The suitability for Marbled Murrelets would depend on the specific characteristics of the stand, including the presence of mature trees with large branches, deformities, and other formations that provide nesting platforms. For this analysis, these habitat types are used to represent potential habitat for

Marbled Murrelets, although it is important to recognize that many of these stands may not provide suitable habitat.

Recognizing the limitations of the CWHR system, and limitations associated with available survey for murrelets and other species, it is possible and even likely that some of the stands identified as being either suitable or unsuitable for any given species may not be correct. In the absence of field assessment and survey at the stand level, it is impossible to state with certainty that a given habitat area is suitable or not suitable. CAL FIRE may not "take" the marbled murrelet. Prior to the conduct of projects that propose to impact potential marbled murrelet habitat, an assessment of impacts must be conducted, including survey for the species. In the case of identifying potential future murrelet habitat for management purposes, it should be recognized that the assessment can serve only as a rough indication, and that further, more detailed analysis, is required at the project level.

Marbled Murrelets are known to nest inland at distances similar to that of James Creek in eastern JDSF. James Creek is approximately 17 miles inland and is similar to the greatest distance from the coast for 10 murrelet nests reviewed by Hammer and Nelson (17.34 miles) (See DEIR Page VII.6.6-75). However, the commenter is correct in the generalization that forest stand occupancy likely decreases with distance from the coast. This relationship is described in the Marbled Murrelet species account in the DEIR. Recovery Zone 5 that includes Mendocino County extends inland for a distance of 25 miles from the Pacific Coast.

The spatial pattern analysis conducted for species of concern did not utilize the FRAP Veg database as asserted by the commenter. JDSF Veg (2004) formed the basis for a distribution of CWHR habitat types for the analysis. JDSF Veg differentiates vegetation conditions to a greater degree than the habitat classification system and so cannot be used within the CWHR system to estimate the value of the habitat for various species. This is why the JDSF vegetation types were converted to CWHR habitat types. Map Figure 8 in the Draft Management Plan uses an older, less accurate vegetation coverage than that which was used in the DEIR (JDSF Veg 2004). Map figures J and K of the DEIR use the 2004 JDSF Veg for polygons within the forest boundary. Mendocino Redwood Company (MRC) vegetation polygons were used for MRC lands, and CALVEG was used for the remaining areas outside the forest boundary. It was CAL FIRE's intent to use the best available data even though it originated from several sources. JDSF and MRC vegetation layers were used because they were created in 2004 by foresters using aerial photos and field surveys and were considered more accurate than remotely sensed data based on the older satellite imagery.

Response to Comment 18
The habitat relationship model results from the CWHR System are considered the best available for the purposes of a programmatic DEIR. See response to Comment 14. CWHR produces a non-spatial characterization of habitat capability. BioView, a model developed by the California Department of Fish and Game, was used to illustrate habitat suitability for the eight species in a spatial context after consultation with the Department of Fish and Game. This model is described on DEIR Page VII.6.6-220 to -221 and a URL provided for additional information. There are limitations with any modeling approach. The model allowed an objective evaluation of the amount and configuration of habitat available under each alternative for each of the eight species.

Response to Comment 19
CAL FIRE, after consultation with the Department of Fish and Game, selected 6 landscape measures to apply to each of the 7 Alternatives and for each of the eight species. The six measures were chosen for a variety of ecological and reporting considerations, including relative ease of understanding by the reviewing public. In addition, many of the FRAGSTATS metrics are highly correlated and the additional reporting of all FRAGSTATS metrics would not necessarily result in new or better information (DEIR page VII.6.6-28-33).

Response to Comment 20
The Board used the best data available for a spatial assessment conducted at the scale reported. The degree that inputs to the Spatial Pattern Analysis for Species of Concern are "spatially coarse" and "largely unreliable," as asserted by the commenter, is a species-specific determination.

That the spatial data generated are coarse is recognized. However, precise and spatially fine-grained analytical findings were not sought. The intent of the spatial analysis was to report the relative magnitude of differences between commonly used landscape metrics for each of the selected species under each DEIR Alternative. A key assumption, as indicated in the DEIR, was that all else being equal, a marked change in landscape metrics could, when viewed in the aggregate, indicate an important trend in habitat suitability as a result of Alternative implementation. Such a finding would require additional review of possible impacts and mitigation or management measure development..

Response to Comment 21
The limitations and uncertainties of the modeling approach are described in detail on DEIR Pages VII.6.6-216 to -221, including mapping resolution, minimum mapping unit, and home range size. The commenter is not specific as to which species are not considered at the appropriate scale. The analysis does not assume that each species will respond in the same way as suggested by the commenter. Habitat suitability values are species-specific and derived from the reproduction, foraging and cover values a species finds for a particular CWHR habitat type and structure. The mapped polygon is then categorized as to suitability for that species. In other words, what is considered fully suitable for one species may be determined to be of low value for another species.

Response to Comment 22
See response to Comment 19 and Comment 20. The DEIR followed a coarser more general analytical approach than that presumed by the commenter. The DEIR sought to examine for each species of concern the relative change in simple landscape metrics across all alternatives. The DEIR did not attempt to speculate on the ecological functionality of metric values derived for each species of concern by alternative beyond basic landscape ecology principles. For example, as described on DEIR pages VII.6.6-216 to -221, species preferring interior forest conditions and larger blocks of habitat closely spaced on the landscape would likely be better served by one alternative over another. Any alternative may well meet the spatial habitat requirements of a particular species over time, the objective of the analysis was to rank or group alternatives for each species using the metrics selected.

The relative ranking of alternatives as a result of the spatial analysis was summarized for the reader on DEIR Pages VII.6.6-237-240. This includes species-specific information. Habitat relationships for each species of concern were described in detail for each species of concern in the species accounts, DEIR Pages VII.6.6-44-110.

Response to Comment 23
Individual planning units or watersheds were not used as the analytical landscape for a variety of reasons. First, for several of the species examined, individual home range and proportion of the landscape used by the population are not influenced by watershed boundaries. Second, conducting the analysis for each planning watershed by alternative and for each of the eight species of concern would have resulted in markedly more analytical effort and data of uncertain utility. Third, determining the spatial distribution of future THPs by watershed, beyond the first decade, and those silvicultural prescriptions to be applied is highly speculative. The result is a large number of possible management scenarios impossible to effectively analyze. The intent of the analysis was to provide a relative ranking of alternatives by the expected effect on widely recognized landscape metrics as guided by the habitat requirements for eight species of concern. The Board believes that the analytical objective was met.

Response to Comment 24
See responses to comment 20 and 22. No thresholds beyond the recognition of basic landscape ecology tenets were considered. Developing a threshold based on percent change in a particular metric would have been arbitrary. Note that comments 14 though 24 entail specific comments on analysis process. In responding to specific comments, the Board is attempting to explain the analysis process. Most comments do not suggest a specific flaw, rather set forth an opinion on a theoretically preferred analysis method. The comment provides no factual basis to assume that the Board failed to use adequate data inputs or analysis processes. Any analysis can only be legitimately conducted to the level of detail present in the initial data. The Board has recognized that fact, and has cautiously modeled and analyzed potential impacts.

Response to Comment 25
The JDSF DEIR and RDEIR follow the CEQA Guidelines by providing a discussion of cumulative impacts of a project (the JDSF management plan) that is both comprehensive and rigorous. The CEQA guidelines state that the discussion of cumulative effects should be "guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact" (15130b). The DEIR and RDEIR provide listings and discussion of all past, present, and probable future projects that potentially contribute to cumulative effects, which is considered one of the necessary methods for an adequate discussion of significant cumulative effects [15130 (1a)]. In addition, following the Dunne report (Dunne et al. 2001) the DEIR uses spatially specific models to evaluate aquatic habitat conditions and potential cumulative impacts from timber harvesting, roads, water flow, and water temperature (DEIR pages VIII.66 – VIII.72; Appendix 10).

The DEIR and RDEIR provide discussions of cumulative effects in multiple, appropriate places throughout the documents. Cumulative effects are addressed in a number of the individual resource analysis sections, as well as a single section that deals entirely with cumulative effects (Section VIII in the DEIR and Section IV in the RDEIR). Sections of the DEIR and RDEIR that address cumulative effects can be readily identified in the table of contents. Some cumulative effects issues are crosscutting: For example, how do sediment, stream temperature, nutrients, flow, and large woody debris combine to affect in-stream fish habitat? Such issues are appropriately addressed in integrative sections like VIII in the DEIR and IV in the RDEIR. Other cumulative effects issues are more focused on how a single impact type may accumulate over space and time, such as loss of a particular habitat type and its impacts on a species that prefers that habitat (e.g., needs of Marbled Murrelets for trees, typically old growth, with large platform branches to provide nesting sites). This kind of focused impact can be appropriately contained within a section addressing wildlife and wildlife habitat.

As a detailed example of integration of crosscutting cumulative effects in the DEIR, Section VIII.4 addresses in one place the five important "watershed products" that are the key factors for in-stream fish habitat. These are the five factors that are most often influenced by forest management activities.

Further integrative analysis is found in the use of several models and large quantities of data in the cumulative effects section VIII.7.1, Aquatic Resources, of the DEIR. For an example of how the DEIR uses a model to integrate across multiple cumulative impacts, see the discussion of Model 1: GIS Evaluation of Cumulative Watershed Effects and Recovery Potential (DEIR page VIII-66 et seq.). This model integrates the following factors across planning watersheds within the JDSF cumulative effects assessment area and yields an aquatic habitat recovery score that provides an integrated indictor of cumulative effects:

- Structure of riparian forest stands;
- Riparian shade;
- Channel characteristics;
- Road sediment;

- Density of road and stream crossings;
- Riparian road density;
- Stream temperature; and
- Timber harvesting history.

This integrative analysis in Section VII.7.1 also includes the use of the EMDS model (see Comment 29).

The table at the end of the cumulative effects section in the RDEIR, Table IV.2. Summary of Potential Adverse and Beneficial Potential Cumulative Effects, provides a thorough overview of the results of the cumulative effects analysis and the broadly-encompassing range of factors (both individual and integrative) examined. The results shown here indicate that Alternative G, the basis for the ADFFMP, would provide a large number of significant beneficial cumulative effects and no significant adverse cumulative effects.

The DEIR and RDEIR make it clear when they are addressing cumulative impact issues. When addressed in single resource area sections, cumulative impacts are typically addressed after individual impacts. Further, the impact summary sections provided at the end of the executive summaries of DEIR and RDEIR, at the end of each resource analysis section, and at the end of the cumulative impacts sections all clearly identify where cumulative impacts have been identified in the analysis.

The comment suggests that every individual impact combines with every other individual impact, resulting in an implied matrix of myriad interactions. No models exist to evaluate such a matrix. Further, interactions of impacts are in reality more limited than this. The DEIR identifies where meaningful impact interactions occur and addresses the potential for those impacts to be significant. For an example of a simple interaction, the discussion of Marbled Murrelet identifies that recreational use in areas in or adjacent to the seabird's habitat can be problematic because the food waste that recreationists often leave behind attracts corvids that also prey on Marbled Murrelet eggs (see DEIR Table VII.6.6.34, page VII.6.6-246). An example of more complex interactions is the GIS Model 1 discussed a few paragraphs above.

Response to Comment 26
The comment notes that "the dominant stressor discussed throughout the DEIR is forest management." Forest management broadly encompasses virtually all land use on JDSF and the other portions of the designated cumulative effects assessment area. Forest management includes roads (their construction, use, maintenance, upgrading, removal, etc.) and the use of chemical treatments to control vegetation. Both of these areas of forest management are thoroughly addressed and evaluated in the DEIR and RDEIR. The RDEIR finds no significant adverse impacts, cumulative or individual, that would result from Alternative G.

Forest management also includes the use of forests for recreation, gathering of minor forest products, protection of cultural resources, restoration, monitoring, collection of information about resource conditions, fire protection, and many more items. All of these forest management elements and others are thoroughly addressed in the DEIR and RDEIR. The comment does not specifically identify any relevant stressor that the DEIR or RDEIR has failed to address adequately.

Response to Comment 27
The comment expresses a simplified view of roads, road density, and associated impacts that does not reflect the variability of forest conditions. For example, while two separate watersheds may share the same road density, one may have much greater potential for impacts to watershed resources, due to the type, maintenance, and location of the roads that exist. A given length of road constructed with little excavation, located on a gently sloped ridge does not share the potential for impact of a similar length of old road constructed in the inner gorge adjacent to a

stream. An overarching consideration with respect to this comment is that fact that the ADFFMP proposes to implement an aggressive Road Management Plan that will reduce the mileage of potentially damaging roads on JDSF and reduce the sediment and hydrologic effects of the remaining roads. New road construction will follow modern construction and maintenance practices, and will be largely located on the upper slope away from watercourses. The Road Management Plan will thus reduce the current level of road-related environmental impacts, resulting in a long-term improvement of environmental conditions.

An overall average road density for JDSF of 6.0 mi/mi^2 does not in itself present a problem for aquatic resources. The road density on JDSF is in fact generally less than for other ownerships within the cumulative effects assessment area. There is unlikely to be single road density threshold that is appropriate for all watersheds. Theoretic and simulation analysis suggests that road density is a poor measure of road-related sediment delivery to the stream network. (University of Washington 2000). While sediment is produced on all forest roads used in timber harvest operations, its delivery to a stream is a function of its distance to the stream. Separation of roads from streams is an effective means of reducing sediment delivery, and JDSF has an active road abandonment program for high risk roads located near streams. CAL FIRE is committed to identify sediment sources from roads and decommissioning roads that are no longer needed or pose high environmental risk.

The Board agrees that roads can have major ecological impacts on ecosystems. The DEIR rigorously identifies the Forest's road network, to estimate its contributions to sediment production, to identify measures that will be taken to reduce road sediment, and to assess the likely effects of sediment on aquatic resources and water quality. The DEIR uses a much more objective, evidence-based assessment approach to roads and sediment than the approach that the commenter uses. In addition to reviewing the significant existing body of studies of roads and other sediment sources in the cumulative effects assessment area (see DEIR Appendix 11, Overview of Existing Sediment Studies Relevant to the JDSF EIR, which cites 55 studies and reports), the DEIR uses the widely accepted spatially explicit road sediment model "SEDMODL2" to estimate road sediment sources within the cumulative effects assessment area.

Section VII.7, Geology and Soils, presents the results of SEDMODL2 and other GIS analysis in a highly detailed fashion at the planning watershed level (see DEIR Tables VII.7.1 and VII.7.2, and Figure VII.7.1). The planning watershed level is a very robust level of spatial analysis for a programmatic EIR; for example, the planning watershed is the typical unit of analysis used for watershed cumulative impacts at the project level, such as a timber harvesting plan. The SEDMODL2 results are incorporated into the integrated cumulative impacts analysis model detailed in the response to Comment 25.

The comment expresses a specific concern that the road density information provided in DEIR Table VIII.6b is too coarse for meaningful analysis. DEIR Table VII.7.1 provides highly detailed road density information, and other road information, at the planning watershed, subwatershed, watershed, and cumulative effects assessment area level. Density information is provided for both JDSF and non-JDSF ownerships. From this table one can ascertain, for example, that road density on JDSF is generally less than for other ownerships within the cumulative effects assessment area.

The Board concurs with the stress the commenter places on the importance of roads along streams, since these roads can be very detrimental to riparian and aquatic ecosystems. As stated in the comment, sediment potential is not equal for all roads—roads within 200 feet of streams or near stream crossings have a much higher potential for sediment delivery than roads near ridgelines. Therefore, riparian road densities and crossing densities are a better index of potential impacts to streams and aquatic habitats than road densities for entire watersheds. DEIR Table VII.7.1 provides the same level of detail on riparian road miles as described previously for overall road density. Table VII.7.2 provides equally detailed information on road crossings. In addition to its use in assessing cumulative impacts, the detailed information in this

table also will be useful in helping to set priorities for implementation of the ADFFMP's Road Management Plan. For example, watersheds with the highest road sediment risk will be inventoried first. Road segments identified during the inventory process as having the highest sediment potential will be treated first.

In addition to discussing current conditions with respect to roads (which the DEIR and RDEIR do thoroughly), it is critical that the CEQA analysis discuss how the proposed project would lead to changes—to the environmental good or detriment—in those existing conditions. The DEIR and RDEIR also do this. For example, it is anticipated that implementation of the ADFFMP and its Road Management Plan will result in a reduction in the miles of potentially damaging roads on JDSF. It will result in the proper abandonment (permanent closure of roads in a way that reduces long-term sediment production, maintains hillslope stability, and re-establishes natural drainage patterns) of some road segments and the likely construction of other road segments that pose a lower level of environmental risk. Remaining roads will be improved to reduce their sediment and hydrologic impacts. Overall, the road sediment impacts of JDSF will be reduced substantially as the Road Management Plan is implemented over time. The Road Management Plan is detailed in ADFFMP Appendix IV.

The DEIR and RDEIR find that, for Alternatives C1 and G, respectively, the proposed management, with application of identified management measures and mitigations, would have:

- Less-than-significant individual or cumulative effects of sedimentation on listed aquatic species (DEIR Sections 6.1.16 and VIII.8.5; RDEIR Sections III.6.2 and IV.3);
- Less-than-significant individual or cumulative effects related to violation of water quality standards or waste discharge requirements (DEIR Sections VII.10.9 and VIII.8.5; RDEIR Sections III.10 and IV.3);
- Less-than-significant individual or cumulative impact on soil erosion or loss of topsoil (DEIR Section VII.7.6; RDEIR Section III.7).

It is anticipated that implementation of the ADFFMP will result in a net decrease in the total amount of potentially damaging road length and area on JDSF over time. This change will result in improvements in wildlife habitat conditions related to roads over time. We also note that road edge is a positive habitat value for some species. The DEIR discusses road related impact to habitat utilized by various terrestrial wildlife species (e.g., Cooper's Hawk, Marbled Murrelet, Northern Spotted Owl, Sonoma red tree Vole, southern torrent salamander, tailed frog, foothill yellow-legged frog).

The DEIR includes a mitigation to Alternative C1 to address potential project impacts, including those from roads, to snag and LWD dependent species:

> **Mitigation 1**
> Retain all snags within all timber harvest areas with the exception of snags that pose a fire or safety hazard, or are within the alignment of roads proposed for construction. The largest snags, including residual old-growth snags, should have priority for protection until the snag retention goals of the DFMP are met. (DEIR p. VII.6.6.131)

The commenter incorrectly speculates that roads significantly open the forest canopy and allow more light to reach the ground. This is an over-generalization. With the exception of main haul roads, forest roads are usually sufficiently narrow that the forest canopy closes above the road within a few years of construction. It is common industry practice to estimate no loss of growing space due to forest roads. The DEIR addresses the issue of invasive species at length. The Board agrees that the literature supports the contention that roads and roadside habitats can be invaded by a suite of exotic (nonnative) plant species, which may be dispersed by "natural"

agents such as wind and water as well as by vehicles and other agents related to human activity, and that they can adversely impact some terrestrial species (Gucinski et al. 2000). To reduce this impact, the management plan calls for implementation of an integrated weed management program (see ADFFMP Chapter 5 and DEIR sections VII.6.2 and VII.8). The risk of spread is expected to be reduced over time. Some important elements of the program will include shade management, maintenance of ground cover adjacent to roads, encouragement of revegetation by native species, and monitoring of new road segments. The DEIR and RDEIR examined and did not identify any potential significant effects related to invasive species.

Response to Comment 28
See response to Comment 25 regarding organization and integration of cumulative effects in the DEIR and RDEIR.

We note, as described in the response to Comment 25, that the cumulative effects analysis in the DEIR and RDEIR point to a number of positive cumulative effects from the implementation of Alternative C1 or Alternative G (the ADFFMP), given the various management measures and mitigations applied. The fact that many beneficial effects would result reduces the need to utilize even more fine-grained or quantitative analytical approaches than the ones already applied. Where potential impact outcomes tend to be adverse, there is a greater need for fine-grained quantitative analysis that more precisely assesses whether various quantitative thresholds might be breached, leading to likely significant adverse impacts. Given that these circumstances do not exist with respect to the proposed JDSF management, the level of analysis conducted in the DEIR and RDEIR is more than adequate to assess potential cumulative adverse impacts. Further, existing models and reasonably available data are substantially limiting in permitting a more detailed quantitative analysis than that already provided in the DEIR and RDEIR.

The DEIR discussed quantitative threshold values in many areas, these include:

- Air quality (see DEIR section VII.5);
- Stream temperature impacts on salmonids (see DEIR pages VII.6.1-15 et seq., VII.6.1-26 et seq., and Appendix 12);
- V* measurement of instream pool filling (see DEIR pages VII.6.1-21 et seq.);
- Turbidity impacts on fish (DEIR pages VII.10-7 et seq.);
- Flow effects (DEIR pages VII.10-4 et seq. and Appendix 10).
- Change in measures of species habitat capability.
- Existing snag densities and recruitment.

All items in this list of thresholds are potentially measures of cumulative effects, since each may represent an accumulation of effects within the ambient air, within a stream system, or forestland condition.

In many cases, models do not exist to specifically evaluate the effects of management activities on these parameters, especially at the level of a programmatic EIR. However, modeling used in the DEIR did specifically evaluate potential quantitative effects on stream flow, road sediment, and wildlife habitat,

The analysis made full use of the best available information and analysis methods. In addition to being limited by existing models and reasonably available data, the ability to fully conduct spatial analysis of potential effects over time is limited by the programmatic and long-term nature of the project and the EIR. It also is limited by the need to use a cumulative effects assessment area that includes substantial amounts of privately held land (77 percent of the 214,000-acre cumulative effects assessment area is owned by landowners other than JDSF, mostly private industrial timberlands). Retrospective and forward looking spatial information was used to the extent it was available (e.g., the short-term harvests identified for JDSF). Historical trends were used to generate projected average spatio-temporal relationships at the planning watershed level,

even if site-specific information was not available. For example, historical harvesting trends on non-JDSF lands were used as a predictor of future harvesting activities.

Dunne et al. 2001 state that computer models should be used to scientifically address cumulative impacts from different stressors, but no one has been able to actually develop and link all of these models for the necessary components in a comprehensive way. Perhaps the closest computer model we currently have for doing this work is NetMap, but this tool is not currently available since most of the JDSF assessment area has not been inventoried. See also response to Comment 29.

Response to Comment 29
The cumulative effects analysis in the DEIR and RDEIR goes well beyond "cobbl[ing] together whatever could be found." See responses to above comments 25, 27, and 28.

The Board and Department have experience in using the EMDS model in a collaborative context with the Department of Fish and Game and other collaborators (see, e.g., Walker et al. 2007). EMDS is used in the DEIR for the assessment of cumulative effects related to in-stream habitat quality (see DEIR pages VIII-73 et seq.). While the EMDS system has some advantages, EMDS is a sometimes elegant compromise between hard science and "arm waving." Walker et al. note a number of limitations of the model, but state that agency scientists found it useful for the in-stream reach condition form it was used in the DEIR.

No one has yet moved beyond the largely conceptual level in the development of a convincing method for transparently and comprehensively analyzing or predicting cumulative watershed effects in a single, all-encompassing model. For example, Dunne et al. (2001) provide the conceptual framework for a comprehensive risk-based approach to cumulative watershed effects assessment. They describe that "The risk assessments would be made through spatially registered mathematical simulation of watershed processes, using recently developed methods of modeling and spatial data acquisition and processing," (*ibid*. at p. 1). However, Dunne et al. describe 10 different legal, conceptual, information, knowledge, economic, and social impediments to achieving their assessment approach (*ibid*. at p. 54). They specifically note, "The implementation of the proposed modeling approach for predicting [cumulative watershed effects] will require a significant increase in our current state of knowledge, particularly of the linkages between physical watershed changes and their biological consequences," (*ibid*. at p. 59). While some progress has been made against the impediments identified by Dunne et al., the current state of knowledge and data still falls far short of what is needed to achieve implementation of their recommended approach.

Cumulative effects analysis is commonly accomplished through approaches that fall short of scientific perfection, but that nevertheless provide a level of assessment adequate to meet the requirements of CEQA. By all accounts, scientists and practitioners are still searching for better analysis methods to measure and predict cumulative watershed effects. What is presented in the DEIR and RDEIR meets the requirements of CEQA and is adequate to ensure public disclosure and protection of the environment. Modeling environmental responses to management can take a variety of forms and levels of sophistication.

Response to Comment 30
Chapter 5 of the DFMP or the ADFFMP provides the monitoring and adaptive management framework that the commenter suggests here.

Response to Comment 31
The DEIR provides information about historical management at JDSF and within the broader redwood region. Section VII.6.3.1 provides quantitative information on timber harvesting from 1949 forward for JDSF, as well the North Coast region and Mendocino County. It also provides a qualitative description of the harvesting history on JDSF and for the region from the first Euro-American harvesting in the 1800s forward. For related historical information also see, e.g., DEIR

sections III.5 through III.6.3. Historical harvesting Information also is provided in Chapter 2 of the DFMP or ADFFMP.

The DEIR provides a general understanding of how older historical management has influenced current conditions. While information on harvesting prior to 1986 is not brought in detail into the data presentation, analysis, and discussion in the cumulative effects section, it is important to recognize that the current conditions within JDSF and the larger cumulative effects assessment area reflect older harvesting activity. Extensive presentation and use of information on current conditions within the cumulative effects assessment area occurs throughout the DEIR and RDEIR. This information on current conditions provides the baseline of information from which the potential for future cumulative effects can be assessed.

Historic harvesting on the Chamberlain Creek watershed, an area specifically identified in the comment, is briefly discussed on page VII.6.3-3 of the DEIR and in Chapter 2 of the DFMP and ADFFMP. Stream temperature issues and data are covered at length in the DEIR, including section VII.6.1 in the main body and in Appendix 12. For example, with respect to the stream temperature example the commenter used for Chamberlain Creek, Appendix 12 identifies in detail the various determinants of in-stream water temperature. Table 1 in the appendix focuses on land management influences on stream temperature. Given the land use and water resource use of JDSF and other lands within the cumulative effects assessment area, the most relevant factors for water temperature in the Chamberlain Creek watershed are removal of upland vegetation and riparian management that affects large woody debris or shade canopy. Appendix 12 (starting at page 6) has a section discussing logging history and water temperature. While this section does not discuss Chamberlain Creek specifically, it provides an overall understanding of logging history and the way it influenced streams in the area. Table 4 in Appendix 12 provides information on stream canopy for Chamberlain Creek and other JDSF streams. The table indicates that Chamberlain Creek has a high degree of canopy closure (which is significantly related to stream shading), and that 95% of the stream length has 70% or greater canopy (rated as “high” canopy coverage).

Upland vegetation removal and conditions also are factors for stream temperature, as mentioned above. Table VIII.3 in the DEIR shows that the Chamberlain Creek watershed has had just 50 acres out of 7,863 acres (or 1%) harvested since 1986. The harvesting done is identified as being of a type that only partially removes the forest canopy. Given the lack of recent harvesting, the current vegetation conditions should largely reflect the influence of the longer term-harvesting history for this watershed. Map Figures K in the DEIR and 2 in the RDEIR show information about current vegetation conditions in the Chamberlain Creek watershed. Map Figure K from the DEIR uses the California Wildlife Habitat Relationships System (WHR) of classification. It shows that the Chamberlain Creek watershed is predominantly Douglas-fir in WHR Class 4 (mean tree diameter of 11-24 inches), with significant areas of redwood in WHR classes 3 (mean tree diameter of 6-11 inches) and 4. Map Figure 2 from the RDEIR provides information on the number of trees per acre greater than 30 inches in diameter at breast height. It indicates that the Chamberlain Creek watershed is dominated by stands with 4 or fewer of these larger trees per acre; with the exception of the western edge of the watershed, which has stands with up to 15 larger trees per acre. These larger trees play an important role in habitat structure for wildlife, as well as for potential recruitment into streams as large woody debris to provide a key in-stream habitat structure element.

While the discussion above goes on at some length about the Chamberlain Creek watershed, it illustrates the high level of detail of information that is included in the DEIR and how that information is used to draw inferences about the relationships among past land use, existing vegetation, and habitat conditions.

Response to Comment 32

Past research and professional experience have shown that limiting harvest to a certain percent of the basin per year to keep sediment levels or other impacts below a set level is too simplistic to

be a robust indicator of potential environmental impacts. The approach does not account for regional or watershed variability, harvest location, silviculture, yarding system, roading, etc., and assumes a direct causal mechanism between harvest and the magnitude of impact. In most cases, it is not the fact that trees were harvested, but how they were harvested, where on the landscape, methods of roading and yarding, degree of riparian protection, and other factors that determine the impact of a forestry operation (Beschta et al. 1995).

JDSF-specific research is relevant to the issue of rate of harvest and potential for watershed cumulative effects. On the North Fork of Caspar Creek, approximately 45 percent of the watershed was clearcut harvested in approximately three years for the purpose of answering these questions. Research conducted in the North Fork of Caspar Creek watershed began in 1985 and directly addressed cumulative watershed effects. Most of the logged units were cable yarded and new roads were built along the ridge lines (thus avoiding sensitive riparian areas). Nested watersheds with individual gauging stations measured sediment routing. None of the statistical tests performed on the sediment data revealed significant positive interactions that would indicate disproportionate disturbance effects at downstream gauging stations (Lewis 1998). In both pre and post-treatment, main stem gauging stations had higher unit area sediment loads than in the tributaries, which could reflect the greater availability of sediment stored in lower gradient reaches. The intensive level of timber management in the North Fork of Caspar Creek watershed also did not cause large changes in watershed physical or biological variables in this moderately stable geologic formation (Ziemer 1998, Lewis 1998, Cafferata and Spittler 1998, Nakamoto 1998, Bottorff and Knight 1996, Bawcom 2003). Ziemer (1998) states that “the effect of logging on stormflow response in Caspar Creek seems to be relatively benign. The resulting changes in streamflow do not appear to have substantially modified the morphology of the channel (Lisle and Napolitano 1998) or the frequency of landsliding (Cafferata and Spittler 1998).” The Caspar Creek results show that significant adverse hydrologic and geomorphic changes resulting from timber operations can be prevented by the application of mitigation and management measures such as those contained in the California Forest Practice Rules and embodied in the ADFFMP.

The Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat (SRP Report; Ligon et al. 1999) looked at percentage-based harvest limitations and found agreement that, “it would be difficult to set specific limitations of percent harvest goal per decade due to the effect of confounding and, in some cases, mitigating factors, (page 67). The SRP did not find “any widely accepted methodology or program that quantifies the level of harvesting with either cumulative effects or flooding,” (*ibid*. at page 68). Despite such problems, the SRP suggested that a harvest limitation based on percentage of watershed harvested per decade should be considered for application on watersheds, pending completion of a watershed analysis. However, the DEIR provides a significant level of watershed analysis, thus largely eliminating the usefulness of a simple rate-of-harvest threshold.

Response to Comment 33

See response to Comments 25, 27, 28, and 29. The DEIR uses a substantial quantity of spatial and nonspatial data and a variety of models and other analytical approaches to describe current conditions and assess how future actions are likely to affect those conditions and values of interest.

The discussion of cumulative impacts found in an EIR does not need to provide as great detail as for the individual project effects and should be guided by reasonableness and practicality (CCR §15130(b)). And, the sufficiency of an EIR is to be determined in light of what is reasonably feasible and not by the exhaustiveness of the analysis and review (CCR §15151). In that this is a programmatic EIR the degree of specificity is limited, with greater analytical detail provided in support of individual site specific projects prior to their approval (CCR §15146).

Cumulative effects analysis is commonly accomplished through approaches that fall short of scientific perfection, but that nevertheless provide a level of assessment adequate to meet the

requirements of CEQA and to ensure the protection of the environment. By all accounts, scientists and practitioners are still searching for better analysis methods to measure and predict cumulative watershed effects. What is presented in the DEIR and RDEIR meets the requirements of CEQA and is adequate to ensure public disclosure and protection of the environment at a programmatic level.

Response to Comment 34
The ADFFMP provides a clear path to the improvement of ecological conditions on JDSF, and the analysis in the DEIR and RDEIR indicate that many beneficial ecological effects will result and that no significant adverse impacts will occur. These improvements will build on the many steps, documented in the DEIR, that have been taken in recent years to improve ecological conditions within the cumulative effects assessment area for JDSF. DEIR Table VIII.7 identifies 126 projects undertaken since 1991 to improve conditions related to stream sedimentation, fish passage, fish habitat, riparian restoration, or planning activities. While impressive, this list does not identify all such improvement projects.

Response to Comment 35
The DEIR provides substantial information on the regional and local ecological context for JDSF (see, e.g., DEIR Sections III and IV, and each individual Resource Analysis section). The Board believes that the ADFFMP provides a viable approach to lead "the way through demonstration and education on how to return ecological integrity to a degraded forest landscape and still maintain a steady and reliable economic return." Just one indicator of the fact that JDSF is already well along the road to demonstrating this ecological and economic balance is the simple fact that JDSF stands are so much better stocked than private timberlands in the North Coast region. Average timber volume on JDSF is greater than 40 thousand board feet (MBF) per acre; private lands in the region have an average volume of about 15 MBF/acre (Waddell and Bassett 1996). However, JDSF is public land, subject to a different set of constraints and management objectives than most private timberland holdings. None-the-less, JDSF management serves as a demonstration of sustainability under the appropriate set of conditions and management incentives.

References

Bawcom, J.A. 2003. Clearcutting and slope stability, preliminary findings, Jackson Demonstration Sate Forest, Mendocino County, California. *In:* S.L. Cooper, compiler, Proceedings of the 24th Annual Forest Vegetation Conference, Redding, CA, January 14-16, 2003. University of California Cooperative Extension, Redding, CA. 10p.

Beschta, R.L., J.R. Boyle, C.C. Chambers, W.P. Gibson, S.V. Gregory et al. 1995. Cumulative effects of forest practices in Oregon: literature and synthesis. Prepared for the Oregon Dept. of Forestry. Salem, OR.

Bottorff, R.L.; Knight, A.W. 1996. The effects of clearcut logging on stream biology of the North Fork of Caspar Creek, Jackson Demonstration State Forest, Fort Bragg, CA -- 1986 to 1994. Unpubl. Final Rept. prepared for the California Department of Forestry and Fire Protection, Contract No. 8CA63802. May 1996. Sacramento, CA. 177 p.

Cafferata, P.H. and T.E. Spittler. 1998. Logging impacts of the 1970's vs. the 1990's in the Caspar Creek watershed. In: Ziemer, R.R., technical coordinator. Proceedings from the Conference on Coastal Watersheds: the Caspar Creek Story, May 6, 1998, Ukiah, CA. General Tech. Rep. PSW GTR–168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. P. 103-115.
http://www.rsl.psw.fs.fed.us/projects/water/caspar

Dunne, T., J. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. The University of

California Committee on Cumulative Watershed Effects. University of California Wildland Resource Center Report No. 46. June 2001. 107 pp.

Gucinski, H., M.J. Furniss, R.R. Ziemer, and M.H. Brookes. 2000. Forest roads: a synthesis of scientific information. USDA Forest Service.

Klein, R. 2003. Duration of turbidity and suspended sediment transport in salmonid-bearing streams, north coastal California. Final Report prepared for the U.S. EPA, San Francisco under Interagency Agreement DW-1495553501-0. Redwood National and State Parks, Arcata, CA. 32 p.

Lisle, T.R. and M. Napolitano. 1998. Effects of recent logging on the main channel of North Fork Caspar Creek. *In*: Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 81-85.

Nakamoto, R. 1998. Effects of timber harvest on aquatic vertebrates and habitat in the North Fork Caspar Creek. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 87-95.

Lewis, J. 1998. Evaluating the impacts of logging activities on erosion and sediment transport in the Caspar Creek watersheds. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 55-69.

Ligon, F., A. Rich, G, Rynearson, D. Thornburgh, W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resources Agency of California and the National Marine Fisheries Service, Sacramento. 92 p. + 7 appendices.

McGurk, B. and D. Fong. 1995. Equivalent roaded area as a measure of cumulative effects of logging. Environmental Management 19(4): 609-621.

University of Washington. 2000. Sediment and road density reduction. College of Forest Resources, Forest Engineering and Hydrology Program. Fact Sheet No. 4. 2 p.

Waddell, K.L. and P.M. Bassett. Timber resource statistics for the North Coast Resource Area of California, 1994. Resource Bulletin PNW-RB-214. Pacific Northwest Research Station, USDA Forest Service, Portland, OR.

Walker, R., C. Keithley, R. Henly, S. Downie, and S. Cannata. 2007. Ecosystem management decision support (EMDS) applied to watershed assessment on California's North Coast. *In* Standiford, R.B., G.A. Giusti, Y. Valachovic, W.J. Zielinski, and M.J. Furniss, technical editors. 2007. Proceedings of the redwood region forest science symposium: What does the future hold? Gen. Tech. Rep. PSW-GTR-194. Pacific Southwest Research Station, USDA Forest Service, Albany, CA. p. 25-34.

Ziemer, R.R. 1998. Flooding and stormflows. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 15-24.

Patrick Higgins
Consulting Fisheries Biologist
791 Eighth Street, Suite N
Arcata, CA 95521

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

February 21, 2006

Re: **Review of Environmental Impact Report for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan, December 2005**

Dear Mr. Gentry,

Below you will find my comments on the *Environmental Impact Report* (EIR) for the *Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan*, December 2005. The following incorporates by reference all points made in my letter of comments (Higgins, 2004) on the previous release of the *Jackson Demonstration State Forest Management Plan* (CDF, 2004) and the associated *Environmental Impact Statement* (EIS). I am a consulting fisheries biologist with extensive knowledge of the watersheds surrounding Jackson Demonstration State Forest (JDSF), having completed projects on the Noyo, Big and Ten Mile rivers for the California Department of Forestry (CDF). These CD and Internet (www.krisweb.com) compendiums of information, known as KRIS projects, have been filed into the record as compact disks with my past submissions.

1 While the new EIS is sometimes encyclopedic, it does not specifically recognize the reliance of endangered coho salmon (Oncorhynchus kisutch) on JDSF and potential regional consequences of mismanagement of the State forest at this critical time.

2 Although CDF FRAP included more information on cumulative effects, sediment yield, roads, water temperature, riparian conditions, sensitive amphibians, restoration, and timber harvest, there is still a fundamental failure to deal with these subjects in a scientific, meaningful and quantitative way. There is no clear monitoring program for

3 tracking effects of management as required by CEQA nor do the *Draft Plan* and *EIS* meet that law's requirement to "emphasize feasible mitigation measures." Reliance on the "functionally equivalent" JDSF Management Plan measures and Forest Practice Rules

4 (FPRs) does not meet CEQA standards and the FPRs have been shown to be insufficient to prevent cumulative effects (Dunne et al., 2001) and the decline of Pacific salmon species (Ligon et al, 1999; Collison et al., 2003).

Overall Organization and Flaws of EIS Approach

5 The *JDSF EIS* (CDF, in press) is 1449 pages in length and is exhaustive in its coverage of issues and the range of literature that it sites. It is, however, scientifically vacuous and completely insufficient in its understanding and explanation of cumulative watershed effects. There are no clear means of minimizing risk of these effects or any quantifiable and well defined monitoring program that would guarantee positive trends in aquatic health or fish populations in concert with the suggested management approaches.

6 Although high levels of impacts are explicitly acknowledged, most are ascribed to old logging not more recent widespread clear cutting. CDF fails to prove that planned

7 actions will not cause incremental additions of pollution in already critically stressed aquatic ecosystems within and adjacent to JDSF. It seems that there has been a great deal

8 of effort put into invoking literature and giving lip service to issues raised in previous comments (Higgins, 2004), but no point made in portions of the document adjacent that explain the significance of citations or references (see Restoration below).

9 Specifically there are basic problems with scientific assessment and selective use of data that undermine the credibility of the *JDSF Plan* and *EIR* (see Temperature). Despite a substantial increase in discussion of coho salmon and a more frank characterization of

10 their imperiled status, there are no specific steps in the preferred options of the *EIS* and *JDSF Management Plan* that I would expect to lead to their recovery. CDF Fire and Resource Protection (FRAP) generated maps for the EIR (Appendices 1-14) that are very

11 attractive, but very unenlightening and in some cases colors are used that are actually misleading.

Summary Response to Range of Alternatives

12 Alternative B is to continue with business as usual under the outmoded 1984 *JDSF Management Plan*, although this option has been defeated in court and is not a viable management strategy. The EIS preferred alternative is C1, which relies mostly on protections under the California Forest Practices Rules (FPRs) for maintaining aquatic health and allowing ecosystem recovery. Numerous studies, such as Ligon et al. (1999), Dunne et al., (2001) and Collison et al. (2003), have explicitly pointed out that California

13 FPRs have failed to protect Pacific salmon species. That CDF clings to the strategy that they can devolve management back to reliance on FPRs shows that the institution is in denial. JDSF management will continue to give rise to public opposition (and likely legal challenge) unless an Alternative other that C1 is selected. The "non-management" option Alternative A is not viable because ecological perturbations are so far advanced, and the

14 ecosystem so far outside the normal range of variability, that return to good forest health through any unmanaged succession would be unlikely.

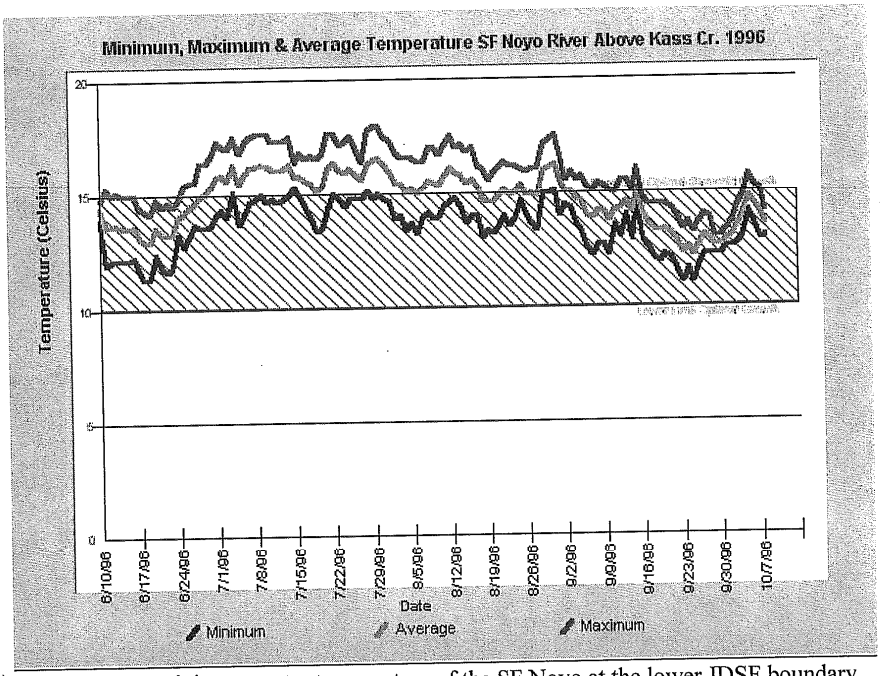
15 Alternatives C2-E would all be acceptable. Alternative E makes the most sense ecologically, since it would move upland conditions in the direction of their normal range of variability. Fish and key herpetafauna evolved in old growth conditions, with trees up to 20 feet in diameter that live for hundreds or sometimes thousands of years (Figure 1).

16 Figure 1. Early logging in the Fort Bragg area circa 1870 showing that the redwood forest before disturbance at JDSF likely had trees that were very large and hundreds of years old. Photo courtesy of the Held-Poage Historical Library and the Mendocino Historical Society. From KRIS Ten Mile.

Scientific Problems

CDF FRAP is misrepresenting or cherry picking data to minimize problems of cumulative effects or to make points that are not supported by wider data sets.

17 *Water Temperature*: JDSF owns and commonly deploys a number of automated temperature sensors that allow data to be downloaded within minutes for a whole season. CDF FRAP only used temperature data that spanned from 1996-2001, a period ending more than five years ago. CDF is claiming that there is no temperature problem on JDSF, except on James and Chamberlain Creek, when in fact my last comment letter (Higgins, 18 2004) and data from the KRIS Noyo system (IFR, 1999) shows quite clearly that both Parlin Creek and the SF Noyo at the lower JDSF boundary were over the range that supports coho in 1997 (Figure 2). Automated temperature probes were undoubtedly deployed in JDSF in the five years since 2001. This raises questions as to whether CDF omitted these data because they didn't support the hypothesis that there were no existing temperature problem related cumulative effects. Collison et al. (2003) point out that in order for management decisions to be trustable, that raw data supporting management 19 conclusions must be provided. JDSF and CDF FRAP need to provide analysis of temperature data from 2001-2005 for the Noyo and Big Rivers as part of the revised *EIS* and post raw water temperature on the Internet for use by scientists and the general public.



20 Figure 2. The minimum water temperature of the SF Noyo at the lower JDSF boundary was over optimal on some days in 1997, while maximums exceeded levels stressful to coho salmon (McCullough, 1999; Welsh et al., 2001). From KRIS Noyo.

21 *Sediment Data*: CDF makes many charts from sediment data, particularly from Casper Creek, but the latter is likely not representative of JDSF as a whole. The CDF analysis of turbidity uses invalid thresholds. Sigler et al., (1984) showed clearly that levels over 25 nephlometric turbidity units (ntu) inhibit juvenile steelhead growth. CDF chose 40 ntu as the level of impact on salmonids and did not report exceedence of the more relevant 25 ntu level. As CDF FRAP revises this *EIS*, they need to use 25 ntu as the point of concern and raw data must be made available to the scientific community and the public.

22 CDF FRAP needs to collect data similar to Caspar Creek on turbidity in streams like Parlin Creek, which was logged intensively from 1994-1998 (Higgins, 2004). Methods should follow those of Lewis and Eads (2001) and JDSF samples should be compared with the same watersheds as studies by Klein (2003). Klein (2003) found relationships between disturbance related to logging and the maximum and duration of turbidity. Levels of timber harvest over 2% of a watershed per year (2% POI) lead to substantial increases in turbidity. Rates in sub-basins like Parlin far exceed this level between 1994-1998 causing sediment pollution (Figure 3) and elevated turbidity. Turbidity in Parlin and the Noyo exceed the maximum 20% increase over background allowed by the North Coast Regional Water Quality Control Board *Basin Plan* (2003).

Figure 3. This photo shows Parlin Creek in 1999 on JDSF where large wood has been added to the stream for restoration purposes. Not also, however, the turbidity of the water and fine sediment stored at right. This deposit is indicative of recent surface erosion and transport related to logging. Photo from JDSF and CDFG. KRIS Noyo.

23

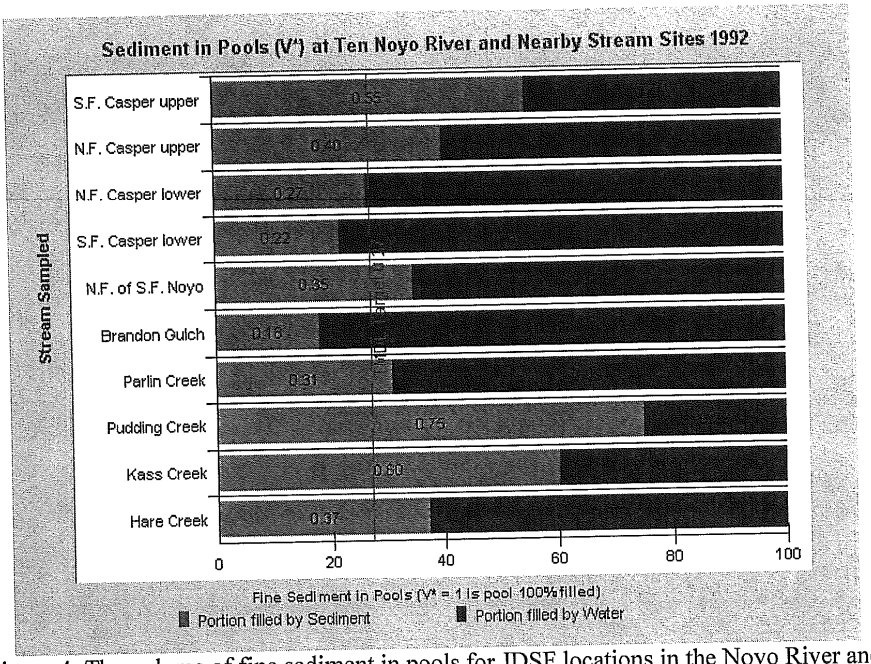
CDF FRAP failed to recognize the significance of Knopp's (1993) north coast study of streams that showed strong relationships between the volume of sediment in pools and upland disturbance related to logging. JDSF streams were part of Knopp's (1993) universe of samples of sediment in pools (Figure 4) that covered over 60 northwestern California locations. The volume of sediment in pools relative to the volume of water and sediment is the V-Star (V*) score (Hilton and Lisle, 1993). The U.S. Environmental Protection Agency (1998; 2001) has set a target of 0.21 for V* in the Noyo and Big River basins as part of the TMDL (U.S. EPA, 1998, 2002). Data from Knopp (1993) show that JDSF streams were already sediment rich according to this metric as of 1992 (Figure 5), including Parlin Creek pools that had roughly 30% (0.31 V*) of their volume filled with sediment. Data have been released for Caspar Creek that show a wave of sediment moving through the North Fork (Figure 6) in the mid-1990's immediately after widespread clear cutting in that watershed (Figure 7). It is obvious that this cost-effective tool, which requires only one day per stream per year for inventory, should be used strategically as an adaptive management tool. CDF uses sediment data like the Casper Creek model to show trends, but doesn't acknowledge logging related sediment waves.

24

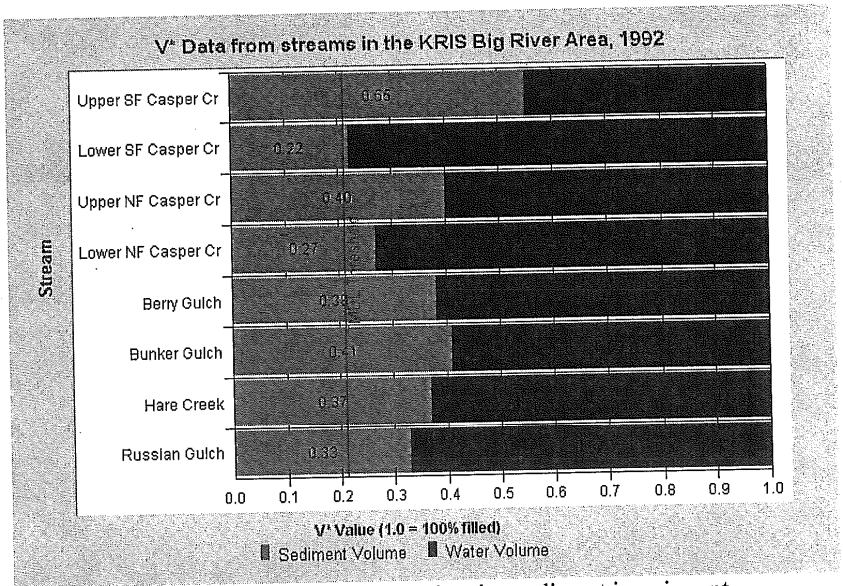
25

Habitat typing data cited by CDF and shown in EMDS model outputs are classic examples of existing cumulative watershed effects, yet the authors of the EIS fail to recognize their significance. Figure 8 shows habitat typing data for the North Fork Big River and its tributaries, including some on JDSF. Murphy et al. (1984) found that undisturbed old growth streams had pool frequencies by length of 39-67%. Pudding Creek surveys in the 1960's found 90% pools while post logging CDFG surveys found nearer 30% (IFR, 1999).

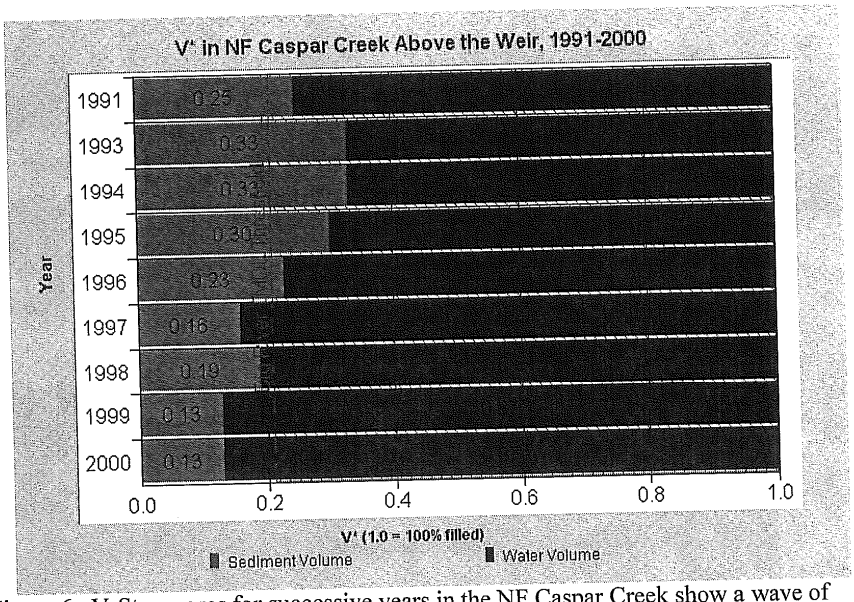
26



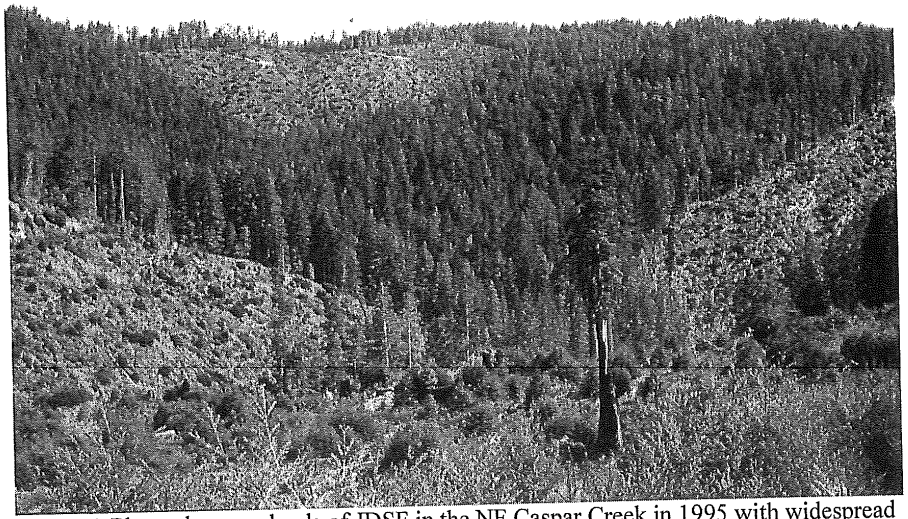
24 | Figure 4. The volume of fine sediment in pools for JDSF locations in the Noyo River and nearby streams show very high V* in extensively logged watersheds like Pudding Creek.



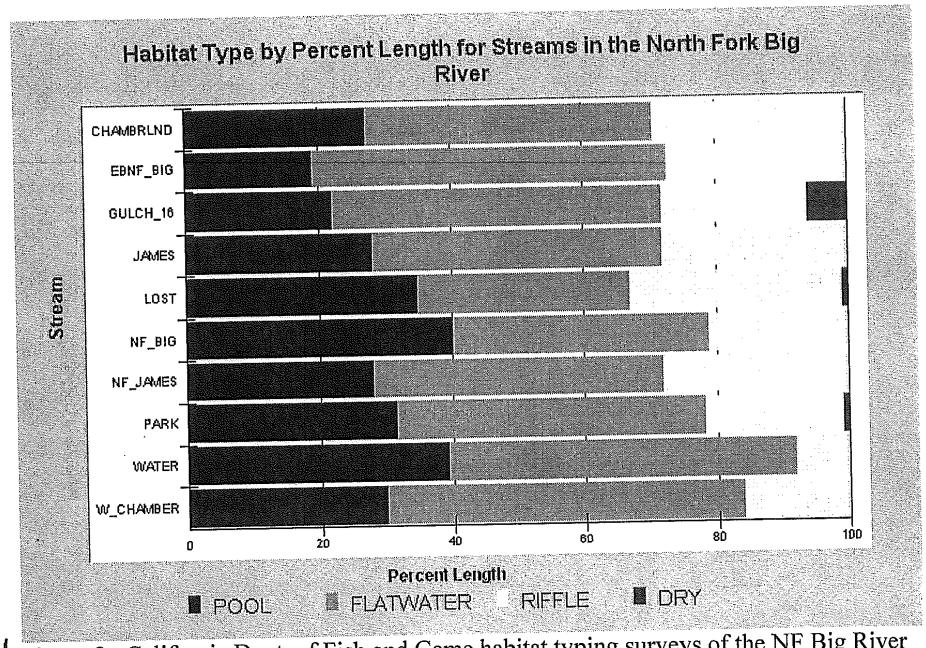
24 | Figure 5. V-Star chart from KRIS Big River showing sediment impairment.



24 Figure 6. V-Star scores for successive years in the NF Caspar Creek show a wave of sediment being transported immediately after widespread clear-cutting. KRIS Big River.



24 Figure 7. Photo shows uplands of JDSF in the NF Caspar Creek in 1995 with widespread patch clear cuts in early recovery. Photo by Pat Higgins from KRIS Big River.



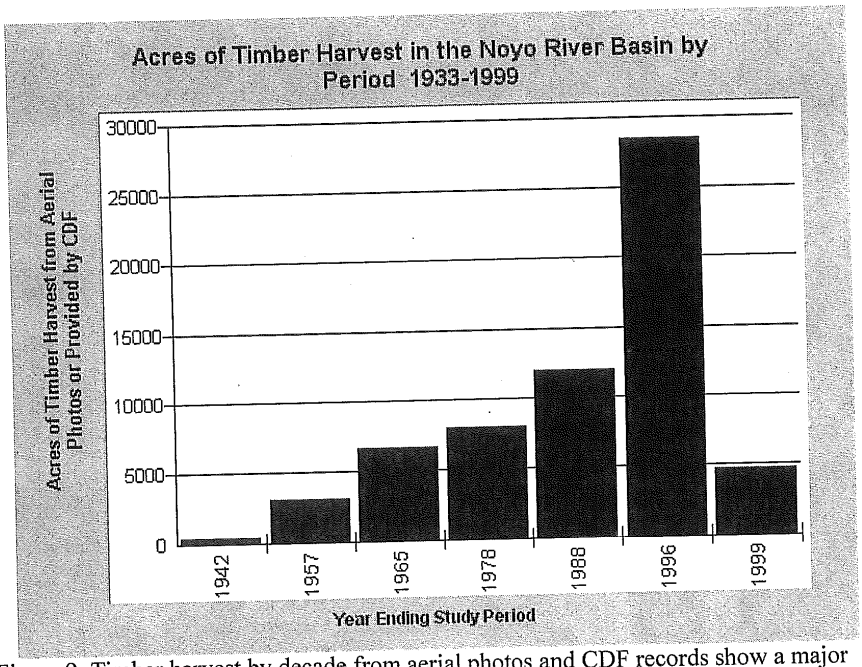
26 Figure 8. California Dept. of Fish and Game habitat typing surveys of the NF Big River show that only the mainstem North Fork and Water Creek attain 40% pool frequency. Compromised pool frequency and depth is a manifestation of sediment over-supply. KRIS Big River.

Cumulative Watershed Effects

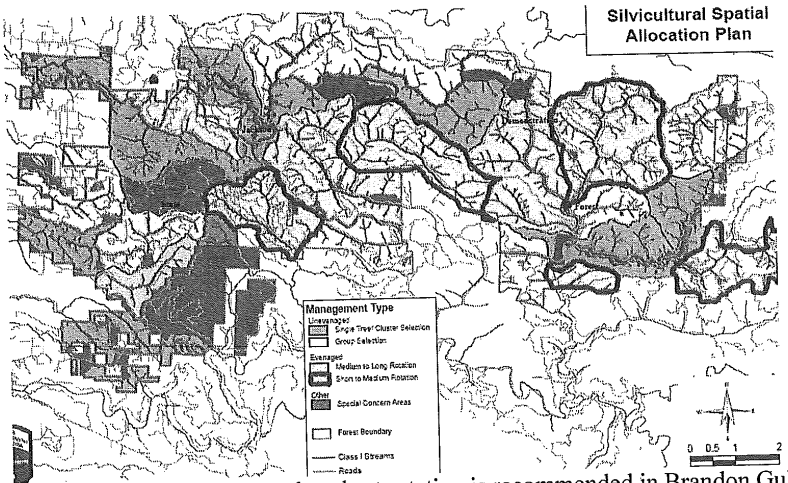
27 *Timber Harvest Data*: CDF does not use timber harvest data to quantify impacts, but rather indulges in the fantasy that all impacts are fully mitigated. Reeves et al. (1993) showed that coastal Oregon watersheds logged in over 25% of their watershed area in less than 30 years experienced major declines in salmonid diversity and abundance. Matthews and Associates (1999) showed a major increase in logging beginning in the mid-1980's and continuing to the late 1990's (Figure 9). CDF FRAP fails to discuss the significance of the impact of the increased rate of harvest. JDSF is over 50% harvested since 1986, the Noyo 75% and the Big River 62%. Some sub-basins in the region have been re-entered and harvested at levels as high as 122% since 1986! The extent of cut on adjacent private lands and the previous intensive management on JDSF suggest that only thinning from below, full cable suspension selective logging and light touch forestry are appropriate for JDSF for at least the next 20 years. Timber harvest maps in the EIS show colors for management that are difficult to distinguish between short and long harvest rotations, which makes it challenging to see where they are applied to sensitive ground (Figure 10).

28

29



27 Figure 9. Timber harvest by decade from aerial photos and CDF records show a major wave of logging in the Noyo River from 1988-1996 but the *EIS* doesn't acknowledge logging impacts such as sediment and temperature increases. KRIS Big River.



29 Figure 10. Figure from *EIS*. Note that short rotation is recommended in Brandon Gulch even in high risk landslide zones. Outlines in red provided by Pat Higgins.

30 *Roads*: CDF FRAP does not have a meaningful discussion on roads and their effects on flow and sediment yield. Matthews and Associates (1999) found that sediment yield related to roads in the Noyo River basin greatly increased with the most recent waves of logging (Figure 11). Despite the listing of the Noyo and Big Rivers as sediment impaired and their current pending status under Total Maximum Daily Load requirements, CDF does not deal quantitatively or substantively with roads and sediment.

31 Gucinski et al. (2001) found that "Even a well-designed road system inevitably creates a set of changes to the local landscape, and some values are lost as others are gained; for example, road density and fish populations correlate negatively over a large area in the interior Columbia basin." Bull trout disappeared in Interior Columbia River Basin watersheds that had road densities of over 1.7 miles per square miles of watershed area (mi./sq mi.) (Quigley at al., 1997). The National Marine Fisheries Service (1996) suggested guidelines of 2.5 mi/sq mi and no stream side or valley bottom roads. JDSF needs to commit to lower road densities beginning immediately, not study for 5 years and then act, and there should be an explicit goal of removal of almost all streamside roads.

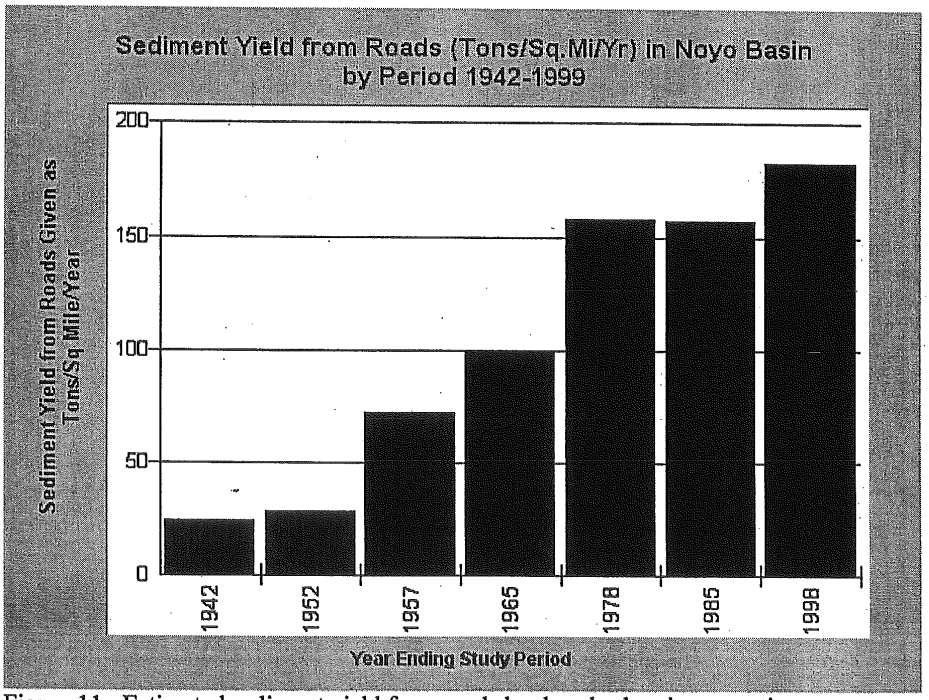


Figure 11. Estimated sediment yield from roads by decade showing a continuous increase in the Noyo River watershed associated with the recent wave of logging and road building. From KRIS Noyo.

32 *Disturbance Indices Using Landsat*: Welsh et al. (2005), in a paper on the Mattole River watershed found, that conversion of uplands to early seral conditions was likely altering ground water temperatures and leading to water temperatures in exceedence of thresholds required by coho salmon and tailed frogs. CDF FRAP participates in vegetation mapping using Landsat in cooperation with the U.S. Forest Service (Warbington et al., 1998). In the revised *EIS*, CDF needs to quantify seral stages and projected recovery and succession. CDF FRAP needs to dust off the data from Keithley (1999) on riparian zones quantified by tree diameter and show quantitative charts of conditions on and off JDSF for the revised *EIS*.

33 CDF and the USFS Spatial Analysis Lab in Sacramento also have Landsat "change scene detection" that shows landscape vegetation changes by comparing two years worth of scenes (Fischer, 2003). Data for 1994-1998 for change scene are available for JDSF and CDF FRAP should run queries on how much changed in JDSF in that period and provide bar charts by Calwater Planning Watershed. Another query that CDF FRAP should run in revising the *EIS* is the overlap of changes according to Landsat with functional riparian zones that would extend be at least 200-240 feet given local site potential tree height (Spence et al., 1996), including Class II and III water courses.

34 *CWE Temperature/Sediment/Riparian Interactions*: The EIS completely ignores the relationships between the sediment problems related to logging, riparian canopy removal and increased water temperature. Chamberlain and James Creeks are hot because they have a previous history of logging and large wood removal from which they have not yet recovered. Sedimentation caused by previous waves of logging has changed the width to depth ratio to shallow and wider, which facilitates stream warming (Poole and Berman, 2001). The low pool frequency, shallow maximum pool depths and high embeddedness suggest watersheds in early recovery from past logging, not candidates for a new wave of clear cutting. Past logging and large wood removal projects on JDSF have starved streams of large wood, which in turn can reduce downwelling that can moderate stream temperature through connection with the cooler hyporheic zone (Poole and Berman, 2001).

36 In addition, CDF FRAP needs to look at temperature problems and riparian conditions and more honestly explore relationships. The excellent work by Keithley (1999) regarding restoration potential of the Big and Noyo River basins is invoked in the EIS, but the significance of its conclusions is overlooked. JDSF has the last contiguous riparian zones in the coastal redwood belt of Mendocino County suitable for coho salmon restoration. CDF ignores effects of industrial timber harvest of riparian trees in the rest of the Noyo and Big River watersheds, although their map of the pattern of temperature suitability shows widespread CWE (Figure 9). Large tree diameters in JDSF shown by Keithley (1999) are correlated to the cold stream temperatures. Restoration of coho in streams that are currently too warm to support them today are decades away from any recovery potential.

37

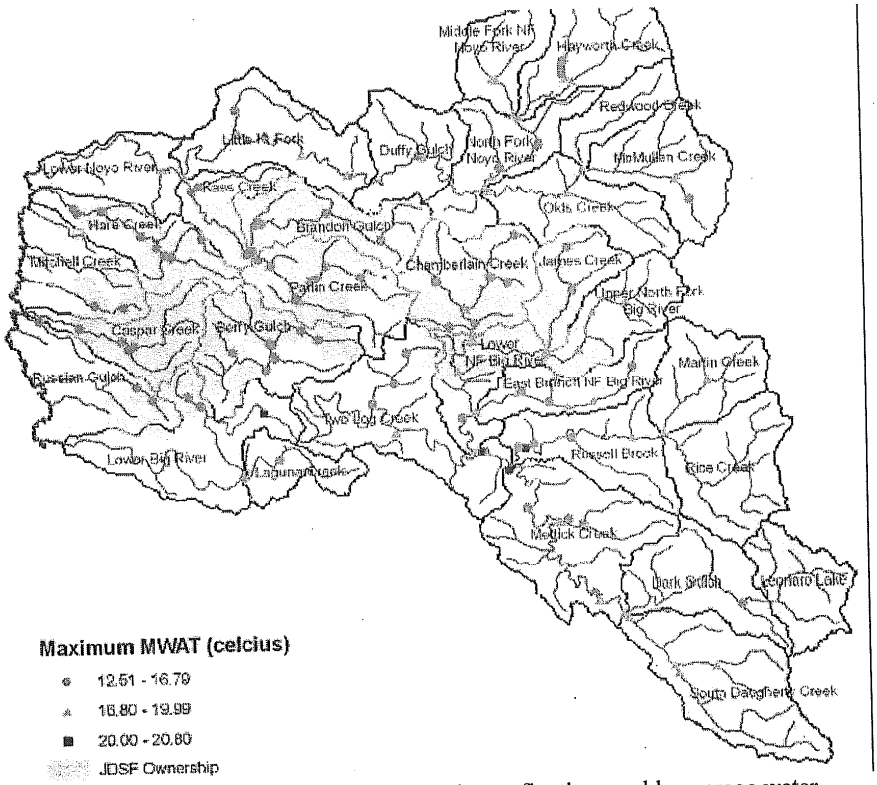


Figure 12. Map from JDSF EIS showing maximum floating weekly average water temperatures for the Noyo and Big Rivers. Only green sites would support coho salmon (<16.8 C) and there are many sites off JDSF no longer capable of doing so.

35

Shallow Landslide Stability Model: The Shallow landslide stability model (Dietrich and Montgomery, 1998) or SHALSTAB can be used to detect unstable headwater and inner gorge areas. IFR (1999) created SHALSTAB coverages for JDSF and the Noyo River basin that CDF should use quantitatively to show the overlap of unstable areas and management options proposed, including road building. The *EIS* points out that:

38

> "JDSF has a higher percentage of its area in potential inner gorge than does the area outside of the Forest. This situation is of concern because these potentially unstable areas tend to be directly connected to watercourses and have a high likelihood of delivering sediment to watercourses, if they release material due to either natural causes or anthropogenic disturbance."

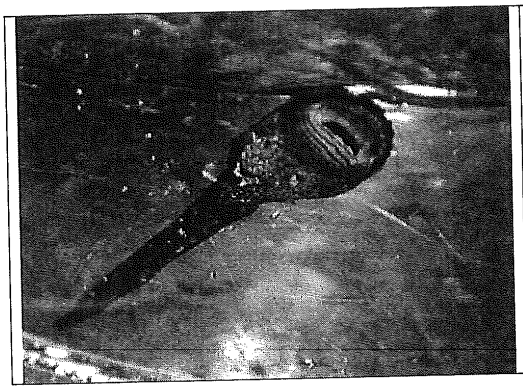
The JDSF inner gorges are extremely fragile and prone to mass wasting, but logging would be allowed under Alternatives B and C1. Mapping areas with high risk and sharing

38 the data with the public is useful, although SHALSATB is only a screening tool and does not take the place of a registered geologist.

Tailed Frogs: Welsh et al. (2005) found that early seral stages conditions in riparian zones were not compatible with maintaining water and air temperatures suitable for supporting tailed frogs. In addition to the coho salmon, the tailed frog should be the aquatic keystone species for JDSF. The condition of Noyo River tailed frog populations are likely similar to those of the Mattole Basin characterized by Welsh et al. (2005):

> "The few small populations of these species now appear to be sufficiently isolated from one another by distance that they are likely nearing extinction in this watershed. These fragmented distributions are the legacy of the large-scale anthropogenic alteration of much of the watershed."

39



Because tailed frog larvae live for up to four years in streams adhering to rocks with a sucking disc, they are extremely susceptible to being dislodged by sediment transport. High sand supply may also scour algae from rocks, thus reducing food supply for this sensitive indicator species. Widespread timber harvest has eliminated tailed frogs from many Noyo and Big River tributaries outside JDSF.

Fish

40 There is more discussion about the dire condition of north coast coho populations than in the previous *Draft EIS*, but still no real recognition to how important JDSF is to regional recovery. Brown et al. (1994) recognized the South Fork Noyo River as one of the last adult coho populations in the hundreds from Marin County to Oregon. CDFG data on adult trends, downstream migrant trapping and standing crops of juveniles in the Noyo and other nearby tribs show poor recruitment of juveniles to adults, but that fact is never stated in the *EIR*. Steelhead show poor survival and from young of the year (0+) to yearling (1+) or two year olds (2+), which indicates poor freshwater habitat. Again CDF FRAP shows examples of data, but avoids the associated conclusion.

41 There is exhaustive discussion of life history requirements of juvenile salmonids, but no discussion of how poor JDSF habitat affects them! Fore example, coho salmon are acknowledged as needing pools in the EIS, but there is no discussion of the diminished frequency or volume of pools as indicated by V* and habitat typing data.

42

While CDF invoked CDFG data on coho presence and absence, they failed to use spatial data to show that the distribution has greatly diminished (Figure 13). JDSF streams have a higher consistent presence than streams on private land, although some year classes are weak. The EIR map of the present range of coho and steelhead masks the fact that they were much more widespread. We need to see where coho once ran and what temperature conditions are in these various locations and correlative riparian. The *Draft Plan* and *EIR* are not frank about the diminishment of range of coho and the causal mechanisms.

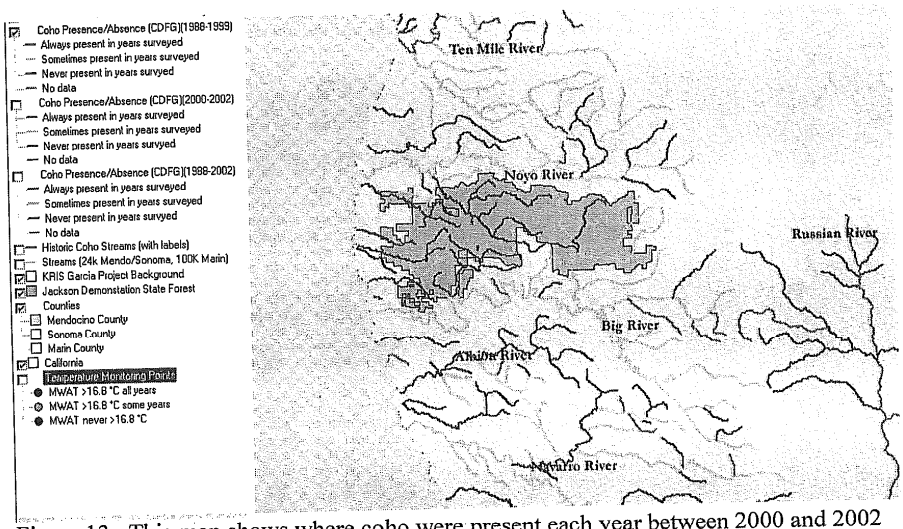


Figure 13. This map shows where coho were present each year between 2000 and 2002 on the Mendocino coast. JDSF has more consistent coho presence than most other areas indicating its importance as a regional refugia and seat of recovery for the species. From KRIS Garcia.

43

Fires before European contact would have fragmented the landscape, but would have caused nothing to mimic the last 50 years of industrial logging. JDSF should be a leader in showing how thinning from below can lead to stand release and how ecological forestry can produce commodities and truly accelerate development late seral conditions and healthy streams supporting a diverse assemblage of salmonids..

Monitoring

44

There is no commitment to measurement of tried and true water quality indicators in Monitoring section of the *Draft JDSF Plan* or in *EIS*. The documents acknowledge condition of habitat as impaired but set no time table or trajectory for recovery. The next version of the *EIR* needs to define specific monitoring parameters that are scientifically valid, cost effective and strategic. Sediment monitoring should conform to standard techniques such as McNeil (McNeil and Ahnell, 1964) or shovel samples (McHenry et al., 1994) and reference progress toward TMDL targets of <14% less than 0.85 mm and

44 <30% fine gravel and sand less than 6.4 mm. As mentioned above, V* should be used to measure trends toward recovery with a target for all of JDSF of less than 0.21. Automated temperature sensors should be arrayed in riparian zones of different streams with different seral stage conditions and recovery of stream temperature projected with models, similar to the Elk River Watershed Analysis (Siskiyou NF, 1996).

45 The Project Impacts section (10.9 *ADEIR*, Chapter 8) says: "Hydrologic and water quality impacts are considered significant if they exceed targets set by federal, state, or local guidelines." If JDSF is not strategically monitoring trends and showing appropriate protection, they are not meeting NCRWQCB or Porter Cologne requirements. There should be equivalent targets for TMDL in the *JDSF Plan* and *EIR* and an explicit time table for their being met. Such monitoring would support adaptive management and meet TMDL and ESA requirements as well as those of the NCRWQCB with regard to new THP waste-discharge requirements.

Recovery

46 There is no scientific foundation for recovery planning in the *JDSF Plan or EIS* (i.e. Bradbury et al., 1996). The *Plan* and *EIS* make the claim that JDSF has "improved in most of the resource categories" since being acquired in 1948, but provide absolutely no data to support that contention in so far as it applies to aquatic resources. Instead of recognizing a hierarchy of recovery with expected time frames (i.e. physical channel attributes followed by biological response), CDF makes statements like "Recovery of a more natural stream geometry from these substantial historic impacts will take a long time."

47 Bradbury et al. (1996) make the point that salmonid populations that are thriving and the areas of best habitat must be protected as a priority, if Pacific salmon populations are to be recovered. The *JDSF EIR* references Keithley (1999), but none of his findings are brought forward. Instead his conclusions are stood on their head:

> "Most of the planning watersheds composed primarily of JDSF lands received ratings that indicate good or moderate habitat conditions with low or moderate disturbance ratings. This outcome suggests that in the context of the assessment area, these planning watersheds may represent a lower relative priority for restoration. In addition, the expected recovery time for these healthier planning watersheds is less than for the more heavily impacted planning watersheds."

48 The patterns shown by Keithley (1999), where JDSF is the obvious center of recovery potential for salmon, is also paralleled by the Marble Murrellet Recovery maps. They both indicate that if these species are to be saved that JDSF must be managed to their benefit.

49 I hope that JDSF will change its management to:

- Increasing basal diameter of riparian zones/cool microclimate over streams,
- Accelerating growth of large trees to support terrestrial species like murrellets,
- Returning watersheds to more normal ranges of flows,

49

- Managing restoration and production of wood products secondarily,
- Inviting the community to participate in studies,
- Making JDSF a recreational Mecca for Ft Bragg residents and tourists.

Sincerely,

Patrick Higgins

References

Brown, L.R., P.B. Moyle, and R.M. Yoshiyama. 1994. Historical Decline and Current Status of Coho Salmon in California. North American Journal of Fisheries Management. 14(2):237-261.

California Department of Forestry. 2004. Jackson Demonstration State Forest (JDSF) Management Plan and Draft Program Environmental Impact Report (DEIR). Prepared for CDF by CH2M Hill and Natural Resources Management. CDF, Sacramento, CA.

Collison, A., W. Emmingham, F. Everest, W. Hanneberg, R. Martston, D. Tarboton, R. Twiss. 2003. Phase II Report: Independent Scientific Review Panel on Sediment Impairment and Effects on Beneficial Uses of the Elk River and Stitz, Bear, Jordan and Freshwater Creeks. Independent Science Review Panel performed analysis on retainer to the North Coast Regional water Quality Control Board, Santa Rosa, CA.

Dunne, T., J. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. The University of California Committee on Cumulative Watershed Effects. University of California Wildland Resource Center Report No. 46. June 2001. 107 pp.

Fischer, C. 2003. Monitoring Land Cover Changes in California, North Coast Project Area (1994-1998). California Department of Forestry FRAP and USFS Spatial Analysis Lab, Sacramento, CA.

Gucinski, H., M.J. Furniss, R.R. Ziemer and M.H. Brooks. 2001. Forest Roads: A Synthesis of Scientific Information. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. General Technical Report: PNW-GTR-509. 120 p.

Higgins, P.T. 2004. Comments on the Jackson Demonstration State Forest Management Plan and Environmental Impact Statement. Letter to CDF Exec Dir Chris Rowney. Prepared for the Friends of JDSF. Patrick Higgins, Consulting Fisheries Biologist, Arcata, CA. 30 p.

Institute for Fisheries Resources. 1999-2002. Klamath Resource Information System (KRIS) Noyo and Big River. Funded by CDF FRAP, Sacramento. IFR KRIOS Project, Arcata, CA. Published on CD and on-line at www.krisweb.com.

Knopp, C. 1993. Testing Indices of Cold Water Fish Habitat. Final Report for Development of Techniques for Measuring Beneficial Use Protection and Inclusion into the North Coast Region's Basin Plan by Amendment of the.....Activities, September 18, 1990. North Coast Regional Water Quality Control Board in cooperation with California Department of Forestry. 57 pp.

Ligon, F., A. Rich, G. Rynearson, D. Thornburgh, and W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resources Agency of California and the National Marine Fisheries Service; Sacramento, CA.

Matthews, Graham and Associates. 1999. Sediment Source Analysis and Preliminary Sediment Budget for the Noyo River. Prepared for: Tetra Tech, Inc. under contract 68-C7-0018, work assignment # 0-18. Matthews Assoc., Weaverville, CA.

McCullough, D. 1999 . A Review and Synthesis of Effects of Alterations to the Water Temperature Regime on Freshwater Life Stages of Salmonids, with Special Reference to Chinook Salmon. Columbia Intertribal Fisheries Commission, Portland, OR. Prepared for the U.S. Environmental Protection Agency Region 10. Published as EPA 910-R-99-010.

McHenry, M.L., D.C. Morrill and E. Currence. 1994. Spawning Gravel Quality, Watershed Characteristics and Early Life History Survival of Coho Salmon and Steelhead in Five North Olympic Peninsula Watersheds. Lower Elwha S'Klallam Tribe, Port Angeles, WA. and Makah Tribe, Neah Bay, WA. Funded by Washington State Dept. of Ecology (205J grant).

Montgomery, D.R. and W.E. Dietrich. 1994. A physically based model for the topographic control on shallow landsliding. Water Resources Research, Vol.30, No.4. April 1994. Pages 1153-1171.

Murphy, M.L., J.F. Thedinga, K.V. Koski and G.B. Grette. 1984. A stream ecosystem in an old growth forest in southeast Alaska: Part V. Seasonal changes in habitat utilization by juvenile salmonids. In Proceedings of Symposium on Fish and Wildlife in Relationships in Old Growth Forests. Eds. W.R. Meehan, T.R. Merrill and T.A. Hanley. American Institute of Fishery Research Biologists, Asheville, North Carolina.

North Coast Regional Water Quality Control Board. 1999. Noyo River Watershed Total Maximum Daily Load for Sediment. NCRWQCB, Santa Rosa, CA.

Quigley, T.M. and S.J. Arbelbide (Eds.). 1997. An Assessment of Ecosystem Components in the Interior Columbia Basin And Portions of the Klamath and Great Basins: Volume I. U.S. Forest Service and U.S. Bureau of Land Management with assistance from the Pacific Northwest Forest Experiment Station. PNW-GTR-405. Pages 1-351

Poole, G.C. and C.A. Berman. 2000. Pathways of Human Influence on water Temperature Dynamics in Stream Channels. Environmental Management. February 2000. 20 p.

Reeves, G.H., F.H. Everest and J.R. Sedell. 1993 . Diversity of Juvenile Anadromous Salmonid Assemblages in Coastal Oregon Basins with Different Levels of Timber Harvest. Transactions of the American Fisheries Society. Vol 122, No. 3. May 1993.

Sigler, J.W., T.C. Bjornn and F.H. Everest. 1984. Effects of Chronic Turbidity on Density of Steelheads and Coho Salmon. Transactions of the American Fisheries Society, 113: 142-150.

Siskiyou National Forest. 1996. Elk River Watershed Analysis. Powers Ranger District, Siskiyou NF, USDA Forest Service, Coquille, OR.

Spence, B.C., G.A. Lomnicky, R.M. Hughes and R. P. Novitzki. 1996. An Ecosystem Approach to Salmonid Conservation. Funded jointly by the U.S. EPA, U.S. Fish and Wildlife Service and National Marine Fisheries Service. TR-4501-96-6057. Man Tech Environmental Research Services Corp., Corvallis, OR.

US Environmental Protection Agency (USEPA). 1999. (Final) Noyo River Total Maximum Daily Load for Sediment. USEPA, Region IX. San Francisco, CA. 87 pp.

US Environmental Protection Agency (USEPA). 2002. (Final) Big River Total Maximum Daily Load for Sediment. USEPA, Region IX. San Francisco, CA.

Warbington, R., B. Schwind, C. Curlis and S. Daniel. 1998. Creating a Consistent and Standardized Vegetation Database for Northwest Forest Plan Monitoring in California. USDA Forest Service. Pacific Southwest Region Remote Sensing Lab. Sacramento, CA.

Welsh, H.H., G.R. Hodgson, M.F. Roche, B.C. Harvey. (2001). Distribution of Juvenile Coho Salmon (Oncorhynchus kisutch) in Relation to Water Temperature in Tributaries of a Northern California Watershed Determining Management Thresholds for an Impaired Cold-water Adapted Fauna. In review for publication in the North American Journal of Fisheries Management. 21:464-470, 2001.

Welsh, H. H. Jr, Hodgson, G. R. and Karraker, N. E. 2005. Influences of the vegetation mosaic on riparian and stream environments in a mixed forest-grassland landscape in ''Mediterranean'' northwestern California. Ecography 28: 537/551.

Email Letter E-26

Overall Response to Comments in Electronic Comment E-26
Many of the comments in this letter raise the issue of historic and recent land management practices as contributors toward the existence of significant cumulative environmental impacts today. These are important factors; however, it must be recognized that the intent of CEQA is the evaluation of the effects arising from proposed future actions relative to the baseline conditions that exist today, which by definition include the legacy of past practices. While the DEIR and RDEIR look extensively at the potential cumulative interaction of the past practices with proposed practices (i.e., the DFMP and the Administrative Draft Final Forest Management Plan), CEQA does not require future actions to mitigate for past effects. Nonetheless, the DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR contain many elements that will contribute toward the recovery of environmental conditions within the watershed cumulative effects assessment area evaluated in the DEIR. The issue of recovery is discussed further below.

Response to Comment 1
The DEIR provides a thorough discussion of coho salmon and their use of habitat on JDSF (see Aquatics section VII.6.1). This section of the DEIR includes a discussion both of the regional setting for coho (VII.6.1-10 to -21) and the environmental setting within JDSF. This discussion largely consists of comparisons of habitat conditions both on and off JDSF (see, e.g., DEIR Figures VII.6.1.3 and VII.6.1.4 on p. VII.6.1-23).
The proposed management plan does recognize the importance of habitat conditions provided on JDSF to coho salmon. The management emphasis of promoting late seral conditions in the WLPZ areas bordering Class I and Class II streams is intended to maintain and enhance aquatic habitat conditions. The Additional Management Measure for Large Woody Debris Survey, Recruitment, and Placement, provided in the DEIR, has the same goal. Over time these improving conditions are expected to contribute to recovery and are consistent with the Recovery Goals as stated in the Fish and Game Recovery Strategy for California Coho Salmon (DFG 2004, p. ES.2).

Response to comment 2
The JDSF DEIR and RDEIR follow the CEQA Guidelines by providing a discussion of cumulative impacts of a project that is both comprehensive and rigorous. The CEQA guidelines state that the discussion of cumulative effects should be "guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact" (15130b). The DEIR and RDEIR provide listings and discussion of all past, present, and probable future projects that potentially contribute to cumulative effects which, is considered one of the necessary methods for an adequate discussion of significant cumulative effects [15130 (1a)]. In addition, following the Dunne report (Dunne et al. 2001) the DEIR uses spatially specific models to evaluate aquatic habitat conditions and potential cumulative impacts from timber harvesting, roads, and water temperature (DEIR pages VIII.66 – VIII.72).

Response to Comment 3
Public Resources Code (PRC) §21081.6 requires a lead agency to adopt a reporting or monitoring program designed to ensure compliance with the measures intended to mitigate project impacts. California Code of Regulations (CCR) §15097(b) goes on to explain that where the project is the adoption of a plan-level document the mitigation monitoring plan may consist of the policies included in the adopted plan. The final Forest Management Plan will incorporate all measures identified in the certified final EIR thus ensuring compliance during individual project implementation.

The JDSF Administrative Draft Final Forest Management Plan includes a Chapter 5, Monitoring and Adaptive Management." The approach was developed to track critical ecosystem processes that are potentially impacted by management practices. Many of the management measures

described in the Administrative Draft Final Forest Management Plan and the mitigations and Additional Management Measures provided in the DEIR are designed to protect and mitigate potential impacts from management practices. Examples of this include the no-cut zones in WLPZ areas bordering Class I and Class II streams. In addition, any mitigation measures or monitoring requirements discussed in the DEIR and RDEIR are presented with the intention that they shall be implemented.

Further, CEQA emphasizes the application of mitigation measures when analysis indicates that there is the potential for significant adverse environmental impacts. Since the DEIR analysis found few potentials for significant adverse impacts for most of the alternatives, the DEIR needs to "emphasize feasible mitigation measures" only in a limited number of instances. Table I.2 in the DEIR (p. I-10 to -25) and Table I.1 in the RDEIR summarize the potentially significant impacts and proposed mitigations for the proposed project.

Response to Comment 4

The DEIR and RDEIR provide a full CEQA programmatic analysis for the DFMP and Administrative Draft Final Forest Management Plan. They do not rely on the "functional equivalency" of the certified state regulatory program found in PRC §21080.5. Where later activities include timber harvesting, requiring the preparation of timber harvesting plans, environmental protection will be ensured through adherence to the Forest Practice Rules (FPRs) as well as compliance with the relevant sections of CEQA. However, the DEIR and RDEIR do not solely rely on the standard FPRs to mitigate the Plan's cumulative or individual effects. Rather the DEIR and RDEIR identify specific activities where the FPRs or other management practices are not sufficient to prevent significant effects and require additional mitigation to lessen those impacts. For example, the DEIR identifies a potential for impacts to snag and LWD dependant species as a result of implementing the DFMP. As such, mitigation is required, that is in addition to the standard FPRs, which mitigates this impact (Page VII.6.6-131). Even where no potential impacts are identified, the DEIR requires additional Management Measures in certain instances to ensure protection of sensitive resources (e.g., Section VII.6.2.7, Additional Management Measures for Botanical Resources).

The Dunne Report does discuss limitations in the current framework for addressing cumulative effects, but it does so with the intent of improving the review of timber harvesting plans. Consistent with the Dunne Report, the DEIR, RDEIR, and the JDSF Administrative Draft Final Forest Management Plan are designed to reduce, not eliminate the risk of further impairment of environmental resources from timber harvesting. Additionally, while the Dunn report provides considerable commentary on perceived limitations with cumulative effect analysis included as part of THPs in the late 1990s, it suggests requirements to deal with cumulative watershed impacts that would require additional budgetary and regulatory authorities. Also, all of the comprehensive computer models suggested for addressing cumulative watershed effects prediction were not, and have not yet, been developed for this type of work.

Regarding the Collison report, conclusions included were made with the panel apparently unaware of provisions in the Forest Practice Act (FPA) and FPRs that give CDF the ability to require and enforce practices that protect water quality. This report also includes criticism of FPR sections that are restatements of legislative intent in the FPA and misconceptions about the THP review process, which indicates that the Panel did not have an adequate understanding of the legal framework for the preparation, review, and approval of THPs. Therefore, many of the criticisms found in Collison and others (2003) are already addressed in the existing THP process. Finally, regarding the Ligon et al. (1999) report, while the Scientific Review Panel concluded that the FPRs did not ensure protection of anadromous salmonid populations in 1999, the current rules in effect for JDSF have been considerably expanded with the passage of the July 2000 Threatened or Impaired Watersheds Rule Package and with the additional measures included in the DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR. Further, the DEIR contains cumulative effects assessment approaches consistent with those recommended in Dunne et al.

Response to Comment 5
See response to Comment 2 for a discussion on the adequacy of the DEIR to address cumulative watershed effects (CWE). Chapter 5 of the JDSF Administrative Draft Final Forest Management Plan provides a clear and well-defined monitoring program for the Forest. No monitoring plan or management plan could "guarantee positive trends in aquatic health or fish populations." Rather, the monitoring program is designed to minimize the risk of further impairment and by design the Administrative Draft Final Forest Management Plan is expected to aid in recovery of fish populations. Monitoring is used in part to track progress towards a desired goal or future condition. If monitoring shows that resource conditions are deviating from the desired condition, then an adaptive management approach is used to make adjustments to the management plan (see Chapter 5 of the Administrative Draft Final Forest Management Plan).

Response to Comment 6
Impacts from relatively recent clearcutting have been monitoring very intensely in the Caspar Creek watershed study—North Fork Phase and results have been described in depth in the DEIR as well as in numerous publications (Ziemer 1998, Lewis 1998, Lewis and others 2001, Keppeler and others 2003, Lewis and Keppeler 2004). In summary, the Caspar Creek results have shown that the impacts of clearcutting nearly half the watershed in three years were relatively benign and did not cause large changes in watershed physical or biological variables.

More broadly, Bawcom (2003) evaluated the amount of landsliding on 50 clearcut units throughout JDSF produced from 1982 to 1994. She found a total of 32 shallow seated landslides failed within the clearcut units. Of the 32 landslide failures, all but four were associated with roads, landings, and skid trails. Bawcom (2003) reported that these results suggest that there is little evidence that vegetation removal associated with clearcutting alone was a significant contributor to slope instability or reactivations of dormant landslides. Almost all of the observed landslides that delivered sediment to watercourses were shallow failures that were associated with old roads constructed decades ago. In general, this study found no increase in the rate of landsliding or initiation of movements of older landslides within clearcuts on JSDF.

Based on these two comprehensive studies conducted on JDSF, it is possible to conclude with assurance that relatively recent clearcut harvesting has not produced high levels of impacts to aquatic resources. Proposed harvesting under Alterative C1 or the proposed Administrative Draft Final Forest Management Plan based on Alternative G would treat much smaller percentages of watersheds than were treated by clearcutting in the North Fork of Caspar Creek.

Response to Comment 7
The adequacy of an EIR is not determined by whether it "prove[s]" that a proposed action will or will not result in a significant effect but rather whether it discloses the potential for significant effects and identifies feasible mitigation. Two or more experts may reach completely opposite conclusions in interpreting the same information presented in an EIR, yet the EIR may still be deemed adequate. The courts will not attempt to determine if the EIR's conclusions are correct as long as the decision that is reached is supported by substantial evidence.

The Board does recognize that timber harvesting and other forest management projects can incrementally contribute to pollutant loads, but the Administrative Draft Final Forest Management Plan has built in management measures to anticipate these incremental impacts and to reduce the impact to level that is less than significant. Further protections, such as the DEIR's Additional Management Measure for an Accelerated Road Management Plan, have been incorporated into the Administrative Draft Final Forest Management Plan. The watershed analysis results presented in the DEIR and RDEIR also recognized that aquatic habitat conditions on JDSF and surrounding areas continue to improve over historic conditions.

Note also that the analysis performed for the EIR found that most of the aquatic system within the assessment area is in a state of recovery. Relatively small and well distributed incremental

effects are expected to occur, but these are not expected to prevent recovery or produce significant impacts.

Response to Comment 8
The comment is non-specific and as such the BOF is unable to provide a detailed response. However, the BOF has attempted to address previous comments in the DEIR and RDEIR. Where appropriate, the BOF has provided references that further the discussion and analysis. The BOF believes that the significance and relevance of most references is evident, but without specific examples is unable to provide additional explanation.

Response to Comment 9
Please see Response to Comments 17-21, below.

Response to Comment 10
The DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR include and clearly describe a variety of measures designed to protect and improve coho habitat quality based in large part on environmental risk factors identified in the California Department of Fish and Game Coho Recovery Plan and by the National Marine Fisheries Service Biological review Team. DEIR pages VII.6.1-90 through -98 lists other pertinent measures. These include but are not limited to an accelerated road management plan, WLPZ management to enhance late successional forest conditions and recruitment of large woody debris to stream ecosystem processes, measures to improve canopy cover and stream temperature, and provisions for providing extensive areas of late seral and older forest (over one-third of the Forest under the Administrative Draft Final Forest Management Plan).

Response to Comment 11
Map colors were carefully chosen to illustrate the intended message of the various map figures. In some cases, due to the large number of classes of information the maps are intended to show, the level of distinction between colors/classes may have been somewhat difficult to discern.

Response to Comment 12
As explained in the DEIR at page VI-9, Alternative B provides a baseline of recent past management direction against which the potential effects of the other alternatives can be compared. Management of JDSF under the 1983 Plan will continue until a new plan is adopted by the Board. The CEQA Guidelines [CCR 15126.6(e)(3)(A)] require an EIR to consider a “no project” alternative which discloses the impacts of continued management under an existing plan. While the alternative is “infeasible” in the sense that it is precluded by Board policy and the settlement agreement, it is still an alternative to the Plan that is useful in disclosing the environmental consequences of continuing current management practices.

Response to Comment 13
The DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR provide numerous protections that go beyond those explicitly enumerated in the Forest Practice Rules. These documents provide numerous protections that go beyond those explicitly enumerated minimum standards in the Forest Practice Rules. In addition, the Rules provide for an assessment of potential impacts, and the implementation of protection practices is not limited in any way by the Rules themselves. Protection provided by the DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR includes:

- Twenty-five-foot buffers along Class I and I streams where harvest is prohibited or limited to habitat improvement (DFMP/ Administrative Draft Final Forest Management Plan);
- Watercourse and Lake Protection Zones are established as Special Concern Areas designated for special management to protect aquatic and riparian resources, maintain terrestrial habitat connectivity for wildlife, and promote development of late-successional forest stand conditions; silviculture is limited to no harvest or special uneven-aged regimes

designed to promote development of late-successional forest stand conditions (DFMP/Administrative Draft Final Forest Management Plan);
- Retention of a minimum 240 ft^2 basal area of conifers (DFMP/ Administrative Draft Final Forest Management Plan);
- Road Management Plan (DFMP) and Additional Management Measures for Accelerated Road Management Plan (DEIR/ Administrative Draft Final Forest Management Plan);
- Additional Management Measure for Survey, Recruitment, and Placement of Large Woody Debris (DEIR/ Administrative Draft Final Forest Management Plan);
- Monitoring and Adaptive Management approach including hillslopes, stream channels, stream temperature, and fish and amphibian populations (DFMP/ Administrative Draft Final Forest Management Plan).

The comment related to Ligon et al. (1999), Dunne et al. (2001), and Collison et al. (2003) is addressed under the Response to Comment 4, above.

The analysis presented in the DEIR and RDEIR indicates that the proposed Administrative Draft Final Forest Management Plan will not result in significant adverse impacts to salmonids and that it will result in beneficial impacts to a number of important factors for salmonids, including water temperature, large woody debris recruitment, migration barriers, riparian forest quality and extent, and instream habitat and streambank stability (see DEIR p. VII.6.1-99 to -120 and Table VII.6.1.12; see RDEIR p. III-25 to -45 and Table III.6).

Response to Comment 14
As noted in the DEIR (p. VI-9), Alternative A "…is not intended as an alternative that could feasibly be adopted; rather, it is intended as a baseline for purposes of comparing the project setting (and the absence of any management plan activities) to several different management strategies represented by Alternatives B through F."

Response to Comment 15
Alternatives C2 through E vary slightly to substantially from Alternative C1. Alternative G, which is the basis for the Administrative Draft Final Forest Management Plan, incorporates a number of the elements from Alternatives C2 through F that will provide an overall higher level of resource protection and recovery than would Alternative C1. Of particular relevance to this comment, the proposed Administrative Draft Final Forest Management Plan would designate over one-third of the Forest for the development of late seral or older forest characteristics.

As directed by (a) existing statues for JDSF and the Demonstration State Forest Program in general and (b) Board policies (see Appendix 5 of the DEIR), the Board must consider many other factors in addition to ecology when determining the appropriate management direction for JDSF.

Response to Comment 16

The DFMP documents that prior to the first harvest entries in JDSF beginning in the 1860s, most of the Forest was assumed to have been virgin old growth (see DFMP p. 6).

Response to Comment 17
The DEIR analyzed data for a period spanning 1991-2003. However, the locations of the monitoring stations (or data loggers) have moved periodically, and thus not all locations have data for the entire duration that monitoring has occurred. The comment most likely refers to figures VII.6.1.6 and VII.6.1.8 in the Aquatics section that showed data for the time period 1995-2003. These figures are just two examples from the entire data set that was analyzed. The entire data set is provided in Appendix 12 of the DEIR. At the time that the NOP was issued (January 2004) stream temperature data from the summer of 2003 included the most recent observations.

Response to Comment 18
Both of these areas currently support coho salmon (per DFG stream surveys), and shade levels are expected to increase as the trees within the riparian zone in these locations continue to grow and develop. Increasing shade levels are expected to result in lower water temperature.

The DEIR discusses the elevated temperature issues in Parlin Creek and along the South Fork of the Noyo (p. VII.6.1-29 and Appendix 12 p. 9, 12-14, 21). Valentine (1996) provides the most comprehensive study of stream temperatures in this specific location. The conclusions in his report suggest that conditions did not represent a serious cause of concern with regard to coho salmon. JDSF continues to monitor water temperature along the SF Noyo at the lower JDSF boundary. There were several years of decreasing temperatures since 1997 followed by two years of increasing temperatures recorded in 2004 and 2005 (see Table 1, below). With no timber harvesting during 2004 and 2005, changes in temperature likely represent natural variation. JDSF will continue monitoring at this location and modify management practices as needed.

Table 1. Stream Temperature Data SF Noyo at the lower JDSF Boundary (ID 25010).

YEAR	1996	1997	1998	1999	2000	2004	2005
MWAT	16.2	17.3	16.2	15.9	15.8	17.1	16.5
Note that no data were recorded at this location between 2000 and 2004.							

Response to comment 19
The cautions noted by Collision et al (2003) are broadly recognized. The Board does not omit data to support or refute a stated hypothesis. See Response to Comment 8. The water temperature data that were analyzed, covering the time period 1991 – 2003, are provided as attachment A in Appendix 12 of the DEIR.

Response to Comment 20
The Board is aware of historic water temperature data in this location. Detailed discussion of water temperatures on the South Fork Noyo can be found in DEIR Appendix 12, starting a page 12 and in the main body of the DEIR on pages VII.7.6-27 to -30. Stream temperatures recorded along the SF Noyo in 1997 did exceed optimal conditions for coho salmon, but as shown in Figure 5a the temperature decreased by a degree (Celsius) or more for the next three consecutive years. More recent data for this gauge site collected in 2004 and 2005 shows a slight increase, but still below the temperature recorded in 1997. With little or no management activity in the last several years the recent increase is not likely to be management related, but instead reflects temporal variability.

Response to Comment 21
The DEIR analysis of turbidity included a range of thresholds from 40 NTU to 500 NTU (DEIR, Table VII.10.3). Table VII.10.3 reported all of the turbidity data provided in Lewis 2000. Recent field and laboratory studies have revealed that while the foraging efficiency of juvenile salmonids was decreased by increased turbidities, fish continue to capture prey at turbidity levels in the range of 40-50 NTUs (Hadden and others 2004). The value of the lower threshold is acknowledged and will be taken into consideration for future water quality monitoring. The Big and Noyo Rivers are listed as impaired for sediment, and suspended sediment concentrations are highly correlated with turbidity for a given watershed.

All data produced on JDSF are available to the public. Much of this data has been published or is available on the Internet. Any other data is available on request to CAL FIRE. CAL FIRE State Forest Program staff are continuing to make additional data sets available on the Internet over time, as funding allows.

Response to Comment 22
The results from the Klein (2003) study are based on a small sample size and are not conclusive. In the report Klein states that the results are preliminary and in need of further replication. The implications from the study are discussed in the Cumulative Effects section of the DEIR (VIII-53). However, the need to collect additional turbidity data in other planning watersheds is a valid comment and will be given consideration as a research project or as part of the monitoring program, pending the availability of funding.

While it would be advantageous to install continuous recording turbidity monitoring stations in several locations throughout JDSF, the cost is prohibitive. It is unusual and highly beneficial to already have 21 continuous recording turbidity stations currently operating within the boundaries of a forest ownership the size of JDSF. Considerable amounts of suspended sediment and turbidity data exist from these South and North Fork Caspar Creek stations and were reported on in the DEIR in considerable detail.

Klein's (2003) report suggests that there are thresholds of harvested acres beyond which additional harvesting will cause large increases in turbidity. Beschta and others (1995) write, however, in a comprehensive review of watershed relate cumulative effects, that natural systems rarely recognize discrete thresholds and can respond incrementally and interactively to change.

Additionally, Klein states in his report that that while turbidity levels might be decreased by reducing the density of roads in a watershed and limiting the annual rate of timber harvest, his "*results should be considered preliminary and not be used alone for policy decisions or regulatory standards"* (italics added). He also wrote that while his study argues for quantitative limits on annual harvest rates, they should be "*perhaps customized to accommodate the variability in erosional sensitivity found within the northcoast*. *But a stronger analysis, one that includes a greater sample size of northcoast streams, is needed to establish defensible harvest rates that ensure protection of beneficial uses*" (italics added).

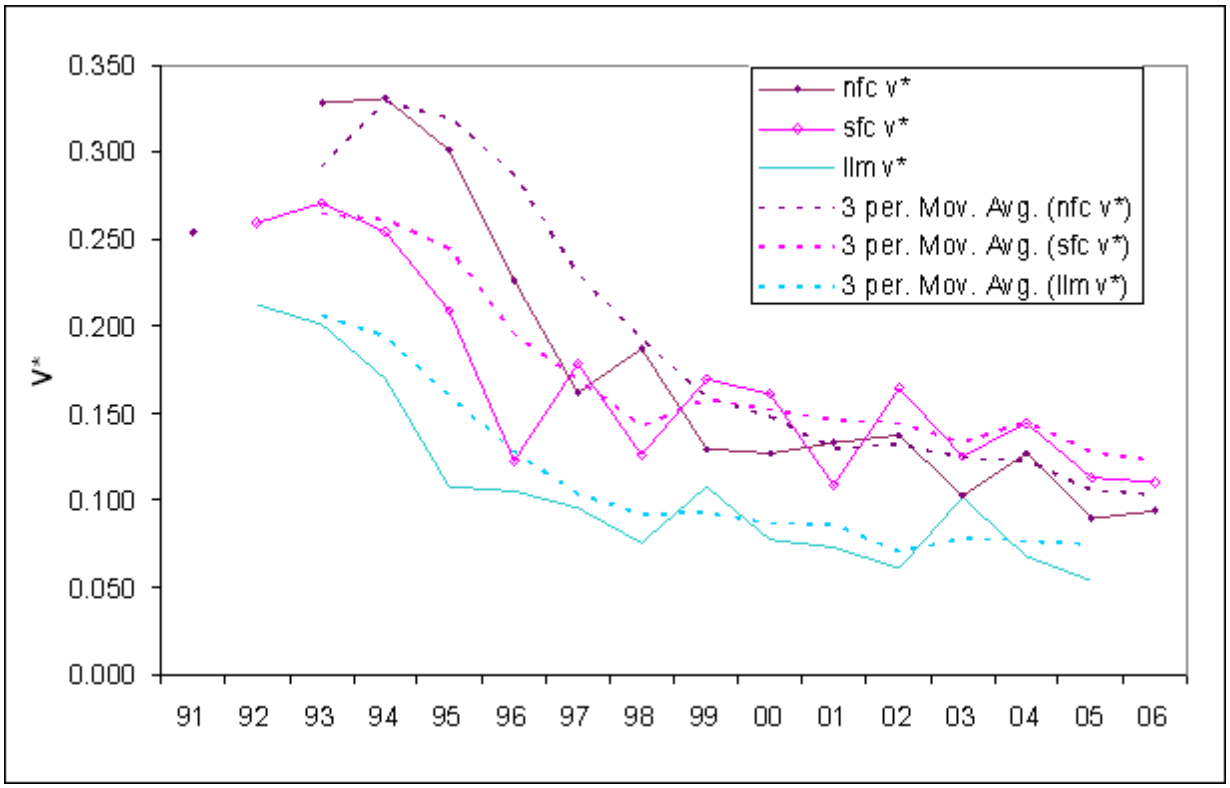
Observing just the data from Klein's (2003) paper collected on JDSF (the North Fork and South Fork Caspar Creek stations), the data show that the relationship described between increased harvesting rate and increased turbidity duration does not apply—the South Fork turbidity value is higher than the North Fork, even though the recent North Fork harvesting rate was higher. This outcome is likely explained by past roading practices and road abandonment work in the South Fork conducted in the late 1990s. Therefore, it appears from the data collected on JDSF that road construction, maintenance and abandonment practices are a very important factor to consider when discussing duration of turbidity—and more important than harvest rate.

Response to Comment 23
The comment suggests that the source of the deposit seen in the photo is related to logging, but does not indicate how this determination was made. Natural processes such as landsliding and bank erosion can lead to similar sediment inputs to streams.

Response to Comment 24
The DEIR discusses the significance of Knopp's (1993) study in the Aquatics section of the DEIR (VII.6.1-18 to VII.6.1-24). The DEIR explicitly acknowledges that management activities have affected channel geomorphology on Class I and Class II streams (VII.6.1-104). As stated in the DEIR, Knopp's results suggest that V* measurements for pools on JDSF are twice as high as undisturbed channels with similar geology (VII.6.1-104). More recent data reported by Stillwater for the draft 1999 HCP/SYP showed a much lower range of values for V*. The V* metric is very difficult to collect in a consistent fashion, which may contribute to the vast difference in V* numbers related to the same stream system. Most likely more consistent monitoring protocols are needed.

V* data also have been collected by the USDA Pacific-Southwest Research Station in the North and South Forks of Caspar Creek (Lisle and Napolitano 1998), and values from the early to mid-

1990s are generally similar to those reported by Knopp (1993). More recent values are lower, as displayed below in the following plot provided by Sue Hilton (USDA Forest Service, Pacific-Southwest Research Station, personal communication) in 2006 [note that data from Little Lost Man Creek (shown as "llm"), a reference watershed located in Redwood National Park is also included in this plot with the North Fork ("nfc") and South Fork ("sfc") of Caspar Creek]. Observe that there is a general decreasing trend for both forks of Caspar Creek over time.



Response to Comment 25
CAL FIRE funded a very detailed study of sediment storage and transport in the South Fork Noyo River Watersheds (Koehler et al. 2001). The DEIR discusses the results in Appendix 11. The findings suggest that large amounts of historic logging-related sediment are stored in channels and transported downstream during high discharge events (DEIR Appendix 11, p. 3). Not much is known about sediment waves because they are difficult to observe and model and have highly variable behaviors (Lisle 1997).

Response to Comment 26
The DEIR does acknowledge potential cumulative effects, particularly from historic management practices. Language from the DEIR such as "Streams on JDSF lands may also be more advanced relative to their recovery and flushing of sediment than pool habitats in other streams that were studied," (DEIR p. VII.6.1-22) and "A number of streams outside of JDSF within the Noyo Basin have pool frequencies below 20% (Figures VII.6.1.3 and VII.6.1.4), which may indicate a higher level of recovery in the streams of JDSF (Figure VII.6.1.2)," (DEIR p. VII.6.1-12), and "The habitat frequency chart from the North Fork of the South Fork Noyo within JDSF depicts some degree of recovery from past activities but pool frequency is still below the optimal range cited in the literature," (DEIR p. VII.6.1-12), clearly indicate that the DEIR is addressing this topic from a cumulative effects perspective. Further, the DEIR states on p. VII.6.1-37, "Historic management practices and more recent (mid-1980s to mid-1990s) harvest levels in assessment

watershed areas (Noyo and Big River) and other adjacent watersheds (Pudding Creek, Ten Mile) at the regional scale may have contributed to the decline of salmonid habitat quality ."

Habitat typing data are presented and discussed in the DEIR Aquatics section (p. VII.6.1-18 to 24, and are further discussed in DEIR section VII.6.1.4 (beginning on p. VII.6.1-37).

Response to Comment 27
The cumulative effects sections of the DEIR and RDEIR rely on timber harvesting data from 1986 to the present to disclose and discuss potential impacts (see, e.g., DEIR p. VIII-4). Further detailed timber harvesting data, THP by THP, are presented in DEIR Appendix 14. The data in the DEIR are summarized by CALWATER Planning Watershed and by silvicultural system. Timber harvesting data also were used explicitly to evaluate and quantify hydrologic impacts related to changes in peak flows (DEIR Appendix 10).

The BOF, in evaluating the DFMP, did not find that "all impacts are fully mitigated". Rather the BOF found a number of instances where implementation of the DFMP would lead to potentially significant effects and has required that measures to mitigate those effects be adopted. Further, it should be noted that CEQA is primarily concerned with the identification of potentially significant impacts and feasible mitigation. CEQA does not require that less-than-significant potential impacts be discussed in the same detail as significant potential impacts, nor does CEQA require that less-than-significant potential impacts be mitigated. We note, however, that the DFMP and DEIR contain numerous provisions that will avoid or mitigate both significant and less-than-significant potential impacts. Many of these elements with respect to aquatic species and their habitat have already been detailed in the Responses to Comments above.

The Reeves et al. (1993) article is of limited application to JDSF and the larger watershed area within which it lies. Oregon forest practice regulations during the 1985-1989 period examined in the article were less restrictive than those of California at the time, and were far less restrictive than today's California Forest Practice Rules. California has had significant Watercourse and Lake Protection Zone rules in place since 1984, and those rules in place for the JDSF area were further strengthened with the implementation of the WLPZ rules for Threatened and Impaired Watersheds in 2000 (see the Forest Practice Rules at 14 California Code of Regulations § 916.9 et seq.)

There are several differences between the Oregon Forest Practice Rules and those enforced in California. While watercourse protection measures for fish-bearing streams have improved considerably in Oregon, major revisions to the Oregon Forest Practice Rules did not take place until September 1994. Oregon currently does not have buffer strip requirements that require conifer trees to remain post-harvest for non-fish bearing streams [the current Hinkle Creek watershed study in Oregon has as primary objective to determine the impacts of contemporary logging practices on non-fish bearing streams--with implications for the need for buffer strips on non-fish bearing streams]. Clearcut size in Oregon is limited to 120 acres [as compared to 20-40 acres under the California Forest Practice Rules (14 CCR §913.1)] within a single ownership. In many situations, a written plan is not required, only a 2 page notice of operation document is filed. Prior approval from the ODF before operations can begin and a written plan are only required for logging proposed in areas with a high potential for causing resource problems (operations within 100 ft of certain types of streams, high risk landslide sites, operations within 300 ft of areas identified as important sites for certain wildlife species, etc.) (Adams 1996).

The DEIR acknowledges that applicability of the Reeves et al. article also is limited by the different precipitation regimes and geology of the coastal Oregon basins examined by the authors as compared to the central Mendocino coast of California. There are considerable differences between trees species growing on JDSF and those found in the Oregon Coast Range in terms of slope stability. Sidle and others (1985) report that the influence of timber harvest on slope stability depends on the density of residual trees and understory vegetation, rate and type of regeneration, site characteristics, and patterns of water inflow after harvesting. In areas with

marginal slope stability, loss of root strength and/or increased soil moisture from reduced evapotranspiration following logging can lead to an increased rate of slope failure (Sidle and others, 1985; Ziemer, 1981a). The influence of timber harvesting on slope stability depends on site characteristics (slope, geologic parent material, past landslide history), the tree species present, density of residual trees and understory vegetation, rate and type of regeneration, and size of storm events that occur after harvesting (Sidle and others, 1985).

Data collected to date in northwestern California areas with sprouting coast redwood does not show a clear relationship between clearcutting under the current FPR regime (sometimes in combination with requirements included in landscape level documents) and landslide rates. Most of the recent mass wasting features are related to roads and landings (Spittler and Cafferata 2004, Bawcom 2003). Improved Forest Practice Rules, mass wasting avoidance strategies, and requirements for professional input appear to be substantially reducing rates of mass wasting from northwestern California recent clearcuts. As stated in the above response to Comment 6, Bawcom (2003) examined rates of mass failures for redwood dominated clearcuts in western Mendocino County on Jackson Demonstration State Forest (JDSF). For this area, little evidence was found to indicate that vegetation removal associated with clearcutting alone conducted under the modern California Forest Practice Rules (1982 to 1994) was a significant contributor to slope instability or reactivations of dormant landslides. Almost all of the observed landslides that delivered sediment to watercourses were shallow failures that were associated with old roads (particularly low on the slope near watercourses) that were constructed decades before the recent harvesting. Similar conclusions were reached earlier for the North Fork of Caspar Creek on JDSF by Spittler (1995) and Cafferata and Spittler (1998).

In the Pacific Northwest, including the Oregon Coast Range reported on in Reeves and others (1993), where the tree species harvested do not sprout from the root mass, the period of increased landslide frequency after timber harvesting is elevated the most between the time of root dieback from harvested trees and the establishment of stabilizing roots by incoming vegetation (Swanson and Dyrness, 1975). This period of time is considered to be from 3 to 15 years after clearcutting (Sidle and Wu, 2001). For example in the slide-prone Mapleton area of the Siuslaw National Forest in the Oregon Coast Range, Ketcheson and Froehlich (1978, in Sidle and others, 1985) found a 3.5 fold increase over a 15 year period in the volume of debris avalanches and torrents in clearcut areas versus forested areas.

More recently in Oregon, Robison and others (1999) reported on the erosional consequences of two very large storm events which occurred in February and November of 1996 in western Oregon. Both storms resulted in a large number of landslides, debris torrents, and altered stream channels. A three year monitoring project was undertaken to evaluate the effects of the storms. The majority of the identified landslides were not associated with roads, but were in clearcut units, with the highest hazard area for shallow rapid landslides occurring on slopes of over 70%. Data from this study indicated a higher incidence of landslides between 0 and 10 years after clearcut timber harvesting (Spittler and Cafferata 2004).

Response to Comment 28

The commenter is expressing an opinion regarding the extent of past impact, the level of impact associated with specific forms of stand management and timber yarding, and an associated period of time for which management should be confined to the specific form that he recommends. Further, the commenter has specified that only a single form of stand management should occur (thinning from below), while simultaneously specifying that selective logging and light touch forestry should occur. While selection logging may include some thinning from below, thinning from below is not synonymous with selective cutting, and "light touch forestry" is not a defined term. These comments represent over generalization that is not supported. The Board will not speculate as to why the commenter believes that future management should be limited as specified. In fact, the analysis performed for this EIR indicates that the watershed is in a state of active recovery from past impacts, and that this recovery will continue coincident with the

management that has been proposed. The proposed management includes a broad spectrum of individual stand management and timber yarding techniques, and each proposal to harvest timber will be accompanied by a site-specific analysis of potential cumulative effects.

The DFMP and Administrative Draft Final Forest Management Plan recognize the sensitivity of streams and riparian areas to potential management impacts and designate these as Special Concern Areas. As such, these areas have significant restrictions on management operations in WLPZ areas, as documented in number of the responses to comment above. Over time, the implementation of this plan should assist in the recovery of degraded channel conditions.

The JDSF DFMP, Administrative Draft Final Forest Management Plan, and DEIR, in part, use the results of the Stillwater-Sciences-produced watershed analysis work to identify approaches to reduce cumulative impacts to a level less than significant. Specifically, on-site impacts from individual and multiple projects will be reduced by a combination of the FPRs, added measures provided for in the DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR, and site-specific measures added from the THP preparation process and Review Team agency review of THPs, as well as from pre-plan consultation with qualified experts. Repair of existing road-related sediment problems will be accomplished through the Additional Management Measure for an Accelerated Road Management Plan.

The rate of sediment production from new activities (i.e., from roads and harvest units) described in the DFMP is not expected to inhibit watershed recovery. The total amount of harvest-related sediment and the proportion of sediment production between harvest areas and roads vary depending on logging systems and road location, type, design, and use and with differences in planning watershed sensitivity. In general, there should be near recovery to original or new baseline suspended sediment conditions within approximately 10-20 years following harvest (Grant 2000). The hazard of sediment production from permanent roads can be considered as constant after about 10 years, although actual amounts will vary by road type and storm size–with less frequent, episodic inputs associated with large storms. Higher rates of surface erosion and failures due to poor design or execution are most likely during the first few years following construction.

Data provided in Table VIII.10 of the DEIR shows that the intensity of future harvesting on JDSF in the next 10 years will be less than has been tested in the North Fork of Caspar Creek, where approximately 45% of the watershed was clearcut harvested in three years. Research conducted in the North Fork of Caspar Creek watershed beginning in 1985 directly addressed cumulative watershed effects. Most of the logged units were cable yarded and new roads were built along the ridge lines. Nested watersheds with individual gaging stations measured sediment routing. None of the statistical tests performed on the sediment data revealed significant positive interactions that would indicate disproportionate disturbance effects at downstream gaging stations (Lewis 1998). In both pre and post-treatment, main stem gaging stations had higher unit area sediment loads than in the tributaries, which could reflect the greater availability of sediment stored in lower gradient reaches. The intensive level of timber management in the North Fork of Caspar Creek watershed also did not cause large changes in watershed physical or biological variables in this moderately stable geologic formation (Ziemer 1998, Lewis 1998, Cafferata and Spittler 1998, Nakamoto 1998, Bottorff and Knight 1996). The Caspar Creek results show that downstream water quality impacts of hydrologic changes resulting from timber operations can be prevented by the application of mitigation measures contained in the California Forest Practice Rules.

Also note that the anticipated amount and intensity of harvesting is less in the Administrative Draft Final Forest Management Plan than was proposed in Alternative C1. The Administrative Draft Final Forest Management Plan, or Alternative G, makes a smaller amount of the Forest available for evenaged management, designates over one-third of the Forest for development of late seral or older forest conditions, and places significant limitations on the acreage of evenaged management that can be conducted each decade.

Response to Comment 29
See Response to Comment 7.1, above. The Board examined the specific map cited here, Map Figure Z, Silvicultural Spatial Allocation Plan, in both the printed version of the DEIR and in the PDF version [as downloaded from the Board website (http://www.fire.ca.gov/php/rsrc-mgt_content/downloads/jdsf_deir_05/DEIR_Map_FigureZ_SilviculturalSpatialAllocation.pdf) and viewed on computer screen]. While the map colors could have been more distinct, we were able to reasonably easily discern the different silvicultural systems displayed in the printed version of the figure. The on-screen image was less clear, but still distinguishable.

In the DFMP, the same figure is provided as Figure 7, Timber Management Areas. The printed version of Figure 7 in the DFMP has very clear distinction between the colors. The electronic version of Figure 7, as provided to the public via the Board of Forestry and Fire Protection website (http://www.bof.fire.ca.gov/pdfs/fig7.pdf) and on CDs, is somewhat more easily distinguishable than the DEIR electronic version of Map Figure Z.

With respect to the expressed concern about Brandon Gulch being designated for short-rotation silviculture, we note that Map Figure Z clearly shows that Brandon Gulch is allocated to unevenaged management (to which the concept of rotation does not apply), plus a Special Concern Area. Further, it should be noted that the silvicultural allocations presented in Figure Z are general designations. Additional information on slope stability (such as that shown and Map Figures V and W) and on-the-ground determinations of slope stability made by a licensed engineering geologist will be used to develop the actual silvicultural treatments provided on any specific area.

In the RDEIR, Map Figure 1 provides the equivalent spatial information on silvicultural allocations for Alternative G, as does Map Figure 5 in the Administrative Draft Final Forest Management Plan. The color scheme in these map figures is very distinctive. Under Alternative G and the Administrative Draft Final Forest Management Plan, management in Brandon Gulch would continue to be unevenaged.

Response to Comment 30
Section 10.3.3 of the DEIR (p. VII.10-6 to -7) provides a discussion of the effects of timber harvest on flows, and Appendix 10 provides a lengthy and detailed discussion of this topic. The Aquatics section (VII.6.1) discusses the importance of flow as a habitat factor for fish.

The main body of the DEIR addresses roads and their effects on sediment detail in several places:

- Section VII.7.2.4 (p. VII.7-7 to -19);
- Section VII.10.4.2 (p. VII.10.-7 to -10);
- Section VIII.3.1 (p. VIII-15 to -17);
- Section VIII.3.3 (p. VIII-39 to -40.

In addition, Appendix 11 focuses solely on the issue of sediment and contains extensive discussion and data related to roads and sediment.

Quantitative information on roads and sediment can be found in a number of places in the DEIR. See the following tables or figures and the related discussion:

- Table VII.7.1
- Table VII.7.2
- Figure VII.7.1
- Table VIII.6b
- Table VIII.7 (documents projects implemented to reduce road-related sediment)

- Appendix 11: Figures 2, 4, 7, 8; Tables 2 plus 4 attached tables.

Matthew's sediment source area analysis work is discussed in the DEIR in Appendix 11. The DEIR analyzed the effects of roads on sediment yield. Sediment budget work completed by Stillwater Sciences for the draft HCP/SYP for JDSF was incorporated into the DEIR and is consistent with the work by Mathews in that they both recognize roads as a primary sediment source. Matthews's estimates of sediment yield from roads by time period are an office-based assessment with little or no field validation. Through field-based inventory and prioritization, the Road Management Plan proposed in the DFMP (or the Additional Management Measure for an Accelerated Road Management Plan) provides a practical, proven approach to reducing sediment loads. This approach also is included in the Administrative Draft Final Forest Management Plan.

Response to Comment 31
The BOF and CAL FIRE are committed to identify sediment sources from roads and decommissioning roads that are no longer needed or pose high environmental risk. However, there is unlikely to be a single road density threshold that is appropriate for all watersheds.

The Road Management Plan included in the DFMP and the Additional Management Measure for an Accelerated Road Management Plan provided in the DEIR are both indicative of the Board's and CAL FIRE's commitment to address road related impacts on ecosystems, including removal of roads. The Road Management Plan includes road abandonment as one of its elements (see DFMP Appendix VI). This approach also is included in the Administrative Draft Final Forest Management Plan.

Response to Comment 32
Appendix 12 of the DEIR discusses a range of variables that can potentially influence stream temperature. Previous modeling studies by Bartholow (2000) found that shading and stream width were the most influential variables in determining stream temperature. The results from Welsh et al. (2005) do suggest that groundwater can play an important role in regulating stream temperatures during the warm summer months. The role of groundwater in regulating stream temperatures across JDSF is not well understood. It may be a useful research or monitoring project to consider if future funding becomes available. JDSF currently uses a well distributed network of stream gauges to monitor stream temperature and where stream temperatures are of concern management prescriptions are adapted as needed.

With respect to the findings of Welsh et al. and their relevance to JDSF, it is important to note the following:

- Late seral stage vegetation types will be increased with implementation of the DFMP, in riparian areas in particular, and not decreased as occurred in the Mattole River basin cited by Welsh et al. Under the proposed Administrative Draft Final Forest Management Plan, over one-third of JDSF is designated for the development of late seral or older forest structure.
- Welsh et al. (2005) determined that the primary processes influencing faunal assemblage patterns were vegetation changes resulting from the harvesting of late-seral forests and the clearing of forest for pasture. With the implementation of the DFMP, no wide-spread conversion to early seral stages or clearing for pasture will occur. Late seral forest conditions on JDSF will be significantly increased under the Administrative Draft Final Forest Management Plan, not decreased.
- Welsh et al. (2005) stress the importance of appropriate microclimatic environments associated with late-seral forests. A detailed riparian microclimate study is currently being conducted on JDSF (and a control in Russian Gulch State Park) forest lands by the Department of Fish and Game (Chapman and others 2004). Summer (May through September) temperature gradients are being monitored along fifteen transects in stream riparian zones within four different watersheds. A minimum of seven stations are set along each transect. This study will provide quantitative information on riparian microclimate for pre- and post-harvest conditions. Based on the results of this study, adaptive management

will occur under the Administrative Draft Final Forest Management Plan if necessary to prevent significant adverse impacts to sensitive aquatic species.

The DEIR includes substantial information on current seral conditions and projected seral conditions. Current seral conditions are depicted using the Wildlife Habitat Relationship System classifications (Mayer and Laudenslayer 1988) in Map Figures J and K. Tabular information on current seral conditions are presented in Tables VII.6.6.1 and VII.6.6.2 in DEIR section VII.6.6.1 Wildlife and Wildlife Habitat. Summary bar graphs of seral classes are presented in Figures VII.6.6.1.1 and VII.6.6.1.2. The data developed by Warbington et al. (1988) and cited in the comment was one of the sources used in these compilations and analyses.

The DEIR includes extensive modeling to project seral conditions over time. See pages VII.6.6-131 through -208. This modeling included both JDSF and areas outside of JDSF within the cumulative effects assessment area.

Information based on Keithley (1999) is provided and discussed in the Cumulative Effects section of the DEIR (VIII-66 to -72). Information is not provided as charts, but the quantitative data is presented in tabular form.

Response to Comment 33
The cited change detection data is better suited for broad landscape level analysis. The mapping is done across geographic areas that are much larger than the DEIR planning area. CAL FIRE has very detailed management data in the form of timber harvest histories and inventory data that more specifically account for changes in land use than the change detection data. These changes are also reflected in the revised vegetation map for JDSF. It is unclear that the additional analysis would yield better information on current conditions.

The suggested analysis using the change detection data to assess the 1994-1998 change in riparian vegetation would push both the change detection data and the available stream location data beyond their levels of accuracy. The Board reviewed change detection data in preparing the DEIR, but determined that available field-based surveys of riparian areas on JDSF and adjoining Mendocino Redwood Company lands provided a more detailed and reliable set of information. In this case the change detection data had limited field checking and lacked a detailed description of the actions that caused a change in vegetation condition. Further, CAL FIRE has developed a very detailed GIS database that identifies timber harvesting and other management activities throughout the DEIR planning area. This kind of information is much more reliable when collected from aerial photographs or on the ground than from LANDSAT imagery. DEIR section VII.6.1 Aquatics includes information on streamside vegetation, including canopy cover (see, e.g., Table VII.6.1.4) and large woody debris.

Response to Comment 34
The analysis performed for the EIR clearly recognizes the relationships between past management and current conditions. The EIR includes very extensive discussion of the relationships between management and impacts associated with sediment, canopy reduction, and water temperature. The reader is encouraged to review Section V (Regional Setting) for a description of existing conditions and past effects, Section VII.6.1 (Aquatic Resources) for an analysis of potential impacts to aquatic resources, Section VII.10 (Hydrology and Water Quality) for an analysis of potential land management effects upon stream flow and water quality, and Section VIII for an assessment of potential cumulative effects. Appendix 12 includes a discussion of water temperature, clearly articulating the relationship between canopy and water temperature.

The DFMP does not set up the context for “a new wave of clearcutting” on JDSF. Table VII.6.3.4 (p. VII.6.3-28) provides information on the silvicultural allocation plan for the DFMP, and a short-term harvest schedule also is included in the DFMP. Similar information is provided in the Administrative Draft Final Forest Management Plan.

Under the Administrative Draft Final Forest Management Plan, the only areas of the Forest specifically designated as eligible to receive evenaged management total 26 percent of the Forest area; and these areas are designated to receive either evenaged or unevenaged management. The extent of clearcutting and other forms of evenaged management are strictly limited to no more than 2,700 acres per decade.

With respect to the two cited watersheds of concern, James Creek is designated to receive either older forest structure or unevenaged treatments; no clearcutting or other forms of evenaged management are anticipated under the Administrative Draft Final Forest Management Plan. Part of the Chamberlin Creek watershed is designated for older forest structure and part is designated for either evenaged of unevenaged prescriptions. The short-term harvest schedule presented in the Administrative Draft Final Forest Management Plan (Table 9) identifies only unevenaged management harvests for the Chamberlin Creek watershed. No harvests are identified for James Creek.

Finally, as discussed several times above, the DFMP, Administrative Draft Final Forest Management Plan, DEIR, and RDEIR provide numerous measures to ensure that significant adverse impacts of the type described in the comment do not occur. The DEIR and RDEIR conclude that taken as a whole, these measures will contribute to recovery of aquatic habitat conditions and salmonid populations.

Response to Comment 35
Almost all of the Class I streams within JDSF support coho salmon, including most of those with water temperature that exceeds preferred levels. The Administrative Draft Final Forest Management Plan will provide for the continued development of canopy and large woody debris, which will increase cover and result in lower water temperature.

Juvenile coho salmon require cool water to survive and grow and are susceptible to increased summer water temperatures because they rear in freshwater for at least a year. Temperatures below 16.8° C are in a range that is considered optimum for Coho. Temperatures beyond 16.8° C have been shown through numerous studies to introduce stress that inhibits growth and or avoidance among juvenile coho. There is not typically a single number that determines whether a stream supports coho. Rather, Appendix 12 of the DEIR discusses a range of thresholds for coho. The map is however instructive for highlighting areas where stream temperatures are potentially constraining the distribution of coho. Many of these areas have also been the focus of restoration activities to improve canopy cover and increase shading.

Response to Comment 36
Appendix 12 of DEIR provides a comprehensive evaluation of water temperature data and canopy cover throughout the assessment area. The report evaluates the historical record of water temperature and discloses locations where water temperature impairment is of concern. In addition, JDSF is committed to maintaining a robust water quality monitoring program that includes collecting water quality data. Further exploration of the relationship between water temperature and riparian habitat will be considered as part of the research program at JDSF, pending available funding. The Administrative Draft Final Forest Management Plan specifically designates three areas on the forest for testing these kinds of relationships.

In addition to examining current riparian conditions on JDSF and the anticipated results of the management proposed in the DFMP and the Administrative Draft Final Forest Management Plan, the DEIR explores riparian conditions on the other ownerships in the broader cumulative watershed effects assessment area. For example, the discussion notes that one of the major industrial landowners within the assessment area, Mendocino Redwood Company (manages about 25 percent of the cumulative watershed effects assessment area), has in place riparian management practices that go substantially beyond the Forest Practice Rules (see DEIR p. VIII-44).

Response to Comment 37
The Board agrees that some stream reaches within the assessment area contain water that is above the optimum temperature range for salmonids, and that canopy growth and development will eventually result in a reduction in stream temperature in many of these reaches. The DEIR recognizes that impaired water temperatures are by definition a cumulative effect and clearly states locations both on JDSF and throughout the Noyo and Big River where water temperatures are high and of potential concern. Detailed information on riparian trees and canopy conditions was provided and discussed for MRC lands. For other private lands within the Noyo and Big Rivers there was limited available information on which to base an analysis. Where the data were made available, the Board evaluated canopy cover for adjacent landowners. Further, Appendix 12, clearly address stream temperature issues that exist off JDSF lands, but within the Noyo and Big River watersheds. Chapter 5 Environmental Setting (p. V-14) shows a map that depicts the framework that was used for interpreting cumulative watershed effects that includes an evaluation of effects throughout the Noyo and Big Rivers, as well as four additional coastal drainages. The DEIR also discusses the management practices that MRC has in place to protect riparian habitat values.

Response to Comment 38
SHALSTAB was used by Stillwater Sciences in their watershed analysis work completed for the draft HCP/SYP for JDSF. This work was used in the DEIR development of the DFMP and Administrative Draft Final Forest Management Plan. Further, the California Geological Survey updated geologic and geomorphic maps for JDSF, Big River, and Noyo River watersheds. SHALSTAB was one of the data layers used to in developing maps of relative landslide potential. Tables VII.7.5 and VII.7.6 of the DEIR provide a summary of the extent of mass wasting features (debris flow, rock slide, earth flow, debris slide, etc.) across most of the assessment area (see p. VII.7-21 to-26). Also, this data layer is displayed graphically in DEIR Map Figures V and W.

The DFMP (p. 71-72) and the Administrative Draft Final Forest Management Plan describe the hillslope management procedures to be used in potentially unstable areas. This process involves office review (including the use of relative landslide potential maps), field review by a Registered Professional Forester using the 1999 “California Licensed Foresters Association (CLFA) Guide to Determining the Need for Input From a Licensed Geologist During the THP Preparation,” and CEG consultation as appropriate during the design phase of timber sale preparation work to address slope instability and erosion issues identified during office and field reviews. This process in intended to ensure that harvest units and road designs are proposed that adequately protect unstable areas and inner gorges.

The DEIR adds a further mitigation to the process to require:

> Use CGS-compiled landslide maps (Short and Spittler 2002a; Manson, Sowma-Bawcom, and Parker 2001; Manson and Bawcom 2001) and relative landslide potential maps [Short and Spittler 2002b; Manson, Sowma-Bawcom, and Parker 2001] to (a) identify areas of potential instability during THP preparation, road layout, and other construction activities, and (b) designate “shallow landslide potential areas” as Special Concern Areas.

JDSF currently has a half-time certified engineering geologist (CEG) on its staff. Duties of the CEG include field evaluation of projects (such as THPs) to identify and mitigate potential effects on slope stability.

Response to Comment 39
The management plan proposes to manage Class I and II riparian zones to develop late seral characteristics. Management to attain early seral stages within the riparian zone is not proposed. Water quality conditions for coho salmon and tailed frogs are comparable. The coho salmon and steelhead were used as the key aquatic species of concern in the DEIR given the greater

availability of historic as well as current information on their status from both a regional and local perspective.

It should also be noted that, as the result of past management practices, early seral stages are not characteristic of riparian areas on JDSF. The canopy information for JDSF streams alone is indicative of this fact (see Table VII.6.1.4 on p. VII.6.1-27 of the DEIR). The aerial-photo-based information on JDSF Class I and II streams in Table VII.6.1.4 indicates that, in 1996, 89 percent of the stream miles had 70 percent canopy closure or greater. Given the Forest Practice Rules, the Forest Practice Rule for Threatened and Impaired Watersheds, and management practices on JDSF, the level of canopy closure has in all likelihood increased since the time this analysis was conducted.

Response to Comment 40
The Board has determined in the DEIR that management of JDSF, as proposed, will result in continued recovery of aquatic habitat within the Forest. This habitat is expected to contribute to the recovery of salmonid populations. The DEIR emphasized habitat condition discussion over population parameters given the large degree of annual population variation and inconsistent effort and timing of data collection, particularly for adults and the youngest salmonid age classes (DEIR Page VII.6.1-61-64). Section VII.6.1.16 Project Impacts DEIR Pages VII.6.1-99-111 link habitat measures to expected impacts on fish populations. The conclusions of Brown et al. (1994) are noted on DEIR page VII.6.1-53 to -54 and in Tables VII.6.1.8 and VII.6.1.9 on DEIR pages VII.6.1-55 and 56, respectively.

Response to Comment 41
Aquatic habitat conditions regionally and within JDSF, including V*, are discussed at length in DEIR section VII.6.1 Aquatic Resources. JDSF-specific discussion of fish populations is found on DEIR pages VII.6.1-72 through -84. Regional and local salmonid population status and relationship to habitat conditions is detailed in DEIR pages VII.6.1-53 through -84.

Response to Comment 42
Section VII.6.1 of the DEIR contains extensive information on the presence and absence of salmonids on JDSF and within the cumulative effects assessment area. Map Figure E in the DEIR provides recent spatial information on coho and steelhead presence on JDSF and the rest of the cumulative effects assessment area. The Board considered a map of the historic spatial distribution of salmonids of concern. Illustrating spatially where coho and steelhead were located historically with regularity would be largely speculative due to the lack of systematic information. The DEIR notes that coho and steelhead likely occurred throughout JDSF where their movement was not restricted by barriers. Differences in survey timing and effort and transitory effectiveness of barriers are variables that would reduce the utility of a map based on presence/absence. Further, correlation of presence/absence with little or no stream habitat data would not be supportable. That the coho and steelhead distribution has retracted from historic levels is broadly recognized.

The issue of the importance of JDSF as regional refugia was discussed above.

Response to Comment 43
The DFMP and the DEIR recognize the issue of how thinning from below can be used as a tool to accelerate development of late seral stands and encourages the use of such management. The DFMP calls for this treatment to be applied, as appropriate, in Class I and Class II WLPZs to hasten the development of late seral habitat that is called for in the Special Concern Areas established in these areas. The DFMP describes such areas thus:

> Watercourse and lake protection zones (WLPZ) - 7,440 acres. Areas designated for special management to protect aquatic and riparian resources, maintain terrestrial habitat connectivity for wildlife, and promote development of late-successional forest stand conditions.

> Silviculture is limited to no harvest or special uneven-aged regimes designed to promote development of late-successional forest stand conditions. (DFMP p. 149, emphasis added)

The DFMP also suggests thinning from below for late seral development in the Woodlands Special Treatment Area:

> Late-successional forest characteristics will also be managed for in the Mendocino Woodlands Special Treatment Area (2,224 acres located in the Lower North Fork Big River planning watershed excluding the Railroad Gulch Research Area). Management in this area may include thinning from below and individual tree selection designed to emphasize development and retention of large trees. (DFMP p. 61, emphasis added)

The DEIR provides an Additional Management Measure for Large Woody Debris Survey, Placement, and Recruitment (see DFMP p. VII.6.1-97 to -98). This measure requires that all Class I and II streams be surveyed for large woody debris loading either programmatically or during THP preparation. Where debris loading falls short of the specified criteria, the called for treatments include "removal of codominant, intermediate, or suppressed trees to promote growth on the larger diameter dominant trees and improve LWD recruitment potential," i.e., thinning from below.

The Administrative Draft Final Forest Management Plan goes well beyond the DFMP to propose substantial additional areas for the development of late seral and older forest characteristics. Thinning from below and careful single tree harvest prescriptions will be essential tools to attaining these goals.

Response to Comment 44
While the future management of the Forest will provide for continued recovery, as concluded in the DEIR, existing science does not enable a prediction of either the slope of the recovery trajectory or the time necessary to achieve full recovery. Further, CEQA does not require that an EIR include a time table for recovery, nor does not achieving full recovery lead to a significant effect requiring mitigation,

The DFMP makes a commitment to continue monitoring efforts of many watershed parameters within the Caspar Creek Watershed Project area (see DFMP p. 109), and the Department has committed to a continuation of monitoring efforts in other areas. Please see Chapter 5 of the DFMP or the Administrative Draft Final Forest Management Plan for a detailed list of proposed monitoring efforts, including many that are widely recognized as appropriate for an assessment of water quality and aquatic habitat. Note that Casper Creek is the only forested long-term paired watershed study ongoing in California (Ziemer and Ryan 2000), with a commitment from the USFS-PSW and CAL FIRE to continue the project for 100 years.

The Administrative Draft Final Forest Management Plan makes a commitment to comply fully with all regulations of the North Coast Regional Water Quality Control Board, including TMDL requirements.

Response to Comment 45
The instream and hillslope monitoring to be implemented on JDSF is well described in Chapter 5 of the Draft Management Plan and the Administrative Draft Final Forest Management Plan. This monitoring will provide an indication of stream condition and attainment of water quality objectives. For instream channel conditions, the document states that "Parameters sampled will vary depending on the stream reach evaluated, but may include:

- LWD frequency by size class, with information on condition and placement

- Pool dimensions (including pool volume], residual pool depth, and useable rearing/holding/overwintering habitat)
- Pool frequency
- Gravel permeability, embeddedness and size distribution (including overall d_{50} of sampled reaches)
- Channel dimensions (measured using transects)
- Longitudinal profiles and cross sections
- Bank conditions and entrenchment
- Benthic macroinvertebrates"

These parameters have associated water quality targets for North Coast listed watersheds.

Further, JDSF will comply with water quality regulations such as the Porter-Cologne Water Quality Act and TMDL requirements, in part through the Waste Discharge Requirement process established by the North Coast Regional Water Quality Control Board. These regulatory measures are discussed in part VII.7.3 (starting at p. VII.7-27) of the DEIR.

Response to Comment 46

The BOF does not agree with the comment. The DEIR provides an extensive summary of data collected over time and for a variety of aquatic resource values. These provide a baseline for future comparative studies and monitoring efforts that under proposed management are expected to continue to exhibit improvements. The Caspar Creek Watershed study provides a scientific foundation that has and will continue to provide monitoring data across a broad spectrum of resources that effect aquatic resources.

There is a lack of scientific information to assess environmental conditions prior to 1948. However, there is a broad source of information on land management practices and the likely impacts associated with past management practices. This information is included in the DEIR. Further, information in the DEIR on timber inventory, wildlife, stream channel conditions are well developed and will continue to document a watershed recovery.

Response to Comment 47

The commenter misunderstands the point that the DEIR is trying to make here (quoted section is from p. VII-69 of the DEIR). The section is discussing priorities for restoration, not protection. As used in this context, "restoration" is referring to the taking of affirmative steps to improve stream conditions, such as removing roads from Watercourse and Lake Protection Zones, upgrading crossings, recruiting or placing large woody debris, removing migration barriers from streams, etc.

The argument being made is based on the fact that available resources for watershed restoration are limited. Thus, the approach to restoration that makes the most sense is:

- Protect watersheds that are in pristine condition and providing fully functioning aquatic and riparian habitat;
- Protect watershed that are in reasonable shape and recovering well on their own;
- Invest limited restoration resources in making improvements to watersheds that are moderately disturbed, where restoration investments will provide a fairly fast recovery response at a relatively low cost;
- Make restoration of heavily disturbed areas a lower priority because the cost of restoring these areas will be relatively high and the rate of recovery fairly low.

Response to Comment 48

The Board and CAL FIRE recognize (as does the DEIR) the biogeographic value of JDSF and more specifically the opportunity to contribute to recovery of these and other species. The responses to comments above discuss salmon recovery at some length. For Marbled Murrelet

specifically, the DEIR provides an Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat (see DEIR p. VII.6.6-123 to -119). The Administrative Draft Final Forest Management Plan builds on the DFMP by providing an additional area of 1,500 acres specifically for the development of late seral habitat to provide Marbled Murrelet Habitat.

Response to Comment 49
As indicated in responses to many of the earlier comments in this letter, the proposed DFMP, additional measures provided in the DEIR, plus the additional research emphasis that the BOF has directed CAL FIRE to incorporate into the final management plan, will make substantial, direct progress toward the achievement of the goals enumerated in this comment. The proposed Administrative Draft Final Forest Management Plan goes even further toward such goals, in part through designating significantly greater areas of the Forest for the development of late seral and older forest characteristics.

The one item not specifically touched on in the responses thus far is recreation. The DFMP and Administrative Draft Final Forest Management Plan call for JDSF to conduct a recreation survey and, based on that, to adjust recreation opportunities. Further, these plans call for a number of specific measures to improve recreation (see DFMP p. 78 or Chapter 3 of the Administrative Draft Final Forest Management Plan). These include improvements to campsites and trails, development of route maps for equestrians and mountain bikes, restoring the Little Red School House and opening it to the public, and upgrading or roads heavily used by recreationists.

Literature Cited in Responses

Adams, P. 1996. Management planning—Oregon's Forest Practice Rules. Oregon State University Extension Service. Corvallis, Oregon. 12 p.

Bartholow, J.M. 2000. Estimating cumulative effects of clearcutting on stream temperatures. Rivers (4): 284-297.
http://smig.usgs.gov/cgi-bin/SMIG/pageprint?page=features_0902/clearcut_inline.html

Bawcom, J.A. 2003. Clearcutting and slope stability: preliminary findings on Jackson Demonstration State Forest, Mendocino County, California. Paper prepared for the proceedings of the 24th Annual Forest Vegetation Management Conference, January 14-16, 2003, Redding, CA. 10 p.

Beschta, R. L., and J. R. Boyle, C. C. Chambers, W. P. Gibson, and others. 1995. Cumulative effects of forest practices in Oregon: literature and synthesis. Oregon State University, Department of Forest Resources, Corvallis, OR.

Bottorff, R.L. and A.W. Knight. 1996. The effects of clearcut logging on the stream biology of the North Fork of Caspar Creek, Jackson Demonstration State Forest, Fort Bragg, California-1986 to 1994. Final Report. Contract No. 8ca63802. 177 P. Prepared for California Department of Forestry and Fire Protection. Davis, California: University of California.
http://www.fs.fed.us/psw/publications/4351/Bottorff.pdf

Cafferata, P.H. and T.E. Spittler. 1998. Logging Impacts of the 1970's vs. the 1990's. Pp. 103-115 In: R.R. Ziemer, Technical Coordinator, The Caspar Creek Watershed. Proceedings of the Conference on Coastal Watersheds: The Caspar Creek Story, USDA General Technical Report PSW-GRT-168. http://www.fs.fed.us/psw/publications/documents/gtr-168/13cafferata.pdf

Chapman. T.. B. Valentine, and R. Macedo. 2004. Microclimate Study of Riparian Buffer Zones in the Northcoast Redwood Region - 2001 through Present [abstract]. Proceeding of the Redwood Region Science Symposium, 15-17 March, 2004, Rohnert Park, California. Found at:
http://forestry.berkeley.edu/redwood_paper25-hughes.html

Collison, A., W. Emmingham, F. Everest, W. Hanneberg, R. Martston, D. Tarboton, R. Twiss. 2003. Phase II Report: Independent Scientific Review Panel on Sediment Impairment and Effects on Beneficial Uses of the Elk River and Stitz, Bear, Jordan and Freshwater Creeks. Independent Science Review Panel performed analysis on retainer to the North Coast Regional water Quality Control Board, Santa Rosa, CA.

California Department of Fish and Game. 2004. Recovery Strategy for California Coho Salmon. Report to the California Fish and Game Commission. Prepared by the California Department of Fish and Game, Sacramento. 594p.
http://www.dfg.ca.gov/nafwb/CohoRecovery/RecoveryStrategy.html

Dunne, T., J. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. The University of California Committee on Cumulative Watershed Effects. University of California Wildland Resource Center Report No. 46. June 2001. 107 pp.

Grant, G.E. and S.K. Hayes. 2000. Geomorphic response to peak flow increases due to forest harvest activities, western Cascades, Oregon. Poster Paper part of the proceedings of the Fifth Gravel-Bed Rivers Workshop, August –September, 2000, New Zealand. Poster CDROM available from the New Zealand Hydrological Society.

Hadden, S.J., M.A. Wilzbach, K.W. Cummins and M.A. Madej. 2004. Relative effects of organic and inorganic constituents of the suspended sediment load on salmonid foraging and prey availability. P. 80 In: American Fisheries Society California-Nevada and Humboldt Chapters Conference Proceedings–Understanding, Protecting and Enjoying California's Fishes from the Sierra to the Sea. Redding California. 100 p. [Abstract]

Keithley, Chris. 1999. Evaluating Stream and Watershed Conditions in Northern California. May, 1999. Fire and Resource Assessment Program, California Department of Forestry and Fire Protection, Sacramento. Published on Internet at:
http://frap.cdf.ca.gov/projects/NC_STREAM/evaluating_stream.pdf

Keppeler, Elizabeth T., Jack Lewis, Thomas E. Lisle. 2003. Effects of forest management on streamflow, sediment yield, and erosion, Caspar Creek Experimental Watersheds**.** In: Renard, Kenneth G.; McElroy, Stephen A.; Gburek, William J.; Canfield, H. Evan; Scott, Russell L., eds. First Interagency Conference on Research in the Watersheds, October 27-30, 2003. U.S. Department of Agriculture, Agricultural Research Service; 77-82.

Ketcheson, G.L. and H.A. Froehlich. 1978. Hydrology factors and environmental impacts of mass soil movements in the Oregon Coast Range. Water Resources Research Institute, Oregon State University, Corvallis, OR. 94 p.

Klein, R. 2003. Duration of turbidity and suspended sediment transport in salmonid-bearing streams, north coastal California. Final Report prepared for the U.S. EPA, San Franscisco under Interagency Agreement #DW-1495553501-0. Redwood National and State Parks, Arcata, CA. 32 p.

Knopp, C. 1993. Testing indices of cold water fish habitat. Unpubl. Final Report submitted to the North Coast Regional Water Quality Control Board, in cooperation with the California Department of Forestry. Santa Rosa, CA. 56 p.
http://www.krisweb.com/krisnoyo/krisdb/html/krisweb/biblio/general/swrcb/knopp.pdf

Koehler, R.D., K.I. Kelson, and G. Matthews. 2001. Sediment storage and transport in the South Fork Noyo River watershed, Jackson Demonstration State Forest. Unpublished Final Report submitted to the California Department of Forestry and Fire Protection, Sacramento, CA. William Lettis and Associates, Inc. Walnut Creek, CA. 29 p. plus figures and appendices.

Lewis, J. 1998. Evaluating the impacts of logging activities on erosion and suspended sediment transport In the Caspar Creek watersheds. Pp. 55-69 In: Robert R. Ziemer (technical coordinator), Proceedings of the Conference on Coastal Watersheds: The Caspar Creek Story, 1998 May 6; Ukiah, California. General Technical Report PSW GTR-168. Albany, California: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. http://www.fs.fed.us/psw/publications/documents/gtr-168/07lewis.pdf

Lewis, J. 2000. Turbidity Exceedance Frequencies. Email Correspondence Forwarded By Robert Ziemer To Peter Cafferata, CDF, dated March 31, 2000. Arcata: USFS-PSW, Redwood Sciences Laboratory.

Lewis, J. and E.T. Keppeler, 2007. Trends in streamflow and suspended sediment after logging, North Fork Caspar Creek. In: Proceedings of the Redwood Region Science Symposium, 15-17 March, 2004, Rohnert Park, California, p. 95-105. General Technical Report PSW-GTR-194, Pacific Southwest Forest Experiment Station, USDA Forest Service, Albany, CA.

Lewis, J., S.R. Mori, E.T. Keppeler, and R.R. Ziemer. 2001. Impacts of logging on storm peak flows, flow volumes and suspended sediment loads in Caspar Creek, California. *In:* Mark S. Wigmosta and Steven J. Burges (eds.) Land Use and Watersheds: Human Influence on Hydrology and Geomorphology in Urban and Forest Areas. Water Science and Application Volume 2, American Geophysical Union, Washington, D.C. p. 85-125.

Ligon, F., A. Rich, G. Rynearson, D. Thornburgh, and W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resources Agency of California and the National Marine Fisheries Service; Sacramento, CA.

Lisle, Thomas E. 1997. Understanding the role of sediment waves and channel conditions over time and space. Pages 57-67, *in:* Sari Sommarstrom (ed.), What is watershed stability? Proceedings, Sixth Biennial Watershed Management Conference. 23-25 October 1996. Lake Tahoe, California/Nevada. University of California, Water Resources Center Report No. 92, Davis, California.

Lisle, Thomas E.; Napolitano, Michael. 1998. Effects of recent logging on the main channel of North Fork Caspar Creek. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 81-85.

Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to wildlife habitats of California. Sacramento: California Department of Forestry and Fire Protection.

Manson, M.W. and J.A. Bawcom. 2001. Geologic and Geomorphic Features Related to Landsliding, Noyo River Watershed, Mendocino County, California, California Division of Mines and Geology Watershed Mapping Series, Map Set.

Manson, M.W., J.A. Bawcom, and T.K. Parker. 2001. Geologic and Geomorphic Features Related to Landsliding, Noyo River Watershed, Mendocino County, California. California Division of Mines and Geology (California Geological Survey), Watershed Mapping Series, Map Sheet 1

Manson, M.W., J.A. Bawcom, and T.K. Parker. 2001. Geologic and geomorphic features related to landsliding, Noyo River Watershed, Mendocino County, California. California Division of Mines and Geology (California Geological Survey), Watershed Mapping Series, Map Sheet 2.

Nakamoto, R. 1998. Effects of timber harvest on aquatic vertebrates and habitat in the North Fork Caspar Creek. Pp. 87-95 In: R.R. Ziemer, (technical coordinator) Proceedings of the conference on Coastal Watersheds: The Caspar Creek Story, 1998 May 6; Ukiah, California. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture;

Reeves, G.H., F.H. Everest and J.R. Sedell. 1993 . Diversity of Juvenile Anadromous Salmonid Assemblages in Coastal Oregon Basins with Different Levels of Timber Harvest. Transactions of the American Fisheries Society. Vol. 122, No. 3. May 1993.

Robison, E.G., K. Mills, J. Paul, L. Dent, and A. Skaugset. 1999. Storm impacts and landslides of 1996: Final Report. Oregon Department of Forestry. Forest Practices Technical Report No. 4. Salem, OR. 145 p.

Sidle, R.C., A.J. Pearce, and C.L. O'Loughlin. 1985. Hillslope stability and land use. Water Resources Monograph No. 11. American Geophysical Union. Washington, D.C. 140 p.

Sidle, R.C. and W. Wu. 2001. Evaluation of the temporal and spatial impacts of timber harvesting on landslide occurrence. *In:* Mark S. Wigmosta and Steven J. Burges (eds.) Land Use and Watersheds: Human Influence on Hydrology and Geomorphology in Urban and Forest Areas. Water Science and Application Volume 2, American Geophysical Union, Washington, D.C. p.179-193.

Short W.R. and T.E. Spittler. 2002a. Preliminary map of geologic and geomorphic features related to landsliding, Jackson Demonstration State Forest, Mendocino County, California. California Geological Survey, Dept. of Conservation, Sacramento, California.

Short W.R. and T.E. Spittler. 2002b. Preliminary map of relative landslide potential with geologic and geomorphic features, Jackson Demonstration State Forest, Mendocino County, California. California Geological Survey, Dept. of Conservation, Sacramento,

Spittler, T.E. 1995. Geologic input for the hillslope component for the pilot monitoring program. Report submitted to the California Department of Forestry under Interagency Agreement No. 8CA38400. California Division of Mines and Geology, Santa Rosa, CA. 18 p.

Spittler, T and P. Cafferata. 2004. Memorandum sent to William Snyder, California Department of Forestry and Fire Protection, Sacramento, California, dated January 6, 2004, titled "Clearcut Adjacency Rule—Petition to the California State Board of Forestry and Fire Protection dated September 10, 2003 (Microclimate Rule Petition) Erosion and Sediment Yield. 17 p.

Swanson, F.J. and C.T. Dryness. 1975. Impact of clearcutting and road construction on soil erosion by landslides in the western Cascade Range, Oregon. Geology 3(7): 393-396.

Valentine, B.E. 1996. Stream Temperatures on Jackson Demonstration State Forest, Mendocino County, California during Summer of 1995. Draft Report. Santa Rosa: CDF, Coast-Cascade Region.

Warbington, R., B. Schwind, C. Curlis and S. Daniel. 1998. Creating a Consistent and Standardized Vegetation Database for Northwest Forest Plan Monitoring in California. USDA Forest Service. Pacific Southwest Region Remote Sensing Lab. Sacramento, CA.

Ziemer, R.R. 1981. Some effects of silvicultural options on the stability of slopes. In: National Council for Air and Stream Improvement. Stream Improvement Technical Bulletin 344. p. 6-17.

Ziemer, Robert R., technical coordinator. 1998. Proceedings of the conference on coastal watersheds: the Caspar Creek story. 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 149 p.

Ziemer, Robert R.; Ryan, Douglas F. 2000. Current status of experimental paired-watershed research in the USDA Forest Service. EOS, Transactions, American Geophysical Union 81(48): F380. Found at: http://www.fs.fed.us/psw/publications/ziemer/Zie

IV.2 Responses to Individual DEIR E-Mail Comments E-27 to E-40

This section presents responses to individual public comments (i.e., not form letter or form letter based) received via e-mail. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

E-27

February 27, 2006

Board of of Forestry
Post Office Box 944246
Sacramento, CA 94244-2460

Re. Comments on
Jackson Demonstration State Forest
Draft Management Plan and DEIR

Thank you for the opportunity to comment on the proposed Forest Management Plan (FMP) and the draft Environmental Impact Report (DEIR) for Jackson Demonstration State Forest.

I am Director of the Bay Area Coalition for Headwaters, and comment on behalf of that organization.

Bay Area Coalition for Headwaters (BACH) calls for rejection of the Draft FMP. We are strongly opposed to the Plan's calls for clearcutting, large-scale commercial logging, cutting of the oldest (and therefore most valuable for habitat) second growth stands, and lack of a clear plan to create opportunities for recreation, education and research, which should be the mission of a demonstration forest. 1

The FMP also fails to provide adequate plans for restoration of old growth habitat. The best alternative regarding restoration, Alternative E, does promote restoration of old growth, but fails to commit funds for repair or decommissioning of hundreds of miles of roads which are causing damaging sedimentation into salmon-bearing streams. Restoration of salmon habitat is also not provided for adequately. 2 3 4

MARBLED MURRELET RECOVERY

Working on public education projects regarding forest issues of Northern California for many years, we have become acutely aware of the precipitous state of many of the forest-dependant species. One of the species of particular concern is the marbled murrelet. Given that so much of the murrelet's habitat is on privately held forestland, and given the poor management of that forestland, there is precious little acreage that represents high quality murrelet habitat and potential habitat for its recovery that the public has avenues to affect. Given the status of Jackson State Forest as the only large public forest in the redwood region north of San Francisco and south of Humboldt County, there are significant public trust issues . 5

While the the Draft FMP seems to recognize the potential for murrelet habitat, the attention it gives to existing habitat and future habitat after restoration, or habitat that would be lost if proposed logging takes place is grossly inadequate, given the disturbing decline in murrelet populations documented by wildlife agencies.

The Five Year Murrelet Status review (McShane et al 2004) assessed status and trends of marbled murrelet populations with the six recovery zones identified by the U. S. Fish and Wildfie Service. The independent scientific analysis completed in March of 2004 shows populations are still declining at a rapid rate.

The 2004 U.S. Fish and Wildlife Service 5-Year Status Review Scientific Findings include: 6

· Continued declines in murrelet population in Washington, Oregon, and California due to loss of nesting habitat from logging and urbanization are predicted.

6

· Models indicate that murrelet populations are declining more rapidly than previously understood, and may disappear from the Pacific Northwest within 100 years if more habitat is not protected.

· In California, predicted probability of extinction is 100% within the next 40 years.

· Murrelets will not recover until there is significant improvement in the amount and distribution of suitable nesting habitat.

· Protection of nesting habitat on Federal land could be severely compromised if the Northwest Forest Plan is altered.

7

Given these findings, the FMP should incorporate the recommendations of the federal Recovery Plan for marbled murrelets, as this document represents the best available science regarding conservation of this species. As this is a species covered by state and federal statutes (CESA and ESA), there is a mandate for CDF to follow, and this mandate requires conservation of the species. Along with careful protection for known murrelets, suitable nesting habitat should be protected where it exists and large tracts should be developed. Murrelet experts should evaluate the old second growth near the South Fork of Hare Creek for suitability along with other areas they determine to have potential. Doing this is well within Jackson's demonstration mandate. Jackson encompasses approximately 30% of the Critical Habitat designated in California for marbled murrelets. CDF has a duty to conserve listed species under the California ESA. Failing to implement feasible conservation activities such as implementing the federal Recovery Plan is a violation of CESA that has not been identified by the DEIR.

8

9

According to the federal Recovery Plan:

"The very small nesting and at-sea population of marbled murrelets along the coast of Mendocino, Sonoma and Marin Counties is important to future reconnection of marbled murrelet populations in northern and central California, if they can survive over the short term. Almost all of the older forest has been removed from this area, although small pockets of old-growth forest occur in State parks and on private landsŠ. Much of the remaining marbled murrelet nesting habitat in this Zone [Zone 5, Mendocino County] is located on private lands.

"The maintenance of this population will require considerable cooperation between State, Federal and private management representatives. Recovery efforts in this Conservation Zone could enhance the probability of survival and recovery in adjacent Conservation Zones by minimizing the current gap in distribution. The population is so small that immediate recovery efforts may not be successful at maintaining this population over time and longer term recovery efforts (e.g. developing new suitable habitat) may be most important. However, if this small population can be maintained over the next 50 years, it will greatly speed recovery in this Conservation Zone. Whether or not marbled murrelets can recolonize regenerated old-growth forests over such a large geographic area is not known." (page 129)

10

Because the region's forestland is overwhelmingly held as private property, Jackson Demonstration State Forest is the only opportunity available in the region where it would be possible to develop marbled murrelet habitat on a large scale. In the interest of species recovery, this should be done. Some of the very few known murrelets in the region are nesting adjacent to JDSF on parkland in Russian Gulch. They must be protected by protecting all the adjacent forest stands located in Jackson. A very large area around the nesting birds must be left intact to minimize any threat to their nesting success. Finally, research on how best to accomplish this is needed and doing so is squarely

10 within Jackson's "demonstration" mission. The FMP as proposed fails to make a substantial
11 contribution to recovery of marbled murrelets and this is a significant adverse effect of the plan that the DEIR has not identified and for which no mitigation is currently proposed by the Department.

Action taken in Jackson State Forest will impact significantly the existence of marbled murrelets in the region and likely the population's survival and viability throughout its range. Murrelets' status as endangered under the California ESA makes it incumbent on Jackson to implement the federal recovery plan strategy. The FMP as proposed also violates CESA.

Under CESA, state agencies have a duty to help recover endangered species as per Fish and Game Code sections 2053, 2055, and 2061:

2053. The Legislature further finds and declares that it is the policy of the state that state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent
12 jeopardy.

2055. The Legislature further finds and declares that it is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species and shall utilize their authority in furtherance of the purposes of this chapter.

2061. "Conserve," "conserving," and "conservation" mean to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary. These methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition, restoration and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

In addition, there is evidence in or near JSF noted by reports (Cota and Papke 1994, Ralph el al 1994, Georgia-Pacific SYP 1997.

AESTHETICS

Proposed Alternative C1 would substantially degrade the existing visual character and quality.

13 The timber industry has eliminated most old second-growth redwood from their holdings. The DEIR claims the Plan intends to develop late succession forest stands as soon as possible but does not explain how logging the oldest second-growth stands would accomplish that. Jackson is a public forest that must give as much consideration to public trust values and aesthetics as it does to logging. To protect the beauty of the forest and its recreation potential, none of the old 80-110 year old second growth stands should be logged.

Other issues:

14 *Clearcutting should be eliminated.
15 *Herbicide use should be avoided
16 *Stream protection should be increased.

Sincerely,

Karen Pickett
Director, Bay Area Coalition for Headwaters
--

Bay Area Coalition for Headwaters (BACH)

2530 San Pablo Ave.
Berkeley, CA 94702
phone: 510 548 3113
email: bach@headwaterspreserve.org

http://www.HeadwatersPreserve.org

Email Letter E-27

Response to Comment 1
The commenter calls for rejection of the Draft Forest Management Plan. The attributes of a forest plan that incorporates the concerns of the commenter are assessed as alternatives in the Draft Environmental Impact Report.

Response to Comment 2
The programmatic DEIR evaluates a range of Alternatives, some of which would markedly increase the acreage of forest placed on a successional path toward old-growth conditions. Site specific prescriptions that would restore old-growth habitat are well beyond the scope of a programmatic DEIR but could be addressed at the scale of individual project planning, review and implementation.

The Administrative Draft Final Forest Management Plan (ADFFMP) would designate one-third of the forest for the development of late seral and older forest characteristics.

Response to Comment 3
The commenter statement that "hundreds of miles of road are causing damaging sedimentation into salmon-bearing streams" is a significant overstatement of fact. Components of the Road Management Plan addressing sedimentation issues are detailed on DEIR Pages VII.6.1-92-94. The Road Management Plan would also apply to Alternative E. Alternative E proposes expanded watercourse protections for all watercourse classes. Decreased levels of harvesting activity associated with the Alternative will also contribute to a reduction in the potential for sediment generation. Similarly, hillslope sediment sources are addressed in the Hillslope Management Guidelines of the DFMP.

Funds generated from the limited amount of timber harvest expected under Alternative E and other sources could be applied to remedy problem areas identified under Alternative E and implementation of the Road Management Plan.

Response to Comment 4
The comment does not specify a specific environmental concern that can be addressed. Restoration of salmonid habitat is provided for under Alternatives C1 through F, as well as alternative G, which was examined in the RDEIR and incorporated into the ADFFMP.

Response to Comment 5
The DEIR includes a Contribution to Recovery of Marbled Murrelet Habitat management measure (DEIR Page VII.6.6-118-119) and identifies areas specifically for the recruitment of Marbled Murrelet habitat DEIR Page VII.6.6-78-82. Final identification of murrelet management areas will include collaboration with and participation of State and federal wildlife agencies, adjacent landowners (such as State Parks) and other interested parties as detailed in the management measure. The Contribution to Recovery of Marbled Murrelet Habitat management measure would apply to DEIR Alternatives B, C1, C2, D and E. In addition, the ADFFMP would designate the 1,549-acre Russian Gulch/Lower Big River area for the development of late seral forest as a means to provide potential Murrelet habitat. Additional potential habitat may develop in the Class I and Class II Watercourse and lake Protection Zones, which are designated in the DFMP and ADFFMP for the development of late seral forest. Further, the 6,800-acre Older Forest Structure Zone provided in the ADFFMP also may develop suitable Murrelet habitat over time.

Response to Comment 6
CAL FIRE and the Board are familiar with the 5 year Status Review Findings of the US Fish and Wildlife Service and cite that document extensively in the DEIR Marbled Murrelet species account. The recommendations of the federal recovery plan for Marbled Murrelets in addition to consultation with federal and State wildlife agencies and other sources of Marbled Murrelet expertise guided the development of the Contribution to Recovery of Marbled Murrelet Habitat management measure. Site specific evaluation of the areas identified in collaboration with State and federal wildlife agencies and others is part of the management measure (DEIR Pages VII.6.6-78-82 and DEIR Pages VII6.6-118-119). See also the response to comment 5.

Response to Comment 7
The DEIR and DFMP provide protection for known Marbled Murrelet nest sites. Similarly, suitable nesting but currently unoccupied (as determined by survey) habitat are also provided protections when that habitat exhibits certain characteristics of importance to Marbled Murrelets as described in the DEIR. Evaluation and development of habitat in the vicinity of Hare Creek as suggested by the commenter as well as in other areas is part of the Contribution to Recovery of Marbled Murrelet Habitat management measure described in the DEIR Pages VII.6.6-78-82 and DEIR Pages VII.6.6-118-119. See also the response to comment 5.

Response to Comment 8
CDF and the BOF are aware of and will meet their responsibilities under the California Endangered Species Act (CESA). Failure to implement the recommendation of the federal Marbled Murrelet Recovery Plan is not a violation of CESA. DEIR pages VII.6.6-89 to -90 summarize recommendations identified in the recovery plan pertinent to JDSF.

Response to Comment 9
The biogeographic importance of JDSF relative to Marbled Murrelet habitat extent and population sustainability is described in detail in the Affected Environment and Environmental Setting section of the DEIR (section 6.6 Page VII.6.6-1-33 and section 6.3 Page VII.6.3-1-5) as well as in the Marbled Murrelet species account DEIR Page VII.6.6-52-90. Contrary to the comment, JDSF does not represent the “only” opportunity where Marbled Murrelet habitat will develop. Existing and recently acquired State Park lands also represent viable opportunities for habitat development assuming that habitat can be created or develop in a time frame that contributes to murrelet habitat needs. The DEIR proposes a Contribution to Recovery of Marbled Murrelet Habitat management measure.

Response to Comment 10
The Marbled Murrelet sightings and breeding behavior exhibited by those birds in the vicinity of Russian Gulch is noted in the DEIR Marbled Murrelet species account. The DEIR also recognizes the relevance of murrelets in Russian Gulch and has developed the Contribution to Recovery of Marbled Murrelet Habitat management measure to include continued collaboration with State and federal wildlife agencies and other sources of Marbled Murrelet expertise. In

addition, the ADFFMP would designate the 1,549-acre Russian Gulch/Lower Big River area for the development of late seral forest as a means to provide potential Murrelet habitat.

JDSF has established management buffers adjacent to other ownerships. Buffer widths adjacent to State Park lands are a minimum of 200 feet as noted in the DEIR Page VII.6.3-42 and Forest Practice Rule 913.1(a)(7) and 913.4(a).

Response to Comment 11
The comment is incorrect. The DEIR has proposed a Contribution to Recovery of Marbled Murrelet habitat management measure that would apply to Alternatives B, C1, C2, D and E. The ADFFMP designates an additional 1,549 acres in the area of upper Russian Gulch and lower Big River for late seral development prescriptions specifically intended to recruit habitat for the Marbled Murrelet (see RDEIR Map Figure 1).

Response to Comment 12
CDF and the BOF recognize their responsibilities under CESA regarding murrelet conservation as "conservation" is defined in Fish and Game Code section 2061. The Regulatory Framework for the Protection of Wildlife Measures is described on DEIR Pages VII.6.6-110-113. The Board does not believe that the management plan violates CESA. The DEIR and ADFFMP found that the Murrelet would not be significantly adversely affected by either the DFMP or the ADFFMP.

Response to Comment 13
The ADFFMP and DEIR/RDEIR provide significant consideration of public values and aesthetics. It must be noted that statutes and Board policy recognize recreation as a secondary, but compatible use of the forest (Board Policy 0351.5). The ADFFMP designates one-third of the forest for the development of late seral and older forest conditions (see RDEIR Map Figure 1), and also includes provisions for maintenance or creation of managed stands with a significant component of large trees, including a substantial element of trees greater than 80 years of age.

The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). Many of the potential impacts of logging are temporary and do not result significant impacts to associated resource values. Mitigation measures have been developed to reduce the potential aesthetic impacts of timber operations to less than significant. This includes implementation of restrictions on the use of even-aged silvicultural practices and timber operations adjacent to special concern areas. See also General Response 9 and 14.

A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII.9 of the DEIR. Additional analysis of aesthetics and recreation can be found in DEIR section VII.14. Further analysis of potential impacts to aesthetic and recreation resources relating to Alternative G and the ADFFMP can be found in RDEIR section III.2 and III.14.

The DEIR includes a map of forested habitat available on JDSF and private lands within the assessment area (see DEIR Map Figure J). There is no inventory of young redwood forest by age class that exists for either the assessment area or the region. Many stands of young forest have been selectively harvested, so a considerable area of young stands that are dominated by large young trees exist on private lands within the assessment area.

Response to Comment 14
See General Response 10.

Response to Comment 15
See General Response 7.

Response to Comment 16
See General Response 11.

E-28

315 P Street • Eureka, CA • 95501
707-445-5100 • Fax:707-445-5151
cats@alternatives2toxics.org

February 14, 2006

Mr. George D. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA. 94244-2460

board.public.comments@fire.ca.gov

Re: Jackson Demonstration State Forest DEIR

Dear Mr. Gentry,

The activities that are planned for in the Jackson Demonstration State Forest (JDSF) Draft Environmental Impact Report (DEIR) are of particular concern to our members.

CATs is a public interest organization that for 24 years has been concerned about activities undertaken by the California Board of Forestry and other public lands management agencies that directly involve the use of pesticides, including herbicides, or create conditions that can lead to the use of pesticides. Members of CATs depend for their livelihood, health, culture, education and well being on the health and productivity of forests in California. Members of CATs live near, depend for their culture and/or livelihood, or visit for study and recreation the JDSF. Water used by many of the members of CATs is discharged from this area; the quality of the air they breathe is affected by activities conducted in the JDSF. Members observe, recreate, gather or otherwise enjoy the resources of the JDSF, or simply derive satisfaction from knowing that it is there, alive with wildlife, still beautiful and available to visit when they choose. JDSF is public land that, as such and as a part of the State of California, holds immeasurable value for CATs members.

CATs commends the California Board of Forestry and Fire Protection (hereafter referred to as "the CBF") for its recognition of and proposed efforts to manage invasive exotic species while protecting native species biodiversity. However, we are concerned about several aspects of the JDSF DEIR especially that vegetation treatments may include chemical (herbicide) methods for both forest regeneration and invasive species management. We do not believe the DEIR can support these actions and more analysis and avoidance of significant impacts are required by CEQA.

CATs supports Alternative D (pg. VI-11) and hopes the CBF has the foresight to adopt such a progressive alternative. We are strongly supportive of the fact that "no herbicides would be used" in this alternative. The conversion of the forest to an all-aged forest will be good for native species biodiversity. Protection of riparian zones for all watercourse classes will be key for protecting the limited historic amphibian and salmonid habitats.

Board of Directors: Jene McCovey, President • Pam Richard, Vice President • Ramona Sokolow, Secretary
Judy Wartella, Treasurer • Patty Clary, Executive Director • Perry Gray-Reneberg • Boyd Smith • Fran Greenleaf

2 Emphasizing recreation, with research, demonstration, and conservation is a sustainable way to manage the JDSF. It is important to the health of our ecosystems that we begin to shift away for intensely managed forests. For these reasons, CATs is also supportive of Alternatives E and F.

3 CATs is opposed to Alternatives C1 and C2. Intensive forestry practices are causing irreversible damage to our native ecosystems. Intensive forestry leads to an unnecessary and dangerous reliance on toxic chemicals for vegetation management. CATs is against intensive forestry practices, the damage they cause and the toxic chemicals that are included in their actions. We do not agree with the need to use herbicides for invasive species management nor for forest regeneration efforts as proposed for in Alternatives C1 and C2.

Below we will discuss inadequacies of the EIR and provide information not provided in the EIR in the following order:

Invasive species and IPM
5-12 *Real IPM
13-19 *prevention and restoration focus, not just treatment of symptoms
20-31 *Prevention (logging, grazing, off-road vehicles, etc)

Alternatives weed treatments
33-37 *non-toxic alternative options including volunteers work forces
38-64 *list of alternative treatment in literature by pest species listed

Herbicide toxicity problems
65-66 *can't use chemicals not listed in EIR w/out new CEQA analyses
67 *just because it's registered doesn't mean its safe (see GWSS appeal decision)
68-71 *risk assessments don't cover inerts, adjuvants, degradates, or tank mixes
73-134 *give toxicity info for each herbicide listed

35 Potential impacts of herbicides (that the Board has failed to mitigate for)
136 *water quality
137 *listed salmonid and amphibians
138 *sensitive vegetation
145-158 *sensitive parts of population (human health)
139-144 *workers
159-165 *herbicides as a disturbance factor
166-167 *cumulative impacts

IPM and invasive species

4 If the CBF expects to be taken seriously in it efforts to remove invasive species from JDSF, then it must employ a long term chemical free IPM strategy. The only viable alternative for control of invasive plant species is Integrated Pest Management (IPM). The following is from a report called "Invasive plants and their biology, impact and control options" (White and Haber 2003): IPM involves combining elements of the various treatment methods with preventative measures, increased knowledge of the target species biology and ecology, and restoration of the biotic and abiotic components of a habitat before or concomitant with the removal of the invasive exotic (Achuff et al., 1990, Thomas 1986, Thomas 1991). Invasion of a community by an alien plant usually occurs because that community has been disturbed, either in terms of its vegetation structure, composition, or its topography (Thomas 1986). For an exotic to be successfully removed from a community, the

disturbance factor that allowed the alien to invade in the first place must be removed and the habitat restored to as near to its original condition as possible (Thomas 1986). This habitat restoration can involve restoring the native dominants, filling vacant niches with natives, restoring natural densities, restoring age and class structures, and correcting any disturbed physical conditions (Thomas 1986). If these steps are not taken, the removal of an exotic species may be followed by either reinvasion or establishment of another exotic (Thomas 1986).

Lack of and Defining of IPM

5 At this point the CBF has failed to include an integrated pest management (IPM) strategy for dealing with invasive plants in the JDSF in the EIR. This is a major failure of the EIR and any plan that does not include IPM as part of weed control efforts is likely to fail. As we will show below, the scientific literature is dominated by the importance of using IPM for long term successful control of invasive exotic species. Below CATs will discuss what IPM is and the different components of it that should have been included in the EIR.

6 The state of California defines IPM as: "...a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of techniques such as monitoring for pest presence and establishing treatment threshold levels, using non-chemical practices to make the habitat less conductive to pest development, improving sanitation, and employing mechanical and physical controls. Pesticides that pose the least possible hazard and are effective in a manner that minimizes risks to people, property, and the environment, are used only after careful monitoring indicates they are need according to pre-established guidelines and treatment thresholds" (www.cdpr.ca.gov).

7 CATs is concerned that the CBF has failed to discuss and disclose established weed treatment threshold levels for this project. The CBF needs to establish that current treatments are failing to control weed infestations at pre-established threshold levels before even considering the use of toxic chemicals. CATs also expects the CBF to quantify any weed increases above threshold levels. How much are populations increasing? How big were infestations when treatments began and how big are they now? Where are the monitoring results to determine whether past treatments have been effective or if new treatments are needed?

8 Published scientific literature provides overwhelming evidence that one-time herbicide applications for the purpose of weed eradication will only deliver short-term results. Over time, the seed bank of existing populations will allow weed populations to re-establish in project areas, often in greater density, abundance, and extent (Zouhar 2003, CDFA Encycloweedia website, Huckins and Soll 2004, Raj 2002, Hoshovsky 1986). Herbicide use for noxious weed management has been shown to be neither the lowest impact nor the most environmentally or economically effective control treatment method (CDFA Encycloweedia website, Kedzie-Web et al. 1996, Huckins and Stoll 2004, Hoshovsky 1986).

The key to any IPM strategy is to know the ecology, biology, and life cycle of the invasive species. "Integrated pest management is a proven approach to managing pest problems, including invasive nonnative plants. Integrated pest management is based on a sound understanding of the ecology and biology of a pest and its environment" (Andrascik et al. 1996). The CBF must include within CEQA documentation a demonstrated
9 knowledge of the biology and life cycle of the targeted invasive species as the first part of forming an IPM strategy to deal with them. How the species reproduces, spreads, and colonizes are all essential information. Some species are know for being prolific seed producers and maintaining extensive seed banks, while other
10 reproduce vegetatively and can clone themselves. What about the targeted invasives in JDSF?

11 Effective weed control has shown to be dependent on the integrating combinations of treatment techniques (Archer 2001). Weed management used in any other fashion is not likely to successfully reduce, suppress, and/or eradicate weed populations.

3

12 Successful weed management is a direct result of proper timing (DiTomaso 2001, Kedzie-Webb et al. 1996, CDFA website, Pitcher 1986, WA Noxious Weed Control Board). Timing for treatments must be included in the analysis of how the project will achieve the overall goal of returning the area to the desired status of a "biologically and structurally diverse forest", but it is not. Significant effects must be analyzed, and improper timing of weed treatment is recognized as a contributor to a significant effect, the spread and establishment, and eventual dominance of invasive plants.

EIR needs a prevention and restoration focus, not just treatment of symptoms

13 CATs is concerned that CBF has failed to discuss, analyze, or evaluate weed vectors as part of the EIR. Mitigation measures to prevent the spread of current invasive plant infestations and prevent new infestations must be included in the EIR to avoid significant environmental impacts. The CBF needs to determine the major sources of weed spread (waterways, vehicles, area visitors, livestock grazing, wind and/or wildlife) in JDSF and include a plan to prevent the cause of weed spread, not just treat the symptoms. Including preventative measures as part of any treatment strategy is critical for long-term control of invasive species and noxious weeds. The CBF's weed control efforts in JDSF are doomed to be unsuccessful without first focusing on the cause of the weed infestations and utilizing a holistic native species ecosystem health approach to combating exotic species.

14 Focusing non-chemical control efforts along the river corridors, at trail heads and recreation locations, and along side roads would be an obvious starting point for reducing weed vectors.

15 The standard Region 5 Forest Service weed prevention methods of washing heavy equipment and vehicles, weed free straw, and education of area users are a good start (USDA Forest Service 2000). The CBF must include those and additional methods as part of the proposed actions for this project to be successful. Immediate action, digging or pulling new infestations, post and pre project monitoring, and flagging and avoiding large infestations are all recommended (Clark 2003). These are basic prevention methods commonly referred to by weed experts and utilized with success by many public land managers.

The CBF needs to develop a plan to deal with prevention, and eliminate disturbance factors that led to past, and will lead to future, invasive species distribution and establishment. Re-vegetation with desirable and competitive natives is essential, but timing and reduction of the seed bank first is essential to rehabilitation
16 success. What specific activities on CBF public lands have facilitated invasive species infestations? What can
17 the CBF do to limit future invasions?

18 The EIR fails to even outline efforts to keep vehicles, machinery, or workers (shoe treads, clothing) clean of exotic seeds, the very least that can be expected. Unfortunately, while cleaning efforts will reduce the likelihood of seed dispersal, this approach is not fail-safe and in most cases avoidance is not feasible. It is possible however to set strict guidelines that weed infestations exceeding specific magnitudes of density or area will be avoided. Recent land management policy (USDA Forest Service) has suggested buffers established around weed populations are necessary to ensure their isolation (Clark 2003). Such mitigation will reduce the extent of future herbicide treatments deemed necessary for weed suppression. For this reason, among others described below, a more thorough analysis is required so that mitigations can be formed.

CATs will briefly discuss four activities, grazing, logging, off-road vehicles, and re-vegetation, that the CBF should be looking at and analyzing in the EIR and evaluate how they can be dealt with to reduce weed spread in
19 JDSF. This is by no means an exclusive list of weed vectors that should be part of the EIR invasive species analyses.

Grazing

20 Grazing has been suggested as being a significant factor contributing to changes in forest structure leading to both high fuel levels and invasive plant species (Belsky and Blumenthal 1997). Livestock typically prefer to graze perennial native grasses and forbs thus reducing their biomass, density, diversity, and reproductive capabilities. This culmination of adversity eliminates native competition from exotic annuals. Additionally, the soil disturbance resulting from livestock trampling and the bare ground produced by grazing of grasses not adapted to such pressure provides ample opportunity for noxious and invasive weed seed germination. Livestock are also responsible for weed seed dispersal by carrying seeds stuck in their fur and hooves and by ingesting seed and later excreting the seed in new locations, often scarified and prepared to germinate. Finally, through soil compaction from trampling, livestock are responsible for reducing infiltration rates in soil thus reducing soil moisture levels. Exotic annuals have been observed out-competing natives for soil moisture (Weed Research Information Center). This is critical when soil moisture may be limited as a result of soil compaction or already limited due to interspecific competition. The exclusion of grazers from sensitive areas where weeds exist already or may spread to in order to facilitate the restructuring of soil, provide a competitive advantage to native perennials, and eliminate an additional vector of seed dispersal, is necessary to achieve the desired goals of the EIR. The exclusion of grazers from existing infestations is most crucial and should be the bare minimum expected.

21 Conversely, grazing could be considered as a tool for weed suppression and vegetation management. Such a technique is usually most successful when used in combination with other weed control techniques and employed over several seasons with cautious and restrictive rotational grazing practices (CDFA Encycloweedia website, Pitcher 1986, WA Noxious Weed Control Board). However, as previously mentioned, the use of grazers in weed management is a delicate tool that must be applied with great responsibility and commitment, not without careful planning, full analysis and monitored implementation. There is no hint of this level of awareness in the EIR.

Logging

Logging, whether part of fuel reduction thinning efforts, or timber harvesting, changes canopy levels, causes disturbances to soil and vegetation, and opens lands to possible invasive species infestations. For example, the scotch and french brooms both grow best in dry, disturbed soils with plenty of sunlight, such as those created with new partial cutting timber harvest techniques (Raj 2002). The literature also says that brooms rapidly invade following logging and land clearing and coversly don't do well in heavily forested, heavy shade areas (CDFA Encycloweedia website, Huckins and Soll 2004, Hoshovsky 1986). Logging equipment, vehicles, and workers also facilitate the movement of exotic weed seeds. The CBF needs to analyze the impacts of logging
22 activities will have on the spread of invasive species and noxious weeds in the JDSF in the EIR.

Timber harvesting and fuel reduction efforts inherently increase light availability and disturb the soil surface. These actions will create optimal conditions for the invasion of noxious and invasive plant species as well as undesired natives. In such an instance, undesired vegetation, or early seral species, are typically represented by annual grasses and weeds, and woody shrubs (Merriam et al. 2005, Zouhar 2003, Raj 2002, CDFA Encycloweedia website, Huckins and Soll 2004, Hoshovsky 1986). The successful establishment of such a stratum could result in high fuel levels in as little as three to five years, depending on vegetation types, and may require maintenance. CATs fears such an outcome will prompt the CBF to adopt a chemical dependent
23 maintenance strategy. CATs is opposed to and will not support any forest management actions that will result in the potential for future herbicide use.

5

24 Thinning can have both positive and negative effects depending on the forest type and its existing structure and age (Graham et al. 1999). Pre-fire fuel reduction projects have been shown to facilitate invasive species infestations both in fuel brakes and in adjacent wildlands (Merriam et al. 2005).

25 In addition to the proliferation of vegetation, logging areas will experience reduced surface fuel moisture and increased flammability (Countryman 1955 as cited in Weatherspoon 1996). The greater the stand opening, the more pronounced the change in microclimate is likely to be. Increased ladder fuels and decreased surface fuel moisture can be a catastrophic combination. These effects must be analyzed within the EIR.

26 Abundant surface and ladder fuels, and dense stands pose a high risk for any prescribed burning efforts. However, studies have shown that following the mechanical treatment, underburning every 5-8 years is required to stabilize the system in order to reintroduce any type of natural fire regime (Stephens 1998).

27 Consistent prescribed burning has shown to be the most effective treatment for reducing a fire's rate of spread, fireline intensity, flame length, and heat per unit of area (van Wagtendonk 1996).

28 The CBF should include consistent prescribed burning as an element of their typical management practices. The EIR should include evaluation of a maintenance strategy, founded on prescribed burning, into the proposed JDSF action plan. The restoration of a site to pre-historically natural conditions is unlikely to be achieved with the omission of a reoccurring fire regime. We fear that negligence of future maintenance could lead to circumstances where the CBF incorrectly feels that chemical treatment of vegetation would be the only viable solution. We are opposed to any land management actions that will likely lead to future vegetation management strategies dependent upon herbicides.

Off-road vehicles

29 Vehicles are well accepted as a major contributor to movement of invasive species. Seeds and reproductive parts can be picked up by tires, attach themselves to vehicles, and be relocated many miles away. Off-road vehicles are even more of a problem as a invasive weed vector. Off-road vehicles may be traveling over public lands, thru or near weed infestations and frequently provide transportation necessary for weed migration and movement into previously undisturbed uninfested natural areas. Off-road vehicles can disturb natural plant communities, creating open spaces where exotic weeds can proliferate. The following is an excerpt from the Nature Trails and Water Coalition (http://www.naturaltrails.org/issues/): Weeds are carried across the landscape by the wind, water, wildlife, people and vehicles. While most vehicles disperse weeds along well-established transportation routes, dirt bikes, all-terrain vehicles (ATVs) and other off-road vehicles traveling cross country can spread invasive weeds over a wide area in only a few hours. A study in Montana demonstrated that a single ATV can disperse more than 2,000 invasive knapweed seeds over a 10-mile radius. The research also found that these seeds are more likely to germinate and crowd out native plants in areas where soil has been compacted by off-road vehicles. (Montana State University Extension Service, 1992). Research in Wisconsin in 2002 found that ATVs commonly transport a variety of weed seeds. This study concludes that ATVs could spread nearly 200 million seeds, many of them noxious weeds, statewide over the next 20 years. (Tom Rooney, University of Wisconsin). The CBF needs to include steps to prevent the spread of weeds by both vehicles and especially off-road vehicles as part of its weed management strategy. The EIR must analyze and mitigate for the the impacts that vehicles and off-road vehicles are having on the spread of invasive weeds in the JDSF.

Re-vegetation

30 CATs promotes the re-vegetation of project areas with native forbs and grasses. Such actions will increase wildlife habitat values, promote soil stability, and provide competition against noxious weeds and undesirable

6

woody species. Native forbs and grasses are often absent from the understory of intensively managed forests. The establishment of this vegetative component is critical in restoring our public lands to their historical conditions and preventing the occurrence and continued spread of noxious weeds.

31 CATs comments that establishment of native plants (specifically native perennials) will be crucial to the suppression of exotic plants and fuel reductions. Native perennial grasses have been observed as being capable of successfully competing against exotic annuals and "pest" shrubs, as well as being considered integral in achieving pre-European low intensity fire regimes (Belsky and Blumenthal 1997). The omission of re-vegetation, in the forms of grasses and forbs, from the any timber, vegetation control, weed removal or restoration actions will not achieve the desired conditions of a "biologically and structurally diverse forest". The herbal layer will most likely consist of significant areas dominated by annual exotic grasses and weeds, which contribute to catastrophic fire, soil destabilization, and increased soil moisture loss. If the PEIS is not altered to avoid these consequences, an analysis of their effects must be undertaken due to the significant impacts that may be anticipated. This concern was not addressed in the PEIS.

Realistic goals (control vs. eradication)

32 The goal of an invasive species management program could be to eradicate completely a plant everywhere, it could be to eradicate it only in a specific area, or it could be to reduce its population to a level that does not significantly displace native flora and fauna (Dahlsten et al. 1989). The Draft EIR does not make this analysis regarding the targeted invasive plants. Furthermore, it does not provide an adequate system for making decisions for each site.

Alternatives weed treatments

33 The CBF's EIR for the JDSF has failed to evaluate a reasonable range of feasible alternatives to treat targeted invasive plants. The number one goal of the JDSF is research and demonstration (pg. III-2). As this is the case, the CBF has an unique opportunity to demonstrate the effectiveness a true integrated pest management strategies, controlling invasive species infestations in the long term without introducing toxic chemicals into the forest. The CBF also has the option to conduct research and study newer, previously untried treatment methods, in an attempt to find out what non-toxic treatment methods will have the best results of both controlling invasives and protecting native biodiversity in a coastal forest system. Below CATs will discuss some of what is missing from the EIR in more detail.

34 The CBF has failed to include alternatives that treat invasive plant infestations with strategies based on ecological healing and prevention. The current EIR is focused purely on treatment of symptoms, rather than prevention of the conditions that lead to the problem. CATs supports an alternative with a focus on restoring native ecosystems in the JDSF. In such an alternative the CBF would view vegetation management in the context of first, prevention of conditions that have led to introduction, colonization, proliferation, and spread of invasive species and fuels hazards; and then second, restoration of healthy forests to strong native ecosystems; thereby third, reducing the need for continued treatments (passive restoration).

35 The CBF has neglected to consider the use of non-toxic organic herbicides and other weed control methods utilized by organic farming practices. For example St. Gabriel Laboratories produces an organic herbicide called Burn Out. It is advertised to work faster than Roundup (the glyphosate the CBF is proposing to liberally apply) and by meeting NOP Organic Farming Requirements is less likely to have adverse impacts to the environment or human health. If the CBF insists on using herbicides, why not use ones that are least likely to have adverse environmental impacts? What about hot foam that the BLM has used before? What about mulching/covers and solarization? What about organizing volunteer weed pulling days? What about flaming or

7

torching? Goats? Bio-control agents? There are many options that the CBF can try, why focus only on the old toxic pill of herbicides?

36 CATs is cognizant of the magnitude of the exotic species infestations California and we are sensitive to the need to protect native biodiversity. We appreciate the CBF's recognition of the problem caused by invasive plants and desired actions to deal with invasives in the JDSF. We recommend that the CBF attempt to recruit volunteers to manually remove weeds, especially for necessary long-term follow-up treatments. This strategy has been effectively used in many parts of California, but perhaps nowhere as successfully as by the Klamath National Forest's partnership with the Salmon River Restoration Council (SRRC). The SRRC is an excellent model to follow for using volunteer labor to effectively remove and eliminate invasive species without herbicides. The SRRC is happy to not only share their model, but also to help teach recruitment and training of workers/volunteers. Specific SRRC information can be found on the web at http://www.srrc.org/. As another applicable example, the Marin chapter of the California Native Plant Society has been successful at getting volunteers to pull broom. Other possible volunteer/work groups the CBF should look into include youth groups, civic and non-profit conservation organizations, and sheriff's SWAP programs. There are several options for increasing the work force for manual weed and vegetation management efforts with little to no extra costs to the CBF that should be attempted and evaluated in the EIR.

37 Each invasive weed must be analyzed individually. What will work as the best control method may be different for each species and different locations. Below CATs will discuss several non-herbicide treatment methods the CBF should be including as part of integrated treatment alternatives. The below discussed treatment options cover a reasonable range, are feasible, avoid potentially significant impacts inherent with herbicides, and meet the project's objectives.

Pampas grass (*Cortaderia jubata*)

38 Physical removal of pampas grass is effective for smaller plants (Peterson 1988). Seedlings and small plants can be very effectively eradicated by hand pulling or grubbing (DiTomaso undated, Peterson 1988, Gosling et al. 2000). Larger plants can be effectively removed by digging them up using a pulaski, mattock, or shovel (DiTomaso undated, Peterson 1988). Access for crown removal is best accomplished by cutting the rest away with a chainsaw or weed whacker (DiTomaso undated).

39 Good success has been reported by simply pulling pampas grass plants out of the ground using vehicles (Peterson 1988).

40 Cattle grazing on pampas grass has been shown to be an effective control in commercial forests of New Zealand (DiTomaso undated, Gosling et al. 2000).

41 It is clear that after initial removal of above ground biomass, the goal is then to remove or kill the roots system to prevent resprouts. Since pampas grass produces many seeds, it is important to continue retreatments until the seed bank is exhausted. We recommend, at the minimum, pulling out all seedlings and smaller plants while the soils are wet and loose. Then cut larger plants, before they can go to seed, and remove all above ground biomass. Then if possible, dig or pull up and remove the crown and root system. Continued cutting / pulling / digging retreatments could be done by volunteer work forces. Or try using goats to eat the resprouts. Another method would be to cover and deny sunlight to any pampas grass that may try to resprout. After several years of treatments it is then time to aggressively revegetate the area with desirable competitive native species. This should be a combination of planting and seeding.

Scotch and French broom (*Cytisus scoparius* & *Genista monspessulana*)

8

42 The literature on scotch and french brooms states that they both grow best in dry, disturbed soils with plenty of sunlight, such as those created with new partial cutting timber harvest techniques (Raj 2002). The literature continues on that line saying that the brooms rapidly invade following logging and land clearing (CDFA Encycloweedia website, Huckins and Soll 2004, Hoshovsky 1986). The brooms do not do well in heavily forested areas and don't tolerate heavy shade (CDFA Encycloweedia website, Huckins and Soll 2004, Hoshovsky 1986).

43 The literature states that because of extremely long-lived seeds broom control requires long-term management to exhaust the seed bank and prevent rapid recolonization of treated areas (CDFA Encycloweedia website, Huckins and Soll 2004, Raj 2002, Hoshovsky 1986). Many non-herbicide methods are recommended in the scientific literature for effective scotch and french broom control/removal. An integrated approach, requiring several years of treatments is accepted as the most effective, economical, and environmentally sound strategy (Huckins and Stoll 2004, Hoshovsky 1986). Established broom infestations will require persistence and retreatments each year for ten years or more, regardless of methods chosen (Huckins and Stoll 2004, Parker, Miller and Burrill 1998).

44 Manual hand methods are highly selective and can remove broom without impacts to desirable vegetation (Huckins and Soll 2004, Raj 2002, Hoshovsky 1986). Experts suggest hand pulling as a good and preferable manual broom removal method. It should be done in moist soils (Huckins and Soll 2004, Hoshovsky 1986). Also there are several hand tools for pulling broom plants including: weed wrenches, root jacks, pulaskis, and more (Huckins and Soll 2004). The weed wrench is mentioned as one of the most effective techniques for complete broom removal (CDFA Encycloweedia website). Hand hoeing and grubbing out crowns effectively control large plants (Parker, Miller and Burrill 1998, Hoshovsky 1986). Hand digging is a sure way of removing broom plants (Hoshovsky 1986). Well timed (before seeds mature) and executed cutting, especially effective manual cutting methods (at ground surface level) which can nearly eliminate re-sprouting, are recommended as an important first step in an integrated broom management plan (CDFA Encycloweedia website, Huckins and Soll 2004, Raj 2002). Experts conclude that the key to long-term broom control is prevention of seed set after the initial clearing takes place (Huckins and Soll 2004).

45 Mechanical control has shown to be practicle is some instances, using tractor mounted mowers or scythes, depending on terrain (CDFA Encycloweedia website, Huckins and Soll 2004, Raj 2002, Hoshovsky 1986). Repeated mowing/cutting can exhaust broom plant food supplies (Hoshovsky 1986). The literature contains examples of grazing, using goats (Angora and Spanish) as shown to be effective in controling broom (CDFA Encycloweedia website, Parker, Miller and Burrill 1998, Hoshovsky 1986). Some expert sources suggest that goats are the most effective for controlling regrowth as a follow up control method after burning or cutting (CDFA Encycloweedia website, Huckins and Stoll 2004). Goats can be less costly, can negotiate steeper slopes, and don't pose the environmental dangers inherent with herbicides (Huckins and Stoll 2004, Hoshovsky 1986)).

46 Experts support the use of tourching (flame thrower or weed burner) to heat-girdle the lower stems as spot treatments (Huckins and Stoll 2004, Hoshovsky 1986). This technique is reported to be less costly than herbicide treatments (Hoshovsky 1986). Large infestations can be removed using prescribed fire, but follow up methods are needed as fire can stimulate broom seed germination (CDFA Encycloweedia website, Huckins and Stoll 2004, Raj 2002, Hoshovsky 1986). This can be preferable for reducing the remaining seed bank far more quickly (Huckins and Stoll 2004). The literature states that burning of broom should be followed by re-burning, manual seedling removal, and re-vegetation with competative native species (Huckins and Stoll 2004). Re-vegetating with, at first, native perennial grasses and forbes, and later with native broadleaf plants will be necessary for long-term control (CDFA Encycloweedia website, Huckins and Stoll 2004, Hoshovsky 1986).

9

47 For large infestations, the Bradley method is recommended as a sensible approach for manually controlling weeds (Fuller and Barbe 1985). This method consists of hand weeding small areas of the infestation, starting with the best stands of native vegetation (those with the least weeds) and working towards those stands with the worst weeds. Initially, single and small groups of weeds should be removed from the edges of the infestation. Next, work on areas with at least two natives to every weed. The native populations will stabilized in each cleared area, and then one should progressively work deeper into the center of the most dense weed patches. This method has great promise for sensitive natural areas with low budgets.

Yellow starthistle (*Centaurea solstitialis* L.)

48 There is an abundance of literature regarding the control and management of yellow starthistle (YST). California governmental sources often rely on the expertise of Dr. Joseph DiTomaso of the University of California, Davis, in regards to YST management and control. DiTomaso states in UC Davis's Weed Research and Information website that viable non-toxic treatment options include grazing, mowing, manual removal, perennial grass reseeding, burning, and biological control. With a myriad of low-impact effective and commonly used treatment options available, why spray?

49 Hand pulling, hoeing, and other manual removal methods are most effective for smaller infestations. They are an "important tool in steep or uneven terrain" and "typically cause minimal environmental impact" (DiTomaso 2001).

50 In areas where the starthistles are working against other competitive vegetation, hand pulling is particularly easy and effective. Using the "Bradley method", it is possible to control large starthistle infestations at low costs while risking low impacts (DiTomaso 2001).

51 Other non-toxic management methods recommended by experts are tilling, mowing, grazing, and prescribed burning. Mowing, a cost effective late season tool, is a popular treatment method (DiTomaso 2001). Properly timed mowing (or weed whacking) can limit YST ability to produce seeds, provide excellent control, and reduce seed banks and populations.

52 Grazing has been shown to be effective controlling young yellow starthistle plants (DiTomaso 2001). If integrated with mowing, burning, bio-controls, or as a treatment for re-growth after hand pulling, grazing can be efficiently and effectively utilized for controlling yellow starthistle.

53 Properly timed grazing (early season) or prescribed burning (late season) have both been used with success as controls (DiTomaso 2001). DiTomaso states that grazing can help competitive vegetation and that it is good for use in both the first year of control program and as maintenance in later years (2001). He also highly recommends prescribed burning, calling it very effective, especially when used in conjunction with re-seeding methods. Burning is recommended for use in the first, second, and third years of long-term management strategies (DiTomaso 2001).

54 The literature shows that bio-control agents have proven effective on yellow starthistle. Six different insects have become established in California for controlling Yellow starthistle. Two in particular, the false peacock fly (*Chaetorellia succinea*) and the hairy weevil (*Eustenopus villosus*), have been shown to have significant impact on seed production (DiTomaso 2001). DiTomaso (2001) also states that several plant pathogens have shown promise as bio-control tools, and in particular the naturally-occurring and host-specific *Ascophyta spp.* DiTomaso accerts that bio-control is recommended to be part of any integrated management strategy and that they provide the possibility of long-term and sustainable management (2001). Isn't that the ideal goal of noxious weed management? Bio-controls should be evaluated for all YST management projects, especially those with large populations in sensitive, hard to access areas.

10

55 DiTomaso mentions problems with using herbicides as part of an integrated, long-term management strategy for YST. DiTomaso reports that herbicides are not effective in the early years of a long-term strategy and do not provide control of seeds germinating after treatment.

Himalayan blackberry (*Rubus discolor*)

56 Blackberry seedlings and young plants less than 3 feet tall can be hand pulled (Hoshovsky 1989). Claw mattocks have been reported to be effective for removing root crowns of plants up to 12 feet tall (Hoshovsky 1989). Rootstocks can also be dug out (Hoshovsky undated and 1989).

57 Cutting for initial clearing of above ground biomass is an important step for removing large blackberry patches (Oregon St. U. Extension undated, Hoshovsky 1989). Hand cutting and tractor mowing all efficiently clear infestations (Hoshovsky undated and 1989). Repeated cutting is necessary to exhaust underground parts' reserve food supplies and kill the plant (Oregon St. U. Extension undated, Hoshovsky 1989). Using covers or mulching after cutting or mowing will kill roots and prevent regrowth (Drliik 1996).

58 Prescribed burns are another good way to remove large mature stands of blackberries (Hoshovsky undated and 1989). Fires are most effective when followed by subsequent reburning to exhaust seed banks and underground food reserves and revegetation with fast growing native species (Hoshovsky 1989).

59 Experts recommend using goats to control blackberries (AgResearch Crown Research Institute 1988, Hoshovsky undated and 1989). Goats will eat blackberries all year long, regardless of other available food sources and are cheaper than both mechanical and chemical controls (Hoshovsky 1989). It is recommended that goats are most effective when used clear new infestations or regrowth of mature patches (Hoshovsky 1989). On older study in Australia showed that using goats was cheaper than herbicides to manage unwaned blackberries on pasture lands (Vere and Holst 1979).

60 Experts recommend revegetating with fast growing shrubs or trees to prevent reinfestations since blackberries are not shade tolerant (Cox 2003, Hoshovsky undated).

61 It is reported that some herbicides stimulate sucker formation and vegetative growth on lateral roots (Hoshovsky undated and 1989). Evidence exists that herbicides are not more effective than cane removal techniques (Hoshovsky 1989). Himalayan blackberries often grow in riparian areas and herbicides used then have the added danger of contaminating waterways and relocating to new areas (Hoshovsky 1989). Blackberries usually regrow following herbicide applications (U. Cal. Ag. and Nat. Res. 2002).

Tasmanian blue-gum (*Eucalyptus globosus*)

62 Mechanical control methods are thought to have the lowest impact on the surrounding area when treating eucalyptus. Cutting down the trees and then returning twice a year to cut regrowth will result in a high kill percentage after only three years. Seedlings and small saplings (up to an inch diameter) can effectively prevent the spread of eucalyptus infestations (Bean 1986).

63 Integrating buring with manual removal efforts is though to be an effective method of control. Work in the Jepson Prairie Preserve has shown that burning did increase eucalyptus mortality. Use of a flame gun has shown to work as well. The flame gun is most effective on already stressed plants or to kill regrowth (Bean 1986).

64 Eucalyptus stumps can be removed with either a stump grinder or tractor. After removal of above ground biomass is it a good idea to cover the area with dirt or black plastic to prevent (or slow) regrowth (Bean 1986).

Herbicide analysis problems

The herbicide analysis and toxicity information for the JDSF in the EIR is inadequate and incomplete. The CBF has failed to provide the most recent information, including scientific studies that discuss significant impacts to human and environmental health from the listed herbicides. The CBF needs to provide adequate
65 information, including valid scientific opinions against the use of these herbicides, for the public and others to completely evaluate this proposed actions.

can't add new chemicals post hoc

66 The CBF states that the list of herbicides given in Appendix 13 of the EIR may change in the future. Does this mean that the CBF may attempt to use other herbicides or new herbicide products without additional CEQA analysis? CEQA does not allow for unanalyzed use of toxics on state lands. The CBF may not use any herbicide or herbicide product not fully evaluated in this EIR in the future on the JDSF.

registration and label directions don't replace CEQA required agency analysis

The CBF seems to have the misconception that if a herbicides is registered and label directions are followed that the herbicide products are 'safe'. This is an incorrect and dangerous assumption. The use of herbicides comes with inherent risks. Herbicides are designed to kill and for numerous reasons may significantly impact (kill, harm, etc) non-targeted species. These impacts must be included in analyzing the impact of any alternative that includes the use of herbicides in the JDSF. California state appeals court has recently ruled that registration
67 does not replace necessary agency project specific analysis under CEQA (Californians for Alternatives to Toxics et al v. California Department of Food and Agriculture, __ Cal.Rptr.3d __; 2005 WL 3549483; 2006 Daily Journal D.A.R. 1204.). "Save Our Ecosystems v. Clark (9th Cir. 1984) 747 F.2d 1240 is instructive. There, the United States Forest Service had determined that certain herbicides could properly be used for defoliation activities, relying solely on their EPA registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The Ninth Circuit Court of Appeals held that "[t]he EPA registration process for herbicides under FIFRA is inadequate to address environmental concerns under NEPA [National Environmental Policy Act] . . . ." Instead, an agency must conduct independent research on the safety of herbicides it proposes to use.6 (Id. at p. 1248; see Northwest Coal. for Altern. to Pesticides v. Lyng (9th Cir. 1988) 844 F.2d 588, 596.) An agency can appropriately fulfill this duty of independent investigation by considering the registering agency's data on herbicides in the specific context of the
area targeted for proposed application. (Save Our Ecosystems v. Clark, supra, 747 F.2d at p. 1247.)"

risk assessments inadequate and incomplete (don't cover inerts, adjuvants, degradates, or tank mixes)

68 The EIR is missing estimates of amounts that quantify the amount of herbicides to be used in the JDSF, and to some extent, according to CBF supporting toxicity analysis, the toxicity, and thus the risks associated with the preferred actions. The CBF must at least make good faith estimates of the amounts of each herbicide product to potentially be applied in JDSF as part of the EIR analyses.

69 A glaring deficiency found in the EIR is it's lack of analysis of potential negative effects from all toxic substances proposed for use in this project. The substances in need of analysis include all components of the final tank mixture that is then applied into the environment. All inerts, adjuvants and active ingredients. The analysis should also include any known degradates and contaminants that could cause negative impacts. The

70 CBF has instead chosen to give cursory analysis to certain active ingredients (AIs), while piggybacking on limited, outdated and bias information, and refusing to perform any analysis whatsoever for potential impacts from the use of the toxic substances the CBF is proposing to introduce into the environment as inerts, adjuvants and degradates. It is impossible for the CBF to mitigate or avoid potentially significant impacts without first disclosing what they are. Left as is, the CBF must abandon the inclusion of herbicides in the JDSF.

71 The CBF is disregarding the adjuvants, inert ingredients, and known degradates, even though it has been clearly established in the scientific literature that these substances can be highly toxic, and often more toxic than the active ingredient (see information below). The CBF must include analysis of these ingredients.

HERBICIDE TOXICITY INFORMATION

72 Below CATs will provide toxicity information, including risks for both human and environmental health, that needs to be included and mitigated for within the EIR if herbicides are to remain a possible alternative. CBF is required to avoid (easy, don't use herbicides) or mitigate potential significant impacts due to herbicide use in this project. At this point the EIR has failed to do so.

Clopyralid

Basic overview

73 Clopyralid is used to kill annual and perennial broadleaf plants, including thistles and knapweeds. High persistence and high mobility increases toxicity and makes it likely to impact non-targeted species (especially native and desirable broadleaf species), as well as contaminate water sources. Transline, a commonly used clopyralid product for weed control (on thistles and knapweeds) made up of 40.9% clopyralid, and 59.1% of water, isopropyl alcohol, and a proprietary surfactant, which may be more toxic than the active ingredient. Public land management agencies must include persistence and mobility and entire product formulation toxicity into any potential effects analyses and NEPA/CEQA evaluations.

Human Health Risks

74 The labels for common clopyralid products (including Transline) state Caution, causes eye injury, harmful if inhaled or absorbed through skin, avoid contact with eyes, skin, or clothing, and avoid breathing spray mist (Information Ventures 1995, Transline Label 1999).

75 According to an EPA reviewer, laboratory tests have demonstrated that exposure to clopyralid results in "substantial" toxicity to fetuses and birth defects (US EPA 1991). In a test with rabbits, clopyralid caused a statistically significant decrease in the weight of the fetuses at both the low and high dose tested. In the same study, the EPA also found that "developmental toxicity in the form of skeletal abnormalities was evident at all dose levels tested" (US EPA 1991).

Environmental Fate

76 Clopyralid is considered persistent in soils by the EPA with a half life of up to 11 months (EPA 1992). Clopyralid is considered active in soils, is not strongly absorbed by soils, and is usually absorbed by plants from soils (Information Ventures 1995). In field studies clopyralid persisted in soils for between two and fourteen months (9.5 months in Pacific Northwest), depending on factors such as soil types and climates (Pik et al 1977, Bovey and Richardson 1991, Tanphiphat and Burrill 1987). Enough clopyralid was shown to persist in soils after 220 days (7.3 months) to damage desirable plants (Tanphiphat and Burrill 1987).

77 Compost and mulches made from clopyralid-treated plants contain toxic residues. A study from Michigan State University measured clopyralid in grass clippings composted for up to one year (Vandervoort et al 1997). Due to problems with its persistence and concern over its presence in lawn clippings and compost, the Washington State Department of Agriculture, in 2002, banned the use of clopyralid on lawns and most turf (Washington Dept. of Ag. 2002).

78 The EPA describes clopyralid as very mobile and very soluble in water and thus concluded that it has the potential to leach to ground water and or contaminate surface waters (EPA 1997). Transline's label warns that clopyralid is a chemical which can travel through soil and contaminate groundwater (1999). Information Ventures warns that because clopyralid is highly soluble in water, does not adsorb to soil particles, and is not readily decomposed in some soils, it may leach into groundwater, with areas with very permeable soils and shallow water tables at the greatest risk for water contamination (1995).

79 Clopyralid is considered volatile according to the EPA (EPA 1990). This means that it can evaporate from foliage and soil after application, move away from the application site, and "adversely affect nontarget broadleaf plants" (EPA 1990). The EPA has calculated that volatilization of only one percent of applied clopyralid would be enough to damage nontarget plants (EPA 1990).

Environmental Risks

80 Very small quantities may injure susceptible plants (Information Ventures 1995). The Transline label warns that it can affect susceptible plants directly through foliar contact and indirectly by root uptake from soil in treated areas (1999).

81 A study conducted in Glacier National Park found that clopyralid based restoration has mixed results. The herbicide treatment reduced the abundance of native broad-leaved plants and increased the abundance of nonnative grasses (Tyser et al 1998). Another study in the United Kingdom showed similar results. Clopyralid treatment reduced the abundance of one seeded broad-leaved species by about 75 percent while completely eliminating flowering by that species. Clopyralid treatments also eliminated flowering by two other species and reduced flowering of a third species by 90 percent (Pywell et al 1996).

82 The Transline label warns not to spray pastures containing desirable forbs, and especially legumes (1999). It also warns that while grasses are generally tolerant to Transline, new grass seedlings may be injured to varying degrees until well established. This may present a problem for land managers who want to use clopyralid to eliminated weeds and restore native grasses at the same time.

83 Clopyralid is also toxic to some beneficial insects, ones that are economically important due to their reduction of agricultural pest populations. The International Organization for Biological Control found that clopyralid is toxic to three species of beneficial insects, including a ladybug, a pirate bug, and a lacewing (Hassan et al 1994).

Other Information

84 It is not recommended to use clopyralid products for fall treatments, only apply to actively growing brush or weeds during the spring or early summer (Information Ventures 1995).

85 It is important to avoid drift (Information Ventures 1995), especially near susceptible plant species or water sources. The Transline label warns to avoid spray drift since very small quantities, which may not be visible, may severely injure susceptible plants (1999).

14

86 Information Ventures recommends that when considering clopyralid use to avoid situations where treated soil particles may blow into areas where susceptible plants grow (1995). This should be a major concern in noxious weed restoration projects, where clopyralid and other herbicides are used to kill weed dominated areas. Following the weed kill soil and plant parts can blow around and impact nontargeted species.

Glyphosate

Human Health Risks

87 Glyphosate eye and skin irritation is sometimes quite severe and can persist for months (Temple and Smith 1992). The Roundup formulation is a potential endocrine distrupter, depressing cyochrome P450 activity in human placental cells and thereby potentially compromising toxin metabolism (Richard et al 2005). This raises the concern about inerts in chemical formulations.

88 A Swedish study has linked glyphosate exposure to the lymphatic cancer non-Hodgkins lymphoma (Hardell and Eriksson 1999). Glyphosate is nitrosated "very readily" to the contaminant N-nitrosoglyphosate, a member of a chemical family of which approximately 75% are know carcinogens (Sittig 1980, Young and Khan 1978, Lijinsky 1974). While the EPA thus far considers that contaminant to be "not toxicologically significant", consideration of its carcinogenic potential has thus far relied exclusively on the results of unpublished studies conducted by Monsanto, hardly an unbiased source (Rubin 1996, US EPA 1993).

89 Glyphosate exposure has resulted in sperm abnormalities in rabbits, suggesting reproductive toxicity (Yousef et al 1995). Maternal exposure to glyphosate induced a variety of enzymatic abnormalities in pregnant rats and their fetuses, indicating possible developmental toxicity (Daruich et al 2001).

90 Varying percentanges of Roundup formulations are composed of polyethoxethyleneamine (POEA), which is a surfactant added to enhance glyphosate's ability to permeate cell walls. POEA is three times as acutely toxic as glyphosate (Sawada et al 1988). One study showed that Roundup formulations with POEA (but not glyphosate alone) inhibited progesterone production (Walsh et al 2000). Many glyphosate formulations contain other possibly harmful "inert" products such as diethanolamide, which is listed by the EPA as "potentially toxic" (US EPA 1987).

Environmental Fate

91 Between 14% and 78% of glyphosate applied as a ground spray drifts off site (Freedman 1991). Glyphosate has been documented to affect plants as far as 131 away from spray sites and residues have been detected 1,313 feet downwind (Marrs et al 1993, Yates et al 1978). "Product labeling does not preclude off-target movement of glyphosate by drift. EPA therefore is requiring three additional terrestrial plant studies to assess potential risks to nontarget plants" (US EPA 1993).

92 Glyphosate is highly persistent in soils, taking on average about 90 days for one-half of the chemical to transform or degrade, and even longer for its primary degradate AMPA (US EPA 1993, Torstensson et al 1989). It's persistence is highly dependent on soil types and weather conditions, with some studies showing half-lives of 140 to 172 days (USDA 1995, Oppenhuizen 1993).

93 Glyphosate has been found in surface water as the result of agricultural and other applications run-off (Frans 2004, US EPA 1993). A 2002 study testing surface water contamination of fifty-one streams throughout the Midwest found that glyphosate was detected in 36% of the samples, with its breakdown product AMPA found

15

in 69%. Most surprisingly, the pesticide was found in 31% of the harvest-time samples, several months after application, indicating a persistence previously downplayed the Monsanto (Scribner et al 2002).

Environmental Risks

94 Roundup has been long recognized as highly toxic to fish and aquatic organisms (US EPA 1993). Recent evidence is emerging that it may also serve as a serious threat to amphibians at environmentally relevant levels. A recent study showed that Roundup reduced aquatic species richness by 22% and completely eliminated two species of tadpoles, most likely due to components other than the active ingredient, such as surfactants and inerts (Relyea 2005). While Roundup applications are currently restricted around aquatic areas, Relyea points out that most amphibians actually breed in small pools and other unprotected, and often seasonally, wet areas. Another study has shown that long-term exposure tests reduced algae populations (Pan et al 2003).

95 As with its human health effects, much of the toxicity of Roundup formulations have been attributed to components other than the active ingredient, namely the surfactant POEA. Roundup formulations containing POEA are thirty times more toxic to fish than glyphosate itself (Servizi et al 1987). The Surfactant POEA has accounted for more than 86% of Roundup toxicity in a study using an array of aquatic organisms (Tsui and Chu 2003).

96 Glyphosate has been shown to adversely affect microorganism composition of soils, by inhibiting the growth of beneficial mycorrhizal fungi, organisms that are essential to ecosystems and enhance plant survival (Sidhu and Chakravarty 1990). Other studies have shown that standard applications of the pesticide on grapevines and on Roundup Ready soybeans could cause increased disease levels in the crops by promoting pathogenic fungal growth on roots of the desired plants (Kremer 2003, Lotter et al 1999).

97 The EPA acknowledges that "many endangered plants may be at risk for the use of glyphosate on the registered use patterns" (US EPA 1993). No information is currently available regarding long-term effects to mammals, birds, and bees from glyphosate and other Roundup products.

Other concerns

18 Monsanto, the primary manufactuer of commercial glyphosate products, has sponsored risk assessments of glyphosate that can hardly be considered unbiased. Laboratories contracted by the manufacturer to conduct toxicological analysis on glyphosate have twice been documented as falsifying data for these tests (US EPA 1994, US Congress 1984). Monsanto use to advertise that Roundup can be used "where pets and kids play" and that it "breaks down into natural materials when its work is done." But in 1996 the New York Attorney General fined Monsanto $50,000 for these false claims.

MORE GLYPHOSATE INFORMATION (sorry if any of it is a repeat – let us know and we can provide actual documents supporting this information)

99 Glyphosate is the active ingredient of numerous herbicide formulations including Roundup, Rodeo, Sting, Spasor, Muster, Tumbleweed, Sonic, Glifonox, Glycel and Rondo. Glyphosate is a broad-spectrum herbicide which inhibits the enzyme essential for the formation of aromatic amino acids in plants

Mammalian Health Risks

100 The herbicidal toxicity operates in a pathway found only in plants and microorganisms, thus not considered to be a risk for humans and other mammals. Nevertheless, studies of the effects of glyphosate and glyphosate formulations have shown genotoxic, hormonal,and enzymatic impacts in mammals. These effects must be taken

16

into consideration in a program advancing the use of glyphosate so that the environmental conditions can be taken into account in light of the potential adverse impacts of use of the herbicide. Such environmental impacts include those occurring to workers, people who use the forest and/or live nearby, and wildlife in the forest.

101 The line of study that is gradually illuminating the genotoxic, hormonal,and enzymatic effects to mammals, and potentially other animal species, through research include: sperm abnormalities (Yousef 1995); functional abnormalities in specific activity of cytolsolic enzymes in liver, heart and brain of pregnant animals and their fetuses (Daruich 2001); depressed function of cytochrome P450 and two other enzymes (Heitanen 1983); dose-dependent formation of DNA adducts in the kidneys and liver (Peluso et al.1998); changes to the activity of some serum enzymes and marked differences to polyacrylamide gel electrophoretic patterns of serum proteins (El-Demerdash 2001); and inhibited progesterone production (without causing cellular toxicity) by disruption of StAR protein mediation (Walsh 2000).

102 In areas of the country where pesticides are used, and particularly among children of men who apply pesticides, birth defects are significantly higher. Higher incidence of neruobehavorial defects from children conceived in spring when glyphosate formulations are used indicates that the chemical may be involved. (Garry 2002)

103 These findings indicate that the use of glyphosate and its formulations are linked to adverse health and, potentially, developmental and reproductive harm not investigated in the earlier years of glyphosate's use but is nevertheless compelling information that must be understood in light of the current proposed project.

104 The glyphosate formulations often studied are Vision and Roundup; study results sometimes indicate toxicity of other, unknown compounds of these formulations. Studies have found slightly greater toxicity of the Roundup formulation compared with glyphosate, in terms of acute toxicity (Folmar et al. 1979; Martinez et al. 1990; Mitchell et al. 1987).

105 The Roundup formulation is a potential endocrine distrupter, depressing cyochrome P450 activity in human placental cells and thereby potentially compromising toxin metabolism (Richard et al 2005). This raises the concern about inerts in chemical formulations.

106 The U.S. Environmental Protection Agency and the World Health Organization reviewed the toxicology data on glyphosate and concluded that glyphosate is not mutagenic or carcinogenic. Despite this conclusion, three recent case–control studies suggested an association between reported glyphosate use and the risk of non-Hodgkin lymphoma (NHL) (De Roos et al. 2003b; Hardell and Eriksson 1999; Hardell et al. 2002; McDuffie et al. 2001).

107 Though not considered a carcinogen by the U.S. EPA, a population study linked glyphosate use to the lymphatic cancer non-Hodgkins lymphoma, interpreting the result conservatively due to limitations of the study, but considering the association worthy of concern, citing related toxicologic findings for glyphosate including excess mutations and chromosome aberrations in mouse lymphoma cells, excess sister-chromatid exchanges (SCEs) in human lymphocytes, and increased incidence of various cancers in a carcinogenicity study of mice (Hardell and Eriksson 1999). Another recent study involving human populations found a suggested association between glyphosate and the risk of multiple myeloma. (deRoos 2005)

Environmental Fate

108 Glyphosate has been documented to affect plants as far as 131 feet away from spray sites and residues have been detected 1,313 feet downwind (Marrs et al 1993, Yates et al 1978). "Product labeling does not preclude off-target movement of glyphosate by drift. EPA therefore is requiring three additional terrestrial plant studies to assess potential risks to nontarget plants" (US EPA 1993).

17

109 Glyphosate has been found in surface water as the result of agricultural and other applications run-off (Frans 2004, US EPA 1993). A 2002 study testing surface water contamination of fifty-one streams throughout the Midwest found that glyphosate was detected in 36% of the samples, with its breakdown product AMPA found in 69%. Most surprisingly, the pesticide was found in 31% of the harvest-time samples, several months after application, indicating a persistence previously downplayed the Monsanto (Scribner et al 2002).

Environmental Risks

110 Roundup has been long recognized as highly toxic to fish and aquatic organisms (US EPA 1993). Recent evidence is emerging that it may also serve as a serious threat to amphibians at environmentally relevant levels. A recent study showed that Roundup reduced aquatic species richness by 22% and completely eliminated two species of tadpoles, most likely due to components other than the active ingredient, such as surfactants and inerts (Relyea 2005). While Roundup applications are currently restricted around aquatic areas, Relyea points out that most amphibians actually breed in small pools and other unprotected, and often seasonally, wet areas. Another study has shown that long-term exposure tests reduced algae populations (Pan et al 2003).

111 With global declines of amphibian on the rise, research looking at the effects of pesticides on amphibians has garnered much attention throughout the last few years. However, with such an extensive list of pesticides being used on a world-wide basis, scientists have focused their attention on those that are widely used and globally common such as formulations with the active ingredient glyphosate (Roundup, Vision, ext). Such research has found that exposing amphibians to such formulations can produce larval mal-development such as craniofacial and mouth deformities, eye abnormalities, bent curved tails (Lajmanovich, 2003), gonadal abnormalities, decreased snout-vent length at metamorphosis and increased time to metamorphosis (Howe, et al. 2004). Other studies have shown that exposure to such pesticides can reduce tadpole survival and biomass by 40% (Relyea, 2005a), as well as reduce amphibian richness in a given area (Relyea, 2005b). Furthermore, when amphibians are also exposed to predator cues (which are naturally occurring), glyphosate formulations can be twice as lethal to these animals (Relyea, 2005c). This last study emphasizes the fact that although amphibians can withstand certain doses of these pesticides in the laboratory, we must also take into account other environmental stressors (such as predator cues, water temperature, ph, ext.) that can make amphibians even more susceptible too much lower doses. For this reason we must be very cautious when deciding what levels of pesticides are acceptable in surrounding environments.

Relyea, R. A.; Schoeppner, N. M.; Hoverman, J. T. 2005a. Pesticides and Amphibians: the importance of community context.. Ecological Applications, 15(4): 1125-1134.

Relyea, R. A. 2005b. The impacts of insecticides and herbicides on the biodiversity and productivity of aquatic communities. Ecological Applications, 15(2): 618-627.

Relyea, R. A. 2005c. The lethal impacts of Roundup and predatory stress on six of North American tadpoles. Environmental Contamination and Toxicology, 48: 351-357.

Howe, C.M.; Berrill, M.; Pauli, B.D.; Helbing, C.C.; Werry, K.; Veldhoen, N. 2004. Toxicity of glyphosate-based pesticides to four North American frog species. Environmental Toxicology and Chemistry, 23(8): 1928-1938.

Lajmanovich, R. C.; Sandoval, M. T.; Peltzer, P. M. 2003. Induction of mortality and malformation in Scinax nasicus tadpoles exposed to glyphosate formulations. Bulletin of Environmental Contamination and Toxicology, 70(3): 612-618.

112 Glyphosate has been shown to adversely affect microorganism composition of soils, by inhibiting the growth of beneficial mycorrhizal fungi, organisms that are essential to ecosystems and enhance plant survival (Sidhu and Chakravarty 1990). Other studies have shown that standard applications of the pesticide on grapevines and on Roundup Ready soybeans could cause increased disease levels in the crops by promoting pathogenic fungal growth on roots of the desired plants (Lotter et al 1999, Kremer 2003).

Imazapyr

Human Health Risks

113 In a study of acute toxicity, bleeding and congested lungs were observed from dermal exposure to imazapyr. Congestion of the kidney, liver, and intestine were also observed. Imazapyr can also cause rashes, redness and swelling at the site of exposure on skin (US EPA 1984). The primary concern is contact with eyes, as imazapyr is listed as "corrosive" and "causes irreversible eye damage" (Tu et al 2004, US EPA 1984). The Center for Ethics and Toxics warns that the primary route of potential harm would occur during the application process (www.cetos.org).

114 The Center for Ethics and Toxics (www.cetos.org) reports that one of imazapyr's primary breakdown products is quinolinic acid, which is a primary breakdown product in soils (Mangels 1991), which is irritating to the eyes, respiratory system, and skin (Sigma Chemical Co, et al 1993). It is also a neurotoxin and can cause symptoms similar to those in Huntington's chorea, such as loss of coordination and trembling (Schwarcz et al 1983, www.cetos.org).

Environmental Fate

115 Imazapyr is considered persistent. The EPA reports that the half-life of imazapyr is 17 months (US EPA 1984). Persistence in soils has been detected at a level high enough to cause plant damage for over one year (Coffman et al 1993, Lloyd et al 1986, Heering and Peeper 1991). Imazapyr doesn't usually bind to soils, meaning that it is very mobile in soils and a likely risk to be a water contaminant (Tu et al 2004, Cox 1996, www.cetos.org). Although when it is adsorbed by soils, movement of soil particles that contain imazapyr can damage desirable species (Tu et al 2004). While imazapyr has a relatively short half-life in water of 4 days (Information Ventures Inc 1995), it may be toxic to aquatic plant species for even longer (like in soils). If released into water, or it moves through soils into the water, imazapyr does not adsorb to suspended solids and sediment based upon the adsorption coeffecient (www.cetos.org), and thus remains available and toxic.

116 Imazapyr has been found in surface water in the southeastern US (Michael and Neary 1993), in groundwater from ground hand applications (Berisford et al 1995), and again in surface water, this time in the Pacific Northwest (Rashin and Graber 1993).

Environmental Risks

117 Imazapyr is an efficient plant killer and therefore puts non-targeted vegetation at risk. It is readily adsorbed through foliage and roots and thus can be injurious by drift, runoff, or leaching from the roots of targeting plants (Tu et al 2004). Field studies report that imazapyr can be exuded from the roots of targeted plant species (Tu et al 2004). This is extremely hazardous for non-targeted and desirable native vegetation in the project area. Imazapyr can be mobile within roots and transferred between intertwined root systems of many different plants and /or to several species (Tu et al 2004). Again, this puts desirable native vegetation in the project area (that would be close enough to hopefully take over treated areas) at high risk. Use of one imazapyr product, Arsenal, is stated by the EPA as putting a number of terrestrial and aquatic listed plant species in "jepordy" (US EPA 1987).

19

Sulfometuron Methyl

Triclopyr

Human Health Risks

118 Triclopyr formulations have shown to have effects on the kidney and liver weight and functioning in test animals and it has been shown to be slightly fetotoxic (US EPA 1998).

119 One study showed that triclopyr's primary degradate, TCP (3,5,6-trichloro-2-pyridinol), may disrupt neural maturation at small concentrations (Das and Barone 1999). Another study revealed that maternal exposure to TCP caused the degradate to concentrate in the fetal brain (Hunter et al 1999).

120 A study by the California Department of Pesticide Regulation (CDPR) of hand applicators of triclopyr in forest settings found that exposure measured by urinary excretion was higher than predicted, while dermal patches showed exposure levels that should not have resulted in such high absorption levels (Spencer 2000).

Environmental Fate

21 Triclopyr is recognized by the EPA as being moderately persistent and highly mobile, with considerable potential to contaminate surface and ground water (US EPA 1998). In some cases triclopyr has been shown to persist for more than two years (Stark 1983).

22 One CDPR study done to determine pesticide residues in Native American gathering areas collected application-day samples that showed the presence of triclopyr up to 50 to 100 feet down slope for the treatment sites (Ando et al 2002). A monitoring study in the Tahoe National Forest verified triclopyr's mobility (and persistence), finding it in sample over 200 feet beyond the spray buffer strip nearly two months after application (Tahoe National Forest 1997).

23 Garlon 4, which is a mixture of the active ingredient triclopyr butoxyethyl ester (61.6%) with unidentified amounts of inert ingredients kerosene and "proprietary" surfactants (total 38.4%) (Material Safety Data Sheet). Kerosene is characterized as "slightly toxic" for acute, or immediate, effects and is not regarded as a cause of cancer or mutations, but it has significant chronic toxicity and causes skin irritation.

124 According to the 1998 US EPA Reregistration Eligibility Decision, "While triclopyr TEA and BEE are the forms applied, both readily form the acid. The acid and its degradate, TCP, are of concern in the ground water assessment. Triclopyr acid is somewhat persistent, with persistence increasing as it reaches deeper soil levels, where there are anaerobic conditions; it is also very mobile. TCP is both mobile and persistent. Pesticides with similar properties have been found in ground water. Due to the environmental fate characteristics of triclopyr acid, the Agency believes this chemical has a potential to leach to ground water."

125 The half-life of triclopyr in soil is in effect extended when it metabolizes to pryridinol (EPA 1998), which is as mobile, but more persistent in soil than triclopyr, in addition to being more toxic. As a result, pyridinol has the potential to degrade groundwater and be transported in surface runoff waters to a degree that surpasses that of triclopyr. The EPA recommends a ground water label advisory for the Garlon label based on the toxicity and environmental persistence of pyridinol (id). Pyridinol has been detected in the blood for as long as 30 days after exposure to another chemical that metabolizes to pyridinol (Chanda and Pope 1995). Pyridinol may also exhibit reproductive toxicity, although this issue remains controversial.

126 The results of recent studies have made the fate and effects of pesticide degradation products such as pyridinol the subject of closer scrutiny. The U.S. Geological Survey (USGS) has reported that when it looks for products of herbicide degradation in surface water, for example, degradates occurred frequently at similar concentrations as the parent compounds. The U.S. Fish and Wildlife Service noted in referring to the California red-legged frog that "risk assessments of pesticides typically fail to evaluate the breakdown by-products". Recent research suggests these by-products may pose a threat to amphibians (La Clair 1998).

Environmental Risks

127 A USGS study of a watershed near Seattle, Washington, found triclopyr at 90 percent of the sited sampled (USGS 1999). This indicates that contamination of streams with triclopyr may be widespread and its impacts to water quality should not be taken lightly.

128 One study found that even at low concentrations (2.4 – 4.8 ppm), triclopyr proved paralyzing or deadly to three native species of newly hatched tadpoles, who were found to be much more sensitive to the pesticide than the standard laboratory surrogate used in toxicity tests (Berrill et al 1993). Another study emphasized the varying effects of the different formulations on amphibians, with the ester form (Garlon 4) having a much higher toxicity than others (Perkins et al 2000).

129 The EPA has labeled Garlon 4 and other butoxyethly ester forms of triclopyr as moderately to highly toxic to fish and aquatic invertebrates. The agency recognizes the threat posed by triclopyr to various listed species, and states that it is awaiting further limitations on the chemicals' use (US EPA 1998).

130 Triclopyr poses a risk to the health of fish species, as described by Wan et al. 1987: "To sum up, this bioassay study indicates that Garlon 4, the ester formulation of triclopyr is highly toxic to salmonids of the Pacific Northwest". Triclopyr also poses a risk to the health of amphibian species, as described by Berrill et al. 1994: Newly hatched tadpoles of all species were very sensitive to 2.4 and 4.8 ppm triclopyr (...), either dying or remaining paralyzed following exposure."

131 Even sublethal concentrations have been shown to adversely affect fish growth, due presumably to the chemical's persistence (Kreutzweiser et al 1995). One study indicates that even recommended (aerial) application rates would result in aquatic concentrations high enough to cause behavioral changes and mortality (Johansen and Geen 1990).

132 Triclopyr can also impact insects adversely. Aquatic insects (*Isogenoides* and *Dolophilodes* species) are adversely affected at concentrations less than 80 ppm (80 mg/Liter). Direct studies of triclopyr applications to stream channels showed clear cut evidence of toxicity from drift exposure as low as 3.2 mg/Liter for *D. distinctus* (Kreutzweiser et al.1992). Triclopyr also poses well known dangers to salmonid species. Garlon 4 reached lethal concentrations as low as 84 ppb (0.84 mg/Liter) (Johansen and Green 1990).

133 The EPA labels the butoxyethyl ester form (includes Garlon 4) as slightly toxic to birds. The EPA acknowledges that triclopyr's primary breakdown product, TCP, is as toxic to birds, fish, and invertabrates as triclopyr itself, and exhibits similar persistence, mobility, and potential for groundwater contamination (US EPA 1998). Therefore the additional action of the degradate could greatly extend the toxicity of the parent compound. This must be included in the analysis for the proposed actions.

134 Additional evidence points to the broader scale of effects triclopyr has on the ecological communities in which it is applied. Several studies have shown triclopyr to have detrimental repercussions on animal species integral to ecosystem balance. Beneficial arthropods that work to control invasive weeds may be killed (Searle et al 1990). Gastrointestinal parasites that control rodent populations can be wiped out (Boggs et al 1991). Triclopyr

21

has been shown to be detrimental to gastropods involved in nutrient recycling as well (Prezio et al 1999). Triclopyr is also highly toxic to ectomycorrhizal fungi, organisms that are essential to ecosystems and enhance plant survival (Chakravarty and Sidhu, Canadian Forestry Service Publication). The degradate is even more toxic to fungi (Baarschers et al 1988).

Potential herbicide impacts not avoided or mitigated

135 The CBF has failed to include in the EIR avoidance or mitigation measures to eliminate significant impacts that may result in the JDSF due to the proposed herbicide applications in alternatives C1 or C2.

water quality

36 All of the above listed herbicides have been found in water that they were not intended to be in. The use the above listed herbicides has the potential to degrade water quality in the project area be direct contamination or adsorption to soils particles and contamination threw sedimentation. The CBF has failed to give a hard look in the EIR at the impacts to water quality from the proposed herbicide applications. Nor has it evaluated avoidance or mitigation measures to prevent significant water quality impacts.

salmonid and amphibians

37 The project area contains habitat for listed salmonid species including endangered coho salmon and threatened steelhead. The JDSF is also home for native amphibian populations. As discussed above both glyphosate and triclopyr product formulations are considered very toxic to fish and amphibians. Therefore the proposed herbicide usage could significantly impact listed TE&S species in the JDSF. The EIR must include analysis of these impacts and measures within the alternatives to avoid them.

plants of special interest

138 The JDSF contains state listed native plants as well including: Humboldt milk-vetch (*Astragalus agnicidus*), and Roderick's fritillary (*Fritillaria roderickii*) are both state listed endangered; and North Coast semaphore grass (*Pleuropogon hooverianus*) is a state listed threatened species. Obviously these plant are at risk of being killed by the proposed herbicides (see above comments regarding toxicity and environmental fate of each herbicide). Drift does happen. Some of the above chemicals are known for their persistence and mobility that would also greatly increase the risks to non-targeted list plant species. The JDSF management plan as analyzed in the EIR is subject to the provisions in CEQA regarding the avoidance of significant adverse effects on the environment, including native plant communities and rare, threatened, and endangered plants (CCR § 15250). Public Resources Code § 21080.5(d)(2)(a) states that the rules and regulations adopted by the administering agency of a certified regulatory program shall "require that an activity will not be approved or adopted as proposed if there are feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment." The
FPRs are a State Certified Regulatory Program (CCR § 15251(a)) and are subject to these rules. An easy way to prevent significant impacts to listed plant species is to avoid herbicide use within JDSF.

workers

39 The EIR contains no analysis regarding the risk of the workers whom would be applying the herbicides in the JDSF. Herbicide applications are proposed to be accomplished by manual laborers using backpack application equipment. The use of backpack sprayers is a source of concern due to common reports of pesticide exposure episodes involving leaks, drips, and splashes onto the applicators, especially in forestry applications. The

potential for leaks of herbicides onto the clothing and skin of applicators is a concern because of previously under appreciated dermal absorption that must be addressed if the use of significant amounts of herbicides will be applied by backpack application (CA DPR 1998).

140 For example the previously mentioned 1995 CDPR study found that exposure measured by urinary triclopyr levels was higher than predicted by Risk Assessment models, while mean exposure estimated from dermal and inhalation monitoring was lower than predicted. Therefore the workers were at greater risk than previously believed.

141 Though the herbicide labels requires the use of protective clothing by workers, protective clothing is variable in its ability to prevent dermal exposures due to manufacture, types of barrier materials used, length of use and type of pesticide used. The EIR fails to analyze the effectiveness of any chemical barrier personal protective clothing or the likely exposure with and without such clothing.

142 Gloves designed specifically to provide barriers against hand exposure to pesticide contamination available to workers, for example, are particularly important to prevent exposures of pesticide applicators. The label for Garlon 4 requires that "chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton" be worn by forestry and other agricultural workers.

143 These barriers can vary in their ability to prevent worker exposures to chemicals. Pesticide protective gloves manufactured with polyvinyl chloride and nitrite butadiene chemical barriers have been defective to the degree that the gloves were contaminated with pesticides, outside and inside, during the use of organophosphate insecticides (Canning et al. 1998). Nitrile and butyl and other chemical barrier gloves provide protection from penetration by residues of 2,4-D, but only for 6-8 hours of use (Lin and Que Hee, 1998). Nitrile gloves generally offer better protection against dermal penetration of pesticides than does latex, but the degree of protection decreased over time and depended on the pesticides used. The use of surfactants such as nonylphenolethoxylate increased penetration of two fungicides and a growth retardant (Nielsen et al. 2001).

144 The current EIR fails to adequately address worker health risks associated with the proposed herbicide applications for the applicators.

Human health- chemically sensitive, pregnant women, fetuses, and infants

Chemically sensitive people

145 Concern is especially magnified for sensitive populations including those with compromised immune systems, children and the elderly. Dr. Robert Kreutzer of the California Department of Health Services reported in the results of the Department's annual survey of California health indicators that 16.9%, or five million Californians, are sensitive to chemicals and that 6.4%, or close to two million Californians, have been medically diagnosed as having chemical sensitivity that affects their health status. (Kreutzer, Neutra, Lashuay. 1999. Prevalence of People Reporting Sensitivities to Chemicals in a Population-based Survey. American Journal of Epidemiology). In a personal communication, Dr. Kreutzer assured us that the findings of his 1999 report corresponded with other studies of chemical sensitivity in the general population and field experiences of his office in chemical release accidents.

Impacts to pregnant women, fetuses and infants

146 (Much of the following is from Having Faith: An Ecologist's Journey To Motherhood by Sandra Steingraber).

147
Pesticides with low molecular weights cross the placenta without restriction. Even heavier pesticide molecules pass through, but sometimes they are partly metabolized by the placenta's enzymes before they pass through, which can make them *more* toxic than they were to begin with. Pesticides do not have to pass through the placenta to cause harm. Some chemicals will lodge in the placenta and do damage there. (U.S. Department of Health and Human Services. Agency for Toxics Substances and Disease Registry. 2002).

148
The brain of a fetus and of a child under six months is more vulnerable to toxins because it lacks a blood-brain barrier, which in older children and adults prevents many blood-borne toxins from entering the brain's gray matter. Fetal brains are even more vulnerable because of the lack of fat in the fetal body. Thus, the fetal brain attracts most of the fat-soluble toxic chemicals resulting in a disproportionately greater effect on the brain. (ibid)

149
There has only been one study of environmental contaminants in amniotic fluid ever conducted, and it found detectable levels of organochlorine pesticides in one third of the thirty samples of amniotic fluid tested.

150
Research conducted using information from the California Birth Defects Monitoring Program has found elevated risks of particular kinds of birth defects among women using pesticides for gardening and for those living within a quarter mile of agricultural crops. Of 2000 mothers of children with birth defects, who were interviewed, 75 percent of them had at least one source of exposure to pesticides while pregnant.

151
Pesticide applicators have a higher risk of having children with birth defects or fetuses with anencephaly. In a study from the Netherlands found an increased risk of spina bifida when fathers are exposed to certain chemicals, including pesticides. Some chemicals are known to injure the DNA strands carried in the heads of sperm cells, while others affect the testicles ability to produce sperm.

152
In Finland, a birth defect registry shows that children born to women employed during their first trimester of pregnancy in agricultural occupations involving pesticides had twice the risk of cleft lips and palates. In Spain, the rate of oral clefts in similar children was three times that of other children. Spain also shows that undescended testicles were more common in areas of high pesticide use. These findings were mirrored in Denmark. Norwegian researchers found strong associations between spina bifida and hydrocephaly and pregnant workers in orchards or greenhouses. In the U.S., a study of 700 women in California showed an increased risk of fetal death from birth defects among babies whose mothers lived near agricultural crops where certain pesticides were sprayed. Women in their first trimester who live in a square mile of pesticide use are most vulnerable to impacts.

153
One of the most thorough studies linking pesticides to birth defects was conducted in Minnesota by Dr. Vincent Garry at the University of Minnesota medical school. He found elevated levels of birth defects among children of registered pesticide applicators (like farmers) in western Minnesota. He also found a clear geographical pattern of birth defects among the general population. Non-farming families living in the western half of the state were 85 percent more likely to have a baby with birth defects than nonfarming families living in the eastern half because of the increased use of pesticides in the agricultural portion of the state. Further, in western Minnesota, children conceived in the spring when pesticide use is at its highest were significantly more likely to have birth defects than those conceived at other times of the year. No seasonal pattern for birth defects was present in the eastern part of the state.

154
In 1997, the U.S. Toxics Release Inventory included 47 different chemicals classified as known or suspected fetal toxicants, which amounted to 989,700,000 pounds of these chemicals released in that one year.

155
There appears to be a direct relationship between birth-defect rates and the application volumes of chlorophenoxy herbicides, according to an EPA researcher. Dina Schreinemachers, a statistician with the agency's National Health and Environmental Effects Research Laboratory based her conclusions on birth records from nearly 150 wheat-producing counties in four Northern Tier states. In the published report, Schreinemachers says her findings should be viewed with caution because, among other reasons, wheat production acreage was used as a surrogate for actual exposures to 2,4-dichlorophenoxyacetic acid (2,4-D) and 4-chloro-2-methylphenoxyacetic acid (MCPA). However, she also notes that her findings are similar to those from a number of previous studies. Consequently, she says, her results "are especially of concern because of [the] widespread use of chlorophenoxy herbicides."

156
Richard et al found (2005. Differential effects of glyphosate and Roundup on human plancental cells and aromatase. Environmental Health Perspectives. Vol 113, Number 6) that some agricultural workers using glyphosate have pregnancy problems, but its mechanism of action in mammals is questioned. They show that glyphosate is toxic on human placental JEG3 cells within 18 hr with concentrations lower than the agricultural use, and this effect increases with concentration and time, or in the presence of Roundup adjuvants. Surprisingly, Roundup is always more toxic than its active ingredient. The herbicide acts as an endocrine disruptor on aromatase activity and mRNA levels, and glyphosate interacts within the active site of the purified enzyme, but its effect is facilitated by Roundup formulation in microsomes or in cell culture. They concluded that endocrine and toxic effects of Roundup and not only glyphosate can be observed in mammals, suggesting that the presence of Roundup adjuvants enhances glyphosate bioavailability and / or bioaccumulation.

157
Further, Farr et al found (2004. Pesticide Use and Menstrual Cycle Characteristics among Premenopausal Women in the Agricultural Health Study. Am J Epidemiol. 160:1194–1204) that women who used pesticides experienced longer menstrual cycles and increased odds of missed periods compared with women who never used pesticides. Women who used probable hormonally active pesticides had a 60–100% increased odds of experiencing long cycles, missed periods, and intermenstrual bleeding compared with women who had never used pesticides. These abnormalities are linked to increased risk to reproductive success.

158
The precautionary principle should be invoked by the CBF and if in ignorance, it should abstain from using herbicides in JDSF. To the extent the CBF chooses to proceed, it has a duty to engage in as thorough a study as possible on the impacts to pregnant women, fetuses and infants in order to disclose the true cumulative effects of the proposed pesticide use to the public.

Herbicides as a disturbance factor for invasive species

159
The DEIR fails in its analysis of the effects of the treatments that may be used to combat invasive plants and conduct vegetation management. Evidence exists, for example, that herbicides use may create conditions more hospitable to invasive species than were present before the chemicals were applied. CATs is concerned that by spraying herbicides in JDSF the CBF will be actually increasing potential invasive species infestations, rather than reducing them (the 'justification' given for herbicides in the DEIR). This is contrary to and exactly the opposite of the CBF's stated project objectives for the DEIR. The evidence below and the potential indirect impacts exposed of the proposed actions must be analyzed by the CBF in the DEIR.

160
Several studies have confirmed that increased nutrient availability, in the form of excessive dead organic matter, can favor non-indigenous annual species where natural nutrient levels may be insufficient. For example, increases in nitrogen (i.e. the widening of the C:N ratio) have shown to provide a competitive advantage to annuals such as cheatgrass that germinate much earlier in the season than native grasses (personal communication USGS, Corvalis, Oregon). If the CBF uses herbicides on invasive species and competitive vegetation, lots of plants will die, leaving an unnatural amount of dead organic matter on the ground, changing natural nutrient levels, and thus creating an unnatural advantage for unwanted exotic species.

25

161
Use of herbicides where non-native weed plants already occur frequently results in a reproductive advantage for non-native species, which then expand rapidly due to the lack of competition. In a short period of time, this can result in an exponential increase in non-native plants (Wooten and Renwyck 2001).

162
McDonald and Everest (1996) of the USFS Pacific Southwest Research Station, found that cheatgrass populations, not observed in the study plots at the beginning of a study, exploded in herbicide-treated plots in a vegetation management study comparing herbicides and non-chemical means of reducing unwanted shrubs. Herbicide plots ended the four year study with 743,667 cheatgrass plants per acre with 22% foliar cover, where cheatgrass was 6 times greater in number of plants and more than 7 times greater in foliar cover than in the non-herbicide control plots (130,300 plants per acre, 3% foliar cover).

163
McDonald and Everest (1996) found that the cheatgrass was colonizing ground cleared by herbicides. Harper and Whitehead, of the Canadian Forest Service, found similar dynamics in comparable ecological conditions in British Columbia. As he notes in his Brush River Brushing Trial site project report (1994) "Total number of species are higher in glyphosate than in other treatments due to the ability of invading plant species to colonize on exposed sites. The initial reduction of shrub and herb cover of naturally occurring species following herbicide application probably allows for the establishment of such 'invaders." That herbicides appear to be a disturbance factor that actually encourages invasive species to colonize and spread in herbicide-treated areas clearly must be analyzed in the EIR.

164
A study done by the British Columbia Ministry of Forests Research Program in the Upper McKay Creek near Lillooet, B.C. found that the choice of herbicides can have a profound effect on the plant species content and diversity many years after treatment (Simar, Heineman and Youwe 1998). "The abundance of several low shrub species (black twinberry, black gooseberry, thimbleberry, trailing raspberry, red raspberry, birch-leaved spirea, and black huckleberry) was reduced for nine years following application of glyphosate. Hexazinone tended to have a longer-lasting effect than glyphosate on the abundance of grasses and forbs." As this report observes, "Plant communities naturally change over time, but sudden shifts in structure and composition may negatively affect the availability of food for wildlife." Lacking an analysis of the impacts over the long-term that may be expected from the use of various herbicides on non-target plant species composition and abundance, and lacking adequate guidance for which herbicides and other treatment options are suited or not suited for various ecological conditions common in the project area, the EIR cannot serve as an appropriate document for future decisions regarding invasive species management as it is currently written.

165
CATs has above provided examples of problems that the JDSF may incur due to the proposed spraying. The CBF is proposing to spray invasives, but the spraying may actually create conditions more favorable to exotics rather than native species. This has the potential to become a continuous spraying loop, something CATs is obviously strongly opposed to. The CBF is required by CEQA to mitigate or avoid these potentially significant impacts.

Cumulative impacts

166
The CBF has failed to analyze the cumulative impacts of past, present and future pesticide use in the JDSF and surrounding area. JDSF has long had intensive forestry practiced, much like on timberlands, that involves heavy herbicide applications. The watersheds of the Noyo and Big Rivers are part of the JDSF and have been and continue to be impacted by pesticide applications. The area framed by Fort Bragg to the West and Willits to the East, and by the Noyo and Big River watersheds has had heavy pesticide usage in the past, with an average of 6,750 pounds of pesticide products applied over the last five years. The CBF has a responsibility to analyze how the proposed herbicide applications within the JDSF will contribute to the cumulative impacts of

past, present and future pesticide applications in this part of Mendocino County. Impacts of special interest should be to human health, water quality, aquatic species, wildlife, and native botanical species.

167

Table 1. Total pounds of pesticide products applied in Mendocino County in the area between Willits and Fort Brag and within the Noyo and Big River watersheds. Data from California Department of Pesticide Use Databases. Information compiled by Californians for Alternatives to Toxics, Feb. 2006.

Year	2004	2003	2002	2001	2000
Total pounds of pesticide products	3,497	4,375	8,685	7,537	9,637

Conclusion

CATs would like to thank the CBF in advance for regarding our comments. Please consider the issues discussed above prudently. Don't hesitate to contact us for further feedback. We look forward to your responses to the public comment period.

Sincerely,

/s/ Pete Harrison
Forestry and Public Lands Program Associate
Californians for Alternatives to Toxics
pete@alternatives2toxics.org

27

References

IPM

White, David J. and Erich Haber. 2003. Invasive plants and their biology, impact and control options. From: Invasive Plants of Natural Habitats in Canada, Canadian Wildlife Service, Environment Canada. Available [February 2006]: http://www.cws-scf.ec.gc.ca/publications/inv/11_e.cfm.

Achuff, P.L., A.W. Bailey, and L.M. Brusnyk. 1990. Non-native plant management in western region national and historic parks: issue analysis and recommendations. Report by D.A. Westworth and Associates Ltd., for Canadian Parks Service, Environment Canada. 128 pp.

Thomas, L.K., Jr. 1986. Some principles of exotic species ecology and management and their interrelationships. Pages 96-110 in L.K. Thomas, Jr., ed. Management of exotic species in natural communities. Volume 5. Proceedings of the Conference on Science in the National Parks. July 13-18, 1986. The U.S. National Parks Service and The George Wright Society.

Thomas, L.K., Jr. 1991. An ecosystem approach to exotic plant management. Abstract of 76th annual meeting of the Ecological Society of America. August 4-8. Supplement to Bulletin of the Ecological Society of America (June) 72: 267.

Andrascik, Roger, Terry Cacek, Robert Doren, Lissa Fox, Ron Hiebert, Gary Johnston. 1996. A Strategic Plan for Managing Invasive Nonnative Plants on National Park System Lands. U.S. Department of the Interior, National Park Service. Available [Feb 2006]: http://www.nature.nps.gov/biology/invasivespecies/strat_pl.cfm

Archer, Amy J. 2001. Taeniatherum caput-medusae. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2005, October 5].

Zouhar, Kris. 2003. Bromus tectorum. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2006, February 10].

California Department of Food and Agriculture, Integrated Pest Control Branch. Weed information sheet. Dyer's woad. http://www.cdfa.ca.gov/phpps/ipc/weedinfo/isatis.htm

Kedzie-Web, S., R. Sheley, and S. Dewey. 1996. Dyer's Woad: A Threat to Rangeland in Montana. Montguide. MT 9614. Montana State University, Bozeman, Montana.
(CDFA) California Department of Food and Agriculture. Integrated Pest Management Branch. Encycloweedia. Italian thistle. http://www.cdfa.ca.gov/phpps/ipc/weedinfo/carduus.htm

Pitcher, Don. 1986. Italian Thistle, Element Stewardship abstract for Carduus pycnocephalus. The Nature Conservancy, Arlington Virginia. http://tncweeds.ucdavis.edu/esadocs

Washington State Noxious Weed Control Board. Italian thistle.
http://www.nwcb.wa.gov/weed_info/written_findings/carduus_pyconocephalus.html

Weed prevention

USDA Forest Service. 2000. Noxious Weed Management Strategy. Pacific Southwest Region. Prepared by Cheri Rohrer and James R. Shackeford. Recommended by Stephen Paulson. Approved by John Neisess.

Clark, Janet. 2003. Invasive Plant Prevention Guidelines. Center For Invasive Plant Management. Bozeman, Montana. Available [February 2006]: www.weedcenter.org.

Grazing

Belsky, A. Joy and Dana M. Blumenthal. 1997. Effects of Livestock Grazing on Stand Dynamics and Soils in Upland Forests of the Interior West. Conservation Biology Volume 11, Number 3, April.

Weed Research Information Center (WRIC). University of California Extension Service. Yellow Star-thistle Information: http://wric.ucdavis.edu/yst/index.html.

Logging

Merriam, K.E., J.E. Keeley, and J.L. Beyers. 2005. The Role of Fuel Breaks in the Invasion of Nonnative Plants. Technical Report. U.S. Geological Survey, Western Ecological Research Center, Sequoia and Kings Canyon Field Station, California. (in preparation). Available [February 2006]: http://www.werc.usgs.gov/fire/seki/ffm/products.htm.

Graham, Russell T., Harvey, Alan E., Jain, Theresa B., Tonn, Jonalea R. 1999. The effects of thinning and similar stand treatments on fire behavior in Western forests. Gen. Tech Rep. PNW-GTR-463. Portland, OR. U.S. Dept. of Ag. Forest Service, Pacific Northwest Research Station. 27p. Available [February 2006]: http://www.treesearch.fs.fed.us/pubs/2979.

Weatherspoon, C. Phillip. 1996. Fire-silviculture relationships in Sierra forests. In: Sierra Nevada Ecosystem Project: Final report to Congress, Volume II, Assessments and scientific basis for management options. Davis: University of California, Centers for Water and Wildland Resources. Chapter 44.

Countryman, C. C. 1955. Old-growth conversion also converts fireclimate. In: Proceedings of Society of American Foresters Annual Meeting, 158-160. Portland, OR: Society of American Foresters.

Stephens, Scott Lewis. 1998. Evaluation of the effects of silviculutral and fuels treatments on potential fire behaviour in Sierra Nevada mixed-conifer forests. Forest Ecology and Management 105, 21-35.

van Wagtendonk, Jan W. 1996. Use of a Deterministic Fire Growth Model to Test Fuel Treatments. In: Sierra Nevada Ecosystem Project: Final report to Congress, Volume II, Assessments and scientific basis for management options. Davis: University of California, Centers for Water and Wildland Resources. Chapter 43.

Off-road vehicles

Nature Trails and Water Coalition. 2002. Invasive Weeds Threaten Wildlands, Economic Health. Issues/Fact Sheets. Available [February 2006]: http://www.naturaltrails.org/issues/.

Eradication

Dahlsten, Donald L., Richard Garcia, and Hilary Lorraine. 1989. Eradication as a Pest Management Tool: Concepts and Contexts. In: Eradication of Exotic Pests. Donald L. Dahlsten and Richard Garcia (eds.). Yale University Press. Pg. 3-15.

Invasive species

Pampas grass

Gosling, D.S., Shaw W.B., and Beadel S.M. 2000. Review of control methods for pampas grasses in New Zealand. Science for Conservation 165. Department of Conservation, Wellington, New Zealand. Available [February 2006]: http://www.doc.govt.nz/Publications/004~Science-and-Research/Science-for-Conservation/PDF/SFC165.pdf

DiTomaso, Joseph M. undated. Cortaderia jubata. California Invasive Plant Council. Available [February 2006]: www.cal-ipc.org/publications/datastore/detailreport.cfm@usernumber=33&surveynumber=182.html.

Peterson, David L. 1988. Element Stewardship Abstract for Cortaderia jubata, Pampas Grass. Revised by Mary J. Russo. The Nature Conservancy. Arlington, Virgina. Available [July 2005]: http://tncweeds.ucdavis.edu/esadocs/cortjuba.html.

Scotch and French Brooms

California Department of Food and Agriculture, Integrated Pest Control Branch. Encycloweedia website. Scotch broom, French broom, Spanish broom. http://www.cdfa.ca.gov/phpps/ipc/weedinfo/brooms.htm.

Fuller, T.C., and G.D. Barbe. 1985. The Bradley method of eliminating exotic plants from natural reserves. Fremontia 13(2):24-25.

Huckins, Eddie and Jonathan Soll. 2004. Controlling Scotch (Scots) Broom (*Cytisus scoparius*) in the Pacific Northwest. The Nature Conservancy. The Global Invasive Species Initiative. http://tncweeds.ucdavis.edu/moredocs/cytsco01.pdf.

Hoshovsky, Marc. 1986. Element Stewardship Abstract for *Cytisus scoparius* and *Genista monspessulanus*, Scotch Broom, French Broom. The Nature Conservancy, Arlington, Virginia. http://tncweeds.ucdavis.edu/esadocs/documnts/cytisco.pdf.

Parker, B., G. Miller, and L.C. Burrill. 1998. Scotch Broom, Cytisus scoparius (L.) Link. A Pacific Northwest Extension Publication. PNW 103. http://eesc.orst.edu/agcomwebfile/edmat/pnw103.pdf.

Raj, Prasad. 2002. Scotch Broom, Cytisus scoparius L. in British Columbia. Natural Resources Canada. http://www.pfc.cfs.nrcan.gc.ca/biodiversity/broom_e.html.

Yellow Starthistle

DiTomaso, J. 2001. Yellow Starthistle Information. Weed Research and Information Center, The University of California. Available from: http://wric.ucdavis.edu/yst/yst.html

Himalayan blackberry

30

Hoshovsky, Marc. 1989. Element Stewardship Abstract for Rubus discolor, Himalayan Blackberry. The Nature Conservancy. Arlington, Virginia. Available [Feb 2006]: http://tncweeds.edu/esadocs/rubuarme.html.

Hoshovsky, Marc C. undated. Rubus discolor. California Invasive Plant Council. Available [Feb 2006]: http://www.cal-ipc.org/publications/datastore/detailreport.cfm@usernumber=71&surveynumber=182.html.

Cox, Caroline. 2003. Nonchemical Methods for Removing Unwanted Blackberry Plants. Journal of Pesticide Reform. 23(1):10-11. Available [Feb 2006]: http://www.pesticide.org/pubs/alts/blackberry/blackberries.html.

University of California Agriculture and Natural Resources. 2002. Wild blackberries. Pest Notes Publ. 7434. www.ipm.ucdavis.edu

Oregon State University Extension. undated. Blackberries take time and persistence to control. Gardening Information. www.eesc.orst.edu/agcommwebfile/garden/Fruit/blackberries.html.

Drliik, T. 1996. Stumps and brambles. Commen Sense Pest Control 9:21.

AgResearch Crown Research Institute. 1998. Goats for weed control. AgFACT No. 240. www.agresearch.cri.nz/agr/pubs/agfact/pdf/240goatsforweedcontrol.pdf.

Vere, D.T. and P.J. Holst. 1979. Using goats to control blackberries and briars. Agricultural Gazette of New South Wales. 90:11-13.

Tasmanian blue gum eucalyptus

Bean, Caitlin. 1986. Element Stewardship Abstract for Eucalyptus globules, Tasmanian Blue Gum. The Nature Conservancy. Arlington, Virginia. Available [Feb 2006]: http://tncweeds.ucdavis.edu/esadocs/euca_spp.html

Herbicides

Clopyralid

DowElanco. 1997. Clopyralid: A North American technical profile Indianapolis, IN., Oct.

US EPA.. Office of Pesticides and Toxic Substances. 1991. 3,6-dichloro-2-pyridinecarboxylic acid (clopyralid): Review of a rabbit teratology study submitted by the registrant. Memo from T. F. McMahon, Health Effects Division, to E. Wilson, Registration Division. Washington, D.C., Mar. 20.

US EPA. Environmental Fate and Ground Water Branch. 1992. Memo from E. Regelman, Environmental Chemistry Review Section #2 to Joanne Miller, Registration Division, Jan. 24.

Pik, A.J. et al. 1977. Fate of 3,6-dichloropicolinic acid in soils. J. Agric. Food Chem. 25:1054-1061.

Bobey, R.W. and C.W. Richardson. 1991. Dissipation of clopyralid and picloram in soil and seep flow in the backlands of Texas. J. Environ. Qual. 20:528-531.

Tanphiphat, K. and L.C. Burrill. 1987. Persistence of clopyralid in soil. Proc. West. Soc. Weed Sci. 40:75.

Vandervoort, C. et al. 1997. Fate of selected pesticides applied to turfgrass: effect of composting on residues. Bull. Environ. Contam. Toxicol. 58:38-45.

US EPA. 1997. Clopyralid; Pesticide tolerance for emergency exemptions. Fed. Reg. 62(95): 26949-26954, May 16.

US EPA. 1990. EEB review: 90-WA-04. Washington, D.C., Mar. 7.

Tyser, R.W. et al. 1998. Roadside revegetation in Glacier National Park, USA.: effects of herbicide and seeding treatments. Rest. Ecol. 6:197-206.

Pywell, R.F. et al. 1996. Preliminary studies of the effects of selective herbicides on wild flower species. Aspects Appl. Biol. 44:149-157.

Hassan, S.A. et al. 1994. Results of the sixth joint pesticide testing programme of the IOBC/WPRS-working group "Pesticides and Beneficial Organisms." Entomophaga 39(1):107-119.

Information Ventures Inc. 1995. Clopyralid methyl. Pesticide Fact Sheet. Prepared for the US Department of Agriculture, Forest Service.

Dow AgroSciences. 2003. Transline Herbicide. Material Safety Data Sheet. Indianapolis, IN.

Washington State Dept. of Agriculture. 2002. Rule restricting the use of clopyralid. www.wa.gov/agr.

Glyphosate

Temple, W., Smith, N. 1992. Glyphosate herbicide poisoning in New Zealand. NZ Med. J. 105: 173-174.

Richard, S., Moslemi, S., Sipahutar, H., Benachour, N., Seralini, G. 2005. Differential effects of glyphosate and Roundup on human placental cells and aromatase. Environmental Health Perspectives. 113(6): 716-20.

Hardell, L., Eriksson, M. 1999. A case-control study of non-Hodgkins lymphoma and exposure to pesticides. Cancer: J of Amer. Cancer Society. 85(6): 1353-1360.

Young J., Khan S. 1978. Kinetics of nitrosation of the herbicide glyphosate. J Environ Sci Health B. 13(1):59-72.

Lijinsky, W. et al. 1974. Carcinogenic N-nitroso compounds. Proc. of the VI International Cancer Congress. Florence, Italy, October 20-26.

Sittig, Marshall (ed.). 1980. Priority toxic pollutants: Health impacts and allowable limits. Park Ridge, NJ: Noyes Data Corporation.

Rubin, L. 1996. Selected Commercial Formulations of Glyphosate – Accord, Rodeo, Roundup, and Roundup Pro. Risk Assessment Final Report. Prepared for USDA Forest Service. Syracuse Environmntal Research Associates. New York.

U.S. Environmental Protection Agency. 1993. Reregistration Eligibility Decision (RED): Glyphosate. Office of Prevention, Pesticides and Toxic Substances. EPA 738-R-93-014.

Yousef, M., Salem, M., Ibrahim, H., Helmi, S., Seehy, M., Bertheussen, K. 1995. Toxic effects of carbofuran and glyphosate on semen characteristics in rabbits. J Environ. Sci Health B. 30(4): 513-34.

Daruich, J., Zirulnik, F., Gimenez, M. 2001. Effect of the herbicide glyphosate on enzymatic activity in pregnant rats and their fetuses. Environ Res. 85(3): 226-31.

Sawada, Y., Nagai, Y., Ueyama, M., and Yamarnoto, I. 1988. Probably toxicity of surface active agent in commercial herbicide containing glyphosate. Lancet 1 (8580): 229.

Walsh, L., McCormick, C., Martin, C., Stocco, D. 2000. Rounup inhibits steroidogenesis by disruptiong steroidogenic acute regulatory (StAR) protein expression. Environ Health Perpect. 108: 769-776.

U.S. Environmental Protection Agency. 1987. Inert ingredients in pesticide products policy statement. Office of Pesticide Programs. Available at www.epa.gov/opprd001/inerts/lists.html.

Freedman, B. 1991. Controversy over the use of herbicide in forestry, with particular reference to glyphosate usage. J. Envir. Sci. Hlth. C8(2): 277-286.

Marrs, R., Frost, A., Plant, R., Lunnis, P. 1993. Determination of buffer zones to protect seedlings of non-target plants from the effects of glyphosate spray drift. Agric. Ecosys. Environ. 45: 283-293.

Yates, W., Akeson, N., Bayer, D. 1978. Drift of glyphosate sprays applied with aerial and ground equipment. Weed Sci. 26(6): 597-604.

Torstensson, N., Lundgren, L., Stenstrom, J. 1989. Influence of climatic and edaphic factors on persistence of glyphosate and 2,4-D in forest soils. Ecotoxicol. Environ. Saf. 18(2): 230-9.

Oppenhuizen M. 1993. The terrestrial field dissipation of glyphosate: final report. Unpublished report MSL-12651. Monsanto Company, St. Louis, MO.

US Deptartment of Agriculture. 1995. Agricultural Research Service. Pesticide properties database: glyphosate.

Scribner, E., Battaglin, W., Dietze, J., Thurman, E. 2002. Reconnaissance data for glyphosate, other selected herbicides, their degradation products, and antibiotics in 51 streams in nine Midwestern states. US Geological Survey. Open-file report 03-217.

Relyea, R. 2005. The impact of insecticides and herbicides on the biodiversity and productivity of aquatic communities. Ecological Applications. 15(2): 618-627.

Pan, Y., Vaivoda, A., Foster, E. 2003. Effects of bromacil, diuron, glyphosate, and sulfometuron-methyl on periphyton assemblages and rainbow trout. – Final report. Portland State University, Oregon Dept. of Transportation, Federal Highway Administration, Oregon Division.

Servizi J., Gordon R., Martens D. 1987. Acute toxicity of Garlon 4 and Roundup herbicides to salmon, Daphnia, and trout. Bull Environ. Contam. Toxicol. 39(1):15-22.

Tsui, M., Chu L. 2003. Aquatic toxicity of glyphosate-based formulations: comparison between different organisms and the effects of environmnental factors. Chemosphere 52(7):1189-97.

Sidhu, S., Chakravarty, P. 1990. Effect of selected forestry herbicides on ectomycorrhizal develpment and seedling growth od lodgepole pine and white spruce under controlled and field environment. Eur. J. For. Path. 20:77-94.

Kremer, R. 2003. Soil biological processes are influenced by Roundup Redy soybean production systems. Phytopathology 93: S104.

Lotter D., Granett, J., Omer, A. 1999. Differences in grape phylloxera-related grapevine root damage in organically and conventionally managed vineyards in California. HortScience 34(6): 1108-1111.

U.S. Congress. 1984. House of Representatives. Committee on Government Operations. Problems plague the Environmnetal Pretection Agency's pesticide registration activities. House Report 98-1147. Washington D.C.

U.S. Environmental Protection Agency. 1994. "Craven Laboratories, owner, and 14 employees sentenced for falsifying pesticide tests." March 4, 1994. Press Advisory. Washington D.C.

Imazapyr

Tu et al. 2001. Weed Control Methods Handbook. The Nature Conservancy. Updated 2004. http://tncweeds.ucdavis.edu

Center for Ethics and Toxics. www.cetos.org

US EPA – OPP. 1984. Memo from S. Creeger, Hazard Evaluation Division to R. Taylor, Registration Division. Environmental fate review of 241-ETG. Washington, D.C. (Mar. 21).

BASF Corporation. Habitat. Herbicide product label. http://aquat1.ifas.ufl.edu/guide/habitat_label.pdf

Information Ventures, Inc. 1995. Imazapyr, Pesticide Fact Sheet. Prepared for the USDA, Forest Service. http://infoventures.com/e-hlth/pestcide/imazapyr.html

US EPA. Office of Pesticides and Toxic Substances. 1984. Memo from W. Dykstra, Hazard Evaluation Div., to R.J. Taylor, Registration Div. (Sept 17).

US EPA. OPP. 1987. EEB review of 241-EEO. Washington, D.C. (Apr. 21 and Jun. 1)

Coffman, C.B., J.R. Frank, and W.E. Potts. 1993. Crop responses to hexazinone, imazapyr, tebuthiuron, and triclopyr. Weed Technol. 7(1):140-145.

Lloyd, R.W., J.W. Keeling, and J.R. Abernathy. 1986. Efficacy of new herbicides on nutsedge and rotational crops. Proc. 39th Ann. Mtg. South. Weed Sci. Soc. (Abstract)

Heering, D.C. and T.F. Peeper. 1991. Field bindweed (Convovulus arvensis) control in winter wheat (Triticum aestivum) with herbicides. Weed Technol. 5:411-415.

Michael, J.L. and D.G. Neary. 1993. Herbicide dissipation studies in southern forest ecosystems. Environ. Toxicol. Chem. 12: 405-410.

Berisford, Y.C. et al. 1995. Operational monitoring of forest site preparation herbicides in the coastal plain: Assessment of residues in perched watertable. 1995 Proc. South. Weed Sci. Soc: 115-120.

34

Rashin, E. and C. Graber. 1993. Effectiveness of best management practices for aerial application of forest pesticides. Olympia, WA: Washington Dept. of Ecology. Environmental Investigations and Laboratory Services Program. Watershed Assessments Section. (October)

Mangels, G. 1991. Behavior of the imidazolinone herbicides in soil – A review of the literature. In Shaner, D.L. and S.L. O'Conner. (eds) The imidazolinone herbicides. Boca Raton, FL: CRC Press. pg. 191-209.

Sigma Chemical Co., Aldrich Chemical Co., and Fluka Chemical Corp. 1993. Quinolinic acid material safety data sheet. St. Louis, MO, Milwaukee, WI, and Ronkonkoma, NY. (Nov)

Schwarcz, R.W., O, Whetsell, and R.M. Mangano. 1983. Quinolinic acid: an endogenous metabolite that produces axon-sparing lesions in rat brain. Science 219: 316-318.

Cox, Caroline. 1996. Imazapyr, Herbicide Factsheet. Journal of Pesticide Reform. 16(3): 16-20.

Sulfometuron methyl

Triclopyr

Spencer Janet R. 2000. Exposure of hand applicators to triclopyr in forest settings, 1995. Health and Safety Report HS-1769: CA EPA DPR Worker Health and Safety Branch

US EPA Prevention, Pesticides and Toxic Substances 1998. Reregistration Eligibility Decision Triclopyr. EPA 738-R-98-011

US EPA Prevention, Pesticides and Toxic Substances 2001. Reregistration Eligibility Science Chapter for Atrazine, Environmental Fate and Effects Chapter, Drinking Water Exposure Assessment for Atrazine and Various Chloro-Triazine and Hydroxy-triazine Degradates

Hayes T.B. et al. 2002. Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses. Proc. Natl. Acad. Sci. USA, Vol 99, Issue 8, 5476-5480.

Berrill M. et al. 1994. Effects of low concentrations of forest-use pesticides on frog embryos and tadpoles. Environmental Toxicology and Chemistry. Vol. 14, No. 4, 657-664.

Wan M.T. et al. 1987. Acute Toxicity to juvenile pacific salmonids of Garlon 3A™, Garlon 4™, Triclopyr, Triclopyr Ester, and their transformation products: 3,5,6-Trichloro-2-pyridinol and 2-Methoxy-3.5.6-trichloropyridine. Bull. Environ. Contam. Toxicol. 39: 721-728.

USDA Forest Service Tahoe National Forest, 1997. Herbicide Monitoring Results, Long Term Soil Productivity Study Sites, Downieville and Nevada City Ranger Districts.

Chanda S.M., Pope C.N. 1995. Correlation of long-term neurochemical changes with distribution of chlorpyrifos and its metabolites in maternal and fetal rat brain. FASEB J 1995 Mar; 9 (4): A664.

Kreutzweiser D.P. et al. 1992. Effects of the herbicides hexazinone and triclopyr ester on aquatic insects. Ecotoxicology and Environmental Safety 23, 364-374.

35

Johansen J.A., Green G.H. 1990. Sublethal and acute toxicity of the ethylene glycol butyl ether ester formulation of triclopyr to juvenile Coho salmon (Oncorhynchus kisutch) Arch. Environ. Contam. Toxicol. 19, 610-616.

Hietanen E et al. 1983. Effects of phenoxyherbicides and glyphosate on the hepatic and intestinal biotransformation activities in the rat. Acta pharmacol. et toxicol., 53, 103-112.

Canning K.M. et al. 1998, Laboratory simulation of splashes and spills of organophosphate insecticides on chemically protective gloves used in agriculture. Ann Agric Environ Med, 5, 155-167.

Lin Y.-W., Que Hee S.S., 1999. Glove permeation tests using novel microchemical techniques for 2,4-Dichlorophenoxyacetic acid (2,4-D) derivatives. Arch. Environ. Contam. Toxicol. 36, 485-489.

Nielsen J.B. et al. 2001. Dermal In Vitro Penetration of Methiocarb, Paclobutrazol, and Pirimicarb: Effect of Nonylphenolethoxylate and Protective Gloves. Environmental Health Perspectives 109 (2), 129.

Estok D. et al. 1989. Effects of the herbicides 2,4-D, glyphosate, hexazinone, and triclopyr on the growth of three species of ectomycorrhizal fungi. Bull. Environ. Contam. Toxicol. 42: 835-839.

Whisenant S.G. et al. 1989. Triclopyr Persistence in Northern Idaho Forest Vegetation. Bull. Environ. Contam. Toxicol. 42: 660-665.

Dow Agro Sciences, Garlon 4 Herbicide Material Safety Data Sheet. 2002

La Clair, JJ, JA Bantle and J Dumont. 1998. Photoproducts and metabolites of a common insect growth regulator produce developmental deformities in Xenopus. Environmental Science and Technology 32:1453-1461.

CADPR. 2000. Exposure of hand applicators to triclopyr in forest settings, 1995. Health and Safaety Report HS-1769. Sacramento.

Das K., Barone S. 1999. Neuronal Differentiation in PC12 Cells Is Inhibited by Chlorpyrifos and Its Metabolites: Is Acetylcholinesterase Inhibition the Site of Action? Toxicology and Applied Pharmacology, 160 (3): 217-230.

Hunter D., Lassiter T., Padilla S. 1999. Gestational Exposure to Chlorpyrifos: Comparative Distribution of Trichloropyridinol in the Fetus and Dam. Toxicology and Applied Pharmacology, 158 (1): 16-23.

Ando, C., Li, L., Walters, J., Gana, C., Segawa, R., Sava, R., Barry, T., Lee, P., Tran, S., White, J., Hsu, J., Goh, K. 2002. Residues of forestry herbicides in plants of interest to Native Amercians in California national forests. Department of Pesticide Regulation.

Kreutzweiser, D., Thompson, D., Capell, S., Thomas, D., Staznik, B. 1995. Field evaluation of triclopyr ester toxicity to fish. Arch. Environ. Contam., Toxicol. 28: 18-26.

Searle, G., Penman, D., Chapman, R. 1990. The toxicity of herbicides to the gorse spider mite Tetranychus linterius. Proc. 43rd N.Z. Weed and Pest Control Conf: 178-181.

Boggs, J., McMurray, S., Leslie, D., Engle, D., Lochmiller, R. 1991. Influence of habitat modification on the community of gastrointestinal helminths of cotton rats. Journal of Wildlife Diseases. 27 (4): 584-593.

36

Prezio, J., Lankester, M., Lautenschlager, R., Bell, F. 1999. Effects of alternative conifer release treatments on terrestrial gastropods in regenerating spruce plantations. Can. J. For. Res. 29:1141-1148.

Chakravarty, P. and Sidhu, S. 1987. Effect of glyphosate, hexazinone, and triclopyr on in vitro growth of five species of ectomycorrhizal fungi. Canadian Forestry Service, Northern Forestry Centre, Edmonton, Alberta, Canada.

Baarschers, W., Donnelly, J., Heiland, H. 1988. Microbial toxicity of triclopyr and related herbicides. Toxicity Assessement: An Internativonal Journal. 3:127-136.

USGS Survey. National Water-Quality Assessment (NAWQA) Program. 1998. Cirulars 1144, 1150, 1151, 1155-1171. http://water.usgs.gov/pubs/nawqasum/.

USGS Survey. 1999. Pesticides detected in urban streams during rainstorms and relations to retail sales of pesticides in King County, Washington. USGS Fact Sheet 097-99. Tacoma WA, Apr.

Impacts

Pregnant women, fetuses and infants

B.M. Blatter et al., "Paternal Occupational Exposure Around Conception and Spina Bifida in Offspring." Am. J. of Industrial Medicine 32(1997): 283-91

A.M. Garcia et al., "Paternal Exposure to Pesticides and Congenital Malformations," Scandinavian J. of Work and Environmental Health 24(1998): 473-80

A.F. Olshan et al, "Paternal Occupational Exposures and the Risk of Down Syndrome," American J. of Human Genetics 44(1989):646-51

Pew Environmental Health Commission, Healthy from the Start, p.22-23

D.H. Poyner et al., "Paternal exposures and the Question of Birth Defects," J. of the Florida Medical Association 84(1997):323-26

P.G. Schnitzer et al., "Paternal Occupation and Risk of Birth Defects in Offspring," Epidemiology 6(1995):577-83

Poyner et al., "Paternal Exposures"

T. Nurminen, "Maternal Pesticide Exposure an dPregnancy Outcome," J. of Occupational an dEnvironmental Medicine 37(1995):935-40

A.S. Rowland, "Pesticides and Birth Defects," Epidemiology 6(1995):6-7

T. Nurminen et al., "Agricultural Work During Pregnancy and Selective Structural Malformations in Finland," Epidemiology 6(1995):23-30

Schettler, In Harm's Way

37

Letter E-28

Response to Comment 1
The responses below will specifically address the stated concerns about use of herbicides and adequacy of analysis and avoidance of impacts. Support for Alternative D is noted. The Administrative Draft Final Forest Management Plan (or Plan) being considered by the Board of Forestry and Fire Protection (Board) is more restrictive regarding the use of herbicides than Alternative C1. See pages III-38 to 45 and 105 in the Recirculated Draft Environmental Impact Report for JDSF Management Plan Alternative G (RDEIR). Alternative G incorporates elements of Alternatives D-F to provide for a greater amount of the Forest to be managed for all-aged, older forest structure than Alternative C1.

Response to Comment 2
Support for Alternatives E and F is noted. Alternative G (which is incorporated into the Administrative Draft Final Forest Management Plan) provides the greatest management emphasis on research and demonstration. The first three goals of the Plan are: Goal #1 – Research and Demonstration, Goal #2 – Forest Restoration, Goal #3 – Watershed and Ecological Processes. Alternative G provides for less intensive forest management than Alternative C1, with expected annual harvests estimated to decline from 31 million board feet (MMBF) per year to 20-25 MMBF per year, similar to the 19.3 MMBF average annual harvest in Alternative F (Table II-4, page II-29 in the RDEIR). The proposed Administrative Draft Final Forest Management Plan would permit an allowable cut of up to 35 MMBF/year, however it is unlikely that this level could be achieved, given the various other goals and constraints contained in the Plan. Further, it places significant restrictions on the utilization of evenaged management.

Response to Comment 3
Opposition to Alternatives C1 and C2 is noted. Alternative G (which is incorporated into the Administrative Draft Final Forest Management Plan) calls for less intensive management practices than Alternatives C1 and C2, as noted in the response to Comment 2. Alternative G places further restrictions on the use of herbicides. The environmental analysis in the DEIR, RDEIR, and FEIR did not find that a significant adverse effect would occur from the use of herbicides. The specific concerns listed will be addressed in detail below.

Response to Comment 4
The Board assumes that the term “chemical free” Integrated Pest Management (IPM) from the comment refers to no herbicide use. Many non-herbicide approaches to vegetation management require substantial use of petrochemicals.

The reference cited for the Canadian Wildlife Service (White and Haber 1993) appears to have been modified in the comment letter quote. The section quoted appears to be from the section 1.3, outlining five control methods. The first control method listed was herbicide, followed by physical removal, the use of biological agents, prescribed burning, and ecological or integrated pest management. For the IPM section, the correct quote is as follows:

> Ecological or Integrated Pest Management involves combining elements of the above four methods with preventative measures, increased knowledge of the target species biology and ecology, and restoration of the biotic and abiotic components of a habitat before or concomitant with the removal of the invasive exotic (Achuff et al., 1990; Thomas, 1986; Thomas, 1991).

The section of the quote that was paraphrased (altered) in the comment is underlined. From the context, it is clear White and Haber considered herbicides a component of IPM.

The majority of the ideas attributed to Thomas in the quote from White and Haber (1993) document found in the concern letter come from the proceedings of a conference conducted

approximately 20 years ago (1986). As time has passed, the recognition that disturbance is not always necessary for invasive weeds to threaten wildlands had been validated.

Alternative G includes Integrated Weed Management and Integrated Pest Management Strategy that incorporates elements of the correctly quoted description from White and Haber (1993) and that includes consideration of the factors cited from Thomas (1986).

Response to Comment 5
The DEIR defines Integrated Weed Management (IWM) as the control method that shall be used at JDSF (IIV.6.6-20). This has been included in the Administrative Draft Final Forest Management Plan. The term IPM refers to Integrated Pest Management. IPM is a broad set of principles. The more specific implementation of these principles for invasive weed control on JDSF is referred to as IWM in the DEIR. The responses refer to IWM as a JDSF approach and IPM as the broader approach.

Response to Comment 6
The definition quoted in the comment is from Assembly Bill 2260, establishing the Healthy Schools Act of 2000. As indicated in the concern letter it may be viewed on the Department of Pesticide Regulation (DPR) web site (http://www.cdpr.ca.gov/cfdocs/apps/schoolipm/school_ipm_law/17_ab2260.pdf). The Healthy Schools Act supplemented the Education Code and Food and Agriculture Code Section 13181. The last sentence in Section 13181 was not included in the concern letter quote. The final sentence states (emphasis added) "This definition shall apply only to integrated pest management at school facilities." Though IPM shares general principles, specific pest management situations will necessitate some differences in emphasis. Pest management within schools is inherently different from pest management on a forest.

Response to Comment 7
The level of detail that the comment requests is beyond the scope of an EIR. The DEIR provides programmatic direction with respect to vegetation management. This does not relieve CAL FIRE from conducting the appropriate site-specific analysis before undertaking any weed management activities. The DEIR page VII.8.13 to 16 provides an explanation of CEQA analysis and herbicide use. JDSF is building its IWM strategy by using adaptive management. As the invasive weed program develops, standards for treatment are developed based upon knowledge gleaned from management of the Forest, from partners in the Mendocino Coast Weed Management area, and elsewhere. DEIR page VII.6.2-20 includes among the eight "planned actions" included in the Administrative Draft Final Forest Management Plan; "The status of infestations and management effectiveness will be periodically evaluated."

Treatment thresholds depend on the risk posed by the invasive weed and the resources at risk. For example, a single individual of a species that is not established on the forest but is known locally for aggressive spread (example *Deliria odorata*, cape ivy,) would be treated with a goal of elimination. Unfortunately, other invasive species are well established in some areas, so management will be more complex and lengthy. For these species (example *Cortaderia jubata,* jubata grass), treatment could occur when individual invasive weeds threaten a sensitive resource, such as a rare plant occurrence. Numerical triggers may be appropriate for agricultural implementation of IPM, where the decision to treat a pest is based on an economic factor.

The DEIR lists thirteen species with reference to their relative abundance (VII.6.2-12 and 13 and Appendix 7B-1). The document provides adequate detail for consideration of vegetation management at the management planning level. Further detail will depend upon analysis performed with knowledge of individual projects and their environment. In the absence of control measures, invasives have some potential to spread. The invasive nature of these species is well documented (e.g. California Invasive Plant Inventory).

High priority invasive weed occurrences are mapped. These occurrences are monitored, and treatments are evaluated and documented. "The status of infestations and management effectiveness will be periodically evaluated." (DEIR page VII.6.2-20) The inclusion of site-specific monitoring results is beyond the scope of a programmatic EIR.

Response to Comment 8
One-time treatments of any type may not be effective. Neither one-time hand pulling nor herbicide application will eradicate an invasive weed, if there is a well-established seed bank at that location. CAL FIRE will not undertake any invasive weed control measures unless there is a plan to manage the weed occurrence for the long term to cope with resprouting or seeding. Any new techniques will be used on small scale and monitored to determine their effectiveness. The references cited note that herbicides can be an appropriate component of control measures in their discussion of these individual species (Zouahr 2003, CDFA (Dyers–Woad), Huckins and Stoll 2004, Raj 2002, Hoshovsky 1996).

The comment states; "Herbicide use for noxious weed management has been shown to be neither the lowest impact nor the most environmentally or economically effective control treatment method." The statement is represented in the letter as a conclusion drawn from the references cited. The references cited were examined to determine whether they made a similar conclusion, and if so, whether the context was relevant. The second citation for the CDFA Encycloweedia is for Italian Thistle. This web reference lists a variety of treatments as being effective, including goats, seven herbicides, and IPM. The reference does not support the comment's conclusion.

Regarding the citation of Kedzie-Webb et al. (1996), this reference states:

> None of the herbicides mentioned have been found to be cost effective for controlling large infestations on rangeland. Cost effective control of large infestations with herbicides depends on the value of the rangeland. Therefore, early detection and treatment of new invasions is most critical.

Note that this specific rangeland analysis is not pertinent to JDSF.

The remaining references cited Huckins and Stoll (2004) and Hoshovsky (1986), descibe control meaures for broom, and include the use of herbicides in the recommendations. These references do not support the comment's statement.

Response to Comments 9-10
Approaches to weed management will be ecologically based as indicated on page II-11 of the RDEIR, "Integrated Weed Management would consider herbicides as a possible treatment for invasive plant species only under limited conditions. No application would be undertaken unless sit is part of a long-term ecologically- based management approach..." The DEIR includes, in Appendix 7B-1, six pages of discussion of the biology and ecology of the major invasive species at JDSF. The threat posed by a given plant will vary by habitat and associated resources at risk. Inclusion of additional detail on weed biology is beyond the scope of the DEIR. The DEIR includes a sufficient level of detail to enable a thorough analysis of the potential for significant effects to occur.

The DEIR includes direction intended to keep knowledge of invasive weeds current. Page VII.6.2-21 states that one of the eight planned actins for invasive exotic plant species control is "JDSF proposed a cooperative with local, state, and federal agencies, forest landowners, and private and public organizations to develop weed management strategies.

Response to Comment 11
The Board recognizes that IWM at JDSF could involve a variety of techniques (DEIRVII.6.2-20.) The Archer (2001) reference is species-specific information (medusahead grass, a species that is not a concern on the forest). In many cases a single treatment method (including herbicides) is

effective, when it has a sound ecological basis. However, the management of JDSF is not restricted to single treatment methods.

Response to Comment 12
The Board is aware of the importance of timing. DEIR page VII.8-12 indicates this in a discussion of IWM program "which relies on a thorough understanding of the pest's biology, the affected environment, timing,…" Dates referenced in literature may not match annual weather patterns or the phenology of invasives in the redwood region. Phenology is likely to vary by distance from the coast and elevation as well. These site-specific, project-specific issues are better addressed at the project level environmental evaluation than in a programmatic EIR.

Literature would be considered in the development of any site specific weed management project, as would the results of effectiveness monitoring for prior projects (DEIR page VII6.2-20).

Response to Comment 13
The Board recognizes the role of vectors in weed spread. The principle vectors (vehicles, contaminated hay, wind, animals, humans, insects, etc) for the manor invasive exotic species on JDSF are included in DEIR Appendix 7B-1. This appendix also noted whether the species is spread by seed, plant parts, or both.

The IWM strategy at JDSF recognizes understanding of the spread of invasives is important. As provided in the Administrative Draft Final Forest Management Plan Chapter 3, the evaluation of weed infestation will include an investigation of the probable cause of the infestation.

The DEIR includes as one of the eight planned actions to reduce invasive weed populations that "The impacts of invasive exotics and the potential for spread will be considered during the development of individual projects" (page VII.6.2-20). This would include preventative measures. Other preventive measures, such as cooperative activities and modification of potential habitat are included in the Administrative Draft Final Forest Management Plan. As an example, page DEIR VII.6.2-21 states; "JDSF proposes a cooperative with local, state, and federal agencies, forest landowners, and private and public organizations to develop weed management strategies … JDSF will continue to support the International Broom Initiative, and will continue to be involved in local weed management initiatives." Additional Management Measure 1 (DEIR VII.6.2.7) commits to monitoring rare plant occurrences for invasive weed problems.

The Board recognizes that an understanding of the causes of invasive weed infestations is key to effective management. This is a basic component of IWM at JDSF.

Response to Comment 14
Invasive weed management will continue to focus upon roads and other areas that represent potential sources of infestation. Roads link most campgrounds and recreation areas. Some species are readily controlled by a vector approach, while others are not.

Response to Comment 15
The cited document is the Regional Noxious Weed Strategy (US Forest Service, 2002). The document includes general discussions appropriate at a very broad scale. JDSF forest management would make use of some similar approaches, as well as others, on a project-specific basis. For example, the DEIR (p. VII.8-11) identifies the IPM measure of: "Manage incidental introductions including those from rock, straw and other materials."

JDSF has taken immediate action, including manual control methods, as well as pre- and post-project monitoring for invasive weed management. Identification and avoidance can also be effective, and has been utilized. Project-, site- and species-specific measures are more effective than general guidelines.

Response to Comment 16
The IWM approach includes prevention and an understanding of the disturbance effects that lead to infestations. Infestations have been facilitated by both management related disturbances and the proximity of infested rural residential and other lands. The DEIR, page VII6.2-20, provides for consideration of invasives during project development; “The impacts of invasive exotics and the potential for spread will be considered during the development of individual projects.” Some management actions have potential to create conditions that are more favorable to the establishment of invasive species, such as timber harvesting, road construction, road maintenance, and recreational development. These activities can be modified, based upon local conditions, to reduce the threat of infestation. Project modification may include variations in shade retention, buffering of roadsides, and reductions in the level of soil disturbance.

Response to Comment 17
A Monitoring and Adaptive Management Program is included in the Administrative Draft Final Forest Management Plan (Chapter 5) that will provide a framework to develop effective control techniques. Page III-23 of the DEIR summarizes the program. See response 16 above.

Response to Comment 18
Using cleaning or washing as a method to control invasive species is not likely to be effective, given the species of invasive weeds currently known to the Forest. Most of the infestations on JDSF occur due to spread by animals, wind, and vegetative means. Cleaning equipment can be effective in specific instances, depending upon the species and sites involved. Buffering infestations to prevent off-site movement of propagules may be a feasible approach for some projects. Speculation concerning the site-specific utility of cleaning measures is beyond the scope of this document.

Response to Comment 19
Grazing and off-road vehicle use are not permitted within the Forest. However, some illegal off-road vehicle use does occur. Most of this activity occurs along roadways at the periphery of the Forest. Local evidence does not suggest that these activities are a significant cause of infestation by invasive species.

Response to Comment 20
Grazing is counter to Board policy (Policy 0351.6) and is not permitted on the Forest. Grazing occurred historically in some areas in the forest, prior to the establishment of the State Forest. This use was primarily associated with the logging camps and early settlement.

Response to Comment 21
Utilizing grazing as a tool for invasive weed control is likely to be ineffective, due to the terrain, available access, the form of the forest vegetation, and the presence of predators. Brooms are toxic to some grazing animals and other major invasive species are less palatable than native plants. Any future use of grazing as a control method would entail careful analysis of the risks and benefits, as well as requiring a change in Board policy, see response above.

Response to Comment 22
Timber harvests are a key part of JDSF’s legislated mandate. They are critical to the demonstration of sustainable forest management. See DEIR Section II. 2 for Board policy related to management of the state forest. Fuels reduction is not the primary purpose for logging activities. Please see DEIR section VII-8 for an evaluation of forest protection, including IWM.

There is potential for invasive species to become established in the forest environment regardless of the form of stand management that is utilized. In general, the most common species present tend to invade newly disturbed areas, such as roads and skid trails. As the forest canopy redevelops and affected areas regenerate, the degree of infestation tends to diminish. Depending upon specifics such as the relationship of disturbance to invasive species and to existing shade levels, plans can be modified to prevent or reduce the risk or degree of invasive establishment.

The specifics of the project site must be considered, and appropriate projects modifications made to reduce or prevent this occurrence. This is the component of IWM at JDSF.

Timber harvests and fuel reduction will vary in their potential to increase invasive weeds. The measures developed must be project specific. The Administrative Draft Final Forest Management Plan (Chapter 3), Planned Actions for invasive weeds, specifies the following; "Staff will consider the impacts of exotic weeds to native vegetation during the normal course of project development. If there is a high likelihood of weed spread due to a nearby infestation, mitigation should be considered where appropriate and consistent with IWM to minimize weed spread."

Response to Comment 23
At JDSF, revegetation is rapid following harvest. The DEIR includes discussion of fire and fuels issues (page VII.8-5&6). Most of the forest is rated as high with regard to fuel levels, due to the high level of forest vegetation inherent to this region. The fire potential is largely mitigated by a relatively wet climate and lower-than-average frequency of severe fire weather. Other factors also affect the potential for wildfire ignition and spread, including the access and the proximity to fire control resources.

The management of the forest focuses upon promoting ecological processes to regenerate the forest, not mechanical or chemical treatment. Carefully planned timber harvest operations are capable of adjusting site occupancy, which is generally maintained by stand development. Herbicides are not widely utilized, nor depended upon, to maintain the forest vegetation in a specific condition. Herbicides are utilized judiciously and in a localized manner under specific circumstances. The analysis in the DEIR and RDEIR did not find that herbicide use would result in a significant adverse environmental impact.

Response to Comment 24
Forest thinning is an activity that is considered in the DEIR and RDEIR. Under Alternative G and the Administrative Draft Final Forest Management Plan thinning objectives include the adjustment of stand structure and tree species to achieve sustainable production goals and to create specific structural conditions (or habitats), as detailed in Administrative Draft Final Forest Management Plan Table 3.2. Thinning may be an important aspect of stand management on an even or uneven-aged basis, and can contribute to conditions that are more resistant to the spread of wildfire. However, landscape-level fuels manipulation is not a primary objective of thinning.

Shaded fuel breaks are among the fire defense improvements referenced in the DEIR and RDEIR. These shaded fuel breaks may be considered in defensible areas along main ridges, adjacent to high use roads, and adjacent to rural residential neighborhoods (page VII.8-7 of the DEIR). The mesic climate lowers fire risk but also increases the rate at which native and invasive plants can become established within a shaded fuel break. Among the considerations for any fuel break project would be long-term management and maintenance, including addressing invasive species risks. Some species of native vegetation, including ferns, forbs, and low shrubs could be managed to discourage the growth of ladder fuels. Significant impacts related to fire safety are not expected to occur. Historically, the incidence of significant fires is very low in the local area.

Response to Comment 25
The Hazards and Hazardous Materials section (VII-8) of the DEIR includes discussion of wildfire risk and measures to protect the Forest. The proximity of the Pacific Ocean and its resulting summer fog pattern dominate any minor microclimate changes associated with the forest structure within JDSF. The vast majority of the Forest is well vegetated with a high level of forest canopy

Response to Comment 26
The DEIR and RDEIR do not include provisions for broad-scale restoration of the pre-Euro-American fire frequency to the redwood forests at JDSF. Such a practice could pose a threat to adjacent property and may not be consistent with the concept of sustainable timber production,

due to the anticipated level of stand damage that would occur. However, some level of underburning may be considered at a local level in areas designated for late-seral forest development.

The concern quoted a study from the Sierra Nevada regarding the need for underburning. The Stephens article is titled "Evaluation of the effect of silvicultural and fuels treatments on potential fire behavior in Sierra Nevada mixed-conifer forests." Jackson Demonstration State Forest is not located in the Sierra Nevada mixed-conifer forest; it is located in the fog-influenced redwood forest. The results of this modeling are not directly applicable to the redwood forest type found at JDSF, nor is the assumption that natural fire regime is a goal for JDSF.

Response to Comment 27
The reference cited is from the 1996 Sierra Nevada Ecosystem Project, a chapter titled "Use of a Deterministic Fire Growth Model to Test Fuels Treatments." The abstract includes this description of the analysis and results:

> Wildfire spread was simulated under idealized conditions to see how specific fuel and stand treatments affect fire behavior. It was obvious from the simulations that fuel breaks alone do not halt the spread of wildfire. Prescribed burning appears to be the most effective treatment for reducing a fire's rate of spread, fireline intensity, flame length, and heat per unit of area. A management scheme that includes a combination of fuel treatments in conjunction with other land-management scenarios should be successful in reducing the size and intensity of wildfires.

While controlled periodic underburning may have potential to reduce the long-term risks associated with wildfire, significant impacts are not expected in consideration of the current level of risk in combination with planned forest management. The context of the actual quote recognizes that this reference was a simulation and that other techniques have a role in modifying fire behavior. The Sierra Nevada is a different ecosystem than the costal redwoods, and fire issues are different as well.

Response to Comment 28
The DEIR discusses fire history on JDSF and recognizes the ecosystem role of fire (see DEIR pages VII.8-1 through -6). It also identifies the Forest's potential for conducting research on prescribed fire as a management tool, including ecosystem management and as a vegetation management tool to protect, maintain, or improve wildlife or plant habitat. This type of research activity is supported in the DFMP (page 83) and the Administrative Draft Final Forest Management Plan (see Chapter 3). However, systematic application of prescribed fire throughout the Forest is not anticipated.

With respect to "prehistorically natural conditions," Alternative G and the Administrative Draft Final Forest Management Plan provide for substantial areas of the Forest, over one-third, to be managed for older forest conditions, including the remaining old growth groves, which would be the portion of the forest closest to prehistorically natural conditions. Prescribed fire may be utilized within these older forest areas, but only after careful study and consideration of ecological processes and environmental effects, including the application of IWM principles and potentials for either controlling or encouraging invasive species.

The DEIR hazards section describes changes in reforestation techniques that have resulted in a reduction in broadcast burning and the need for subsequent herbicide use (pages VII.8-12 to -13).

Response to Comment 29
Public use of off-highway vehicles is not legal on JDSF, nor do any of the alternatives propose a change in that status. Visitor travel on the forest is restricted to highway legal vehicles on roads

designated as open. Some illegal OHV use occurs despite CAL FIRE enforcement of the laws to prohibit such use. Please see responses above concerning the weed vector issue.

Response to Comment 30
The Administrative Draft Final Forest Management Plan Chapter 3 Invasive Weed Planned Actions include: "Conservation of and reestablishment of native vegetation will be considered in disturbed open areas adjacent to forest roads in order to minimize weed spread." Regarding the comment about native forbs and grasses, understory response is discussed extensively in the DEIR at pages VII.6.2-40 to 41.

Response to Comment 31
The paper by Belsky and Bluementhal (1997) concerning ponderosa pine and mixed-conifer forests of the interior west does not appear to support the comment. Regarding competition, this paper states:

> Prior to extensive Euro-American settlement, circa 1820 - 1890, two natural phenomena maintained the trees at low densities (1) competitive exclusion of tree seedlings by dense understory grasses and (2) frequent thinning of understory trees by low-intensity surface fires. The vigorous graminoid understory was particularly important in maintaining low tree densities because established grasses with their extensive root systems are able to out-compete tree seedlings for soil moisture and nutrients (Rummell 1951; Larson & Schubert 1969; Miller 1988; Karl & Doescher 1993).

Regarding exotic weeds:

> Exotic weeds have been able to displace native species, in part, because native grasses of the Intermountain West and Great Basin are not adapted to frequent and close grazing (Stebbins 1981; Mack & Thompson 1982)

The redwood forest is different ecosystem than the interior ponderosa pine and mixed conifer forests of the west. Grasses play a more limited role in the redwood forest understory and succession that in other parts of the west, primarily due to influence of other plant species that overtop and shade out grasses.

A PEIS is a preliminary environmental impact statement, which is normally associated with a federal project. The lead agency for the JDSF management plan is the Board of Forestry and Fire Protection, which is a state agency subject to CEQA, rather than the National Environmental Policy Act (NEPA). Revegetation has been considered in the Administrative Draft Final Forest Management Plan, DEIR, RDEIR, and FEIR. The Administrative Draft Final Forest Management Plan does not propose widespread fuels reduction in the redwood forest of JDSF.

Response to Comment 32
The DEIR addresses eradication and control (VII.8-12). IWM recognizes that eradication is an inappropriate goal for well-established invasive weeds. It recognizes that control is the appropriate strategy in this situation. It notes that treatments would not be recommended without a careful assessment of the pest's impacts. The management decisions will be site and species-specific. The DEIR, RDEIR, and FEIR provide analysis and guidance of vegetation management that will be considered at the project level. See also the response to Comment 7.

Response to Comment 33
The DEIR and RDEIR considered a range of alternatives to treat invasive plants. The alternatives vary from no use of herbicides (Alternative E) to herbicide usage only very generally constrained by label and other legal restrictions (Alternative B), with several variations in between (see "Herbicide Application" and "Invasive Species Control" in RDEIR Table II.4). The various alternatives consider IWM, a moratorium on herbicide use, research and demonstration of alternatives to herbicides, and

other elements. This range of feasible alternative approaches to herbicide use is adequate to meet CEQA requirements.

The DEIR and RDEIR do not represent a decision document for specific herbicide applications; the approach to vegetation management is programmatic. The DEIR document recognizes that individual projects may use mechanical and manual methods to control invasive weeds (page VII.8-12). CAL FIRE is clearly aware of, and interested in using non-herbicide methods to manage vegetation.

JDSF has been a research site for non-herbicide vegetation control methods. This research has included investigation and consideration of several techniques with potential to control species of broom and the resultant seed bank. CALTRANS utilized JDSF as a test site for several control methods, including alternatives to the use of herbicides (Young 2003). JDSF remains interested and available for research of this kind. As noted in response to earlier comments, the supposition that IPM excludes herbicide use is not supported by the literature.

Several of the alternatives, as well the Administrative Draft Final Forest Management Plan, include consideration of research on alternative methods to controlling invasive species (Alternatives C1, C2, E, F, and G). Alternative G, page II-10 of the RDEIR, include the following statement:

> In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks.…

The Administrative Draft Final Forest Management Plan (Chapter 3) details these elements more specifically:

> CALFIRE and the BOF recognize there is public controversy regarding herbicide use. A total ban on herbicide use would compromise research opportunities and the broad demonstration value of the Forest and could result in adverse environmental and economic consequences. JDSF staff will adopt the following limitations to potential herbicide use:
>
> - No herbicide will be used unless it is integral to long-term, ecological based management. Projects will be proactive rather than reactive. These considerations will limit and focus any herbicide use. Long-term management will often integrate a variety of treatment techniques.
> - Public and environmental safety is a priority. When herbicide use is indicated, JDSF staff will reduce risk by selecting appropriate herbicide formulations and application techniques.
> - Recognize that some forest visitors may experience negative aesthetic reaction to dead treated plants, even if they are invasive weeds. Herbicide use will be evaluated for aesthetics where treatments could have this potential effect.

Response to Comment 34

The DEIR and RDEIR include a number of alternatives that incorporate the IWM approach that is based on ecological and preventative principles that are incorporated into the Administrative Draft Final Forest Management Plan. IWM is specifically included in Alternatives C1, C2, E and G, & the Administrative Draft Final Forest Management Plan.

Specific and detailed techniques for control of invasive species are not included in the DEIR. This level of management specificity is beyond the scope of the document. The DEIR and RDEIR provide

the appropriate level of analysis to enable a thorough assessment of the potential for significant adverse effects.

The DEIR does not contain an extensive description of symptoms. It discloses the environmental conditions that exist on the forest.

With reference to restoration of natural ecosystems and the range of alternatives the DFMP includes "Goal #3 - WATERSHED AND ECOLOGICAL PROCESSES**:** Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities". This goal helped formulate Alternatives C1 and C2. Alternatives E and F added an emphasis on management for late seral or older forests. Alternative B had little recognition of natural ecosystems. Alternative G places a greater emphasis on older forests than Alternative C1. The second goal for Alternative G and the Administrative Draft Final Forest Management Plan is "Forest Restoration: Work toward active restoration by managing the Forest to promote and enhance forest health and productivity," The objectives under Goal #2 provide additional detail as to how the goal will be attained. The analysis has encompassed an adequate range of management objectives regarding natural ecosystems.

Response to Comment 35
The DEIR and RDEIR consider and retain a broad range of potential treatment methods. The Board has not proposed to make a blanket decision to rely only on non-organic herbicides. As noted above (see response to Comment 33), the EIR alternatives include research and demonstration of alternatives to herbicides. Alternative G included more specific language to limit herbicide use and encourage alternative methods (see response to Comment 33 regarding the RDEIR and "In an operational context…").

Project planning will incorporate consideration of the potential effects associated with proposed treatment methods.

JDSF is open to demonstration and experimentation involving the techniques listed in the comment letter. Alternative G's emphasis on Research and Demonstration add focus. Some, such as torching, have already been used on the Forest. Priority projects would be those that are both feasible and relevant to forest conditions.

Response to Comment 36
The comment letter author may be unaware of the extensive use of volunteers utilized for invasive weed work near the state forest. Several state park groups, a land trust, botanical garden, and neighborhood groups regularly undertake invasive weed control efforts. Recent outreach by the Mendocino Coast Cooperative Weed Management Area failed to recruit a significant number of new volunteers. JDSF is interested in developing volunteer projects. Alternative G supports these activities.

Response to Comments 37- 64
These comments describe specific control methods for a number of invasive species. They do not raise specific environmental impact concerns about the alternatives considered by the Board.

The Board agrees that each invasive weed and proposed project should be evaluated carefully. The DEIR and RDEIR provide a description of the range of control methods to be used and identify the weed species that are anticipated to potentially require treatment. Within this programmatic context, the assessment in these documents did not find that the proposed actions, as mitigated, would result in a significant potential environmental impact.

The specific possible options for control measures are appropriately considered at the project level. The DEIR includes a discussion of the objectives of the DEIR and its relationship to specific projects (page II –9 to 14). Alternative G provides some specificity in terms of general location of future projects, but the specific operational detail is not known at this time. This management

planning process will establish constraints and mitigation that future projects must adhere to, and recognizes the potential need for future analysis and CEQA compliance.

Sources of information regarding the control of invasive plants, and alternative techniques include: “The Weed Workers’ Handbook, A Guide to Techniques for Removing Bay Area Invasive Plants (Holloran et al. 2004), and the Nature Conservancy's “Weed Control Methods Handbook: Tools and Techniques for Use in Natural Areas” (Tu et al. 2001), as well as various university and government web sites. The availability of information on potential techniques does not demonstrate that they are feasible for use on JDSF, or that the potential environmental effects compare with the use of herbicides. Some of the techniques listed are utilized at JDSF, while others have been tried and have shown little or no promise. Some treatments appropriate for agricultural areas are likely to produce significant impacts if utilized in the forest environment.

Response to Comment 65
Please see response 37 for the description of the role of the DEIR in relation to individual projects. The herbicide information provided is adequate for the consideration of potential effects at the management planning level. The information provided does not support a specific decision to use a given herbicide, but discloses the range of possible herbicides that could be used. Please see DEIR Section VII-8.2.3. This section includes discussion of new information. Please also see the RDEIR at pages III-105 through 110.

The DEIR, RDEIR, and FEIR appropriately provide information to inform decision makers and the public.

Response to Comment 66
Once approved, the Administrative Draft Final Forest Management Plan will provided guidance until such time as the document is significantly amended, revised, or replaced. As new and relevant information becomes available, it will be considered, and the management plan may be revised if proposed changes are significant. All herbicide use will be according to label restrictions and all applicable regulations. The level of effectiveness and safety will be considered. If herbicide products that are not addressed in the DEIR or RDEIR are considered for use on a future project under the Administrative Draft Final Forest Management Plan, any necessary CEQA evaluation will be conducted at that time.

Response to Comment 67
The DEIR does not simply assume, as the comment states, that “if an herbicide is registered and label directions are followed that the herbicide product will be ‘safe.’” Appendix 13 of the DEIR provides general descriptions of herbicides considered for use on Jackson Demonstration State Forest that includes information on potential risks (potential for groundwater contamination, effects of contact with skin, eyes or when ingested, etc). The Appendix also includes a brief introduction to the analysis tool, (Table 1) Categories of Herbicide Toxicity. This presents the factual basis for the risks reviewed and captured on the product labels. These ratings are part of both the Federal and State registration process. The registration process along with the site specific use recommendations make it highly unlikely some one would encounter the dose listed in the tables.

The DEIR also discusses the use of targeted treatments and the potential impacts to non-target species (p. VII.8-10 to -13 and Appendix 13). Project-level evaluations of potential herbicide use will consider potential impacts to non-target species.

Pages VII.8-15, 16 and 12 of the DEIR also indicate that a wide variety of information was taken into consideration when evaluating potential herbicide use impacts in general, and—more critical relative to the comment’s concern about project-specific analysis—will be considered prior to any specific application proposal:

> Where herbicide use is proposed for use under the DFMP CDF will review the herbicide's intended use and its possible environmental effects.… CDF will also check for significant new information showing changes in circumstances or available information that would require new environmental analysis.… CDF will look for simple and practical ways to avoid or mitigate potential new significant effects on the environment. Cumulative impacts are unlikely because herbicide uses related to different control projects are separated in time and distance so that their individual effects do not reinforce or interact with each other. Herbicide use under the DFMP is neither widespread nor frequent. Herbicide may be used to reduce weed competition with small seedlings, to release the young trees from competition with brush, or to eliminate exotic weeds. Forestry herbicide uses are substantially less, in both frequency and amount, than in agricultural or urban settings.
>
> Furthermore, based on evaluations CDF has conducted on this issue in relation to herbicide use by other landowner, potentially significant impacts related to the actual application of herbicides on JDSF are not expected. A CDF report titled *Environmental Effects of Herbicide Related to Timber Harvesting* (Norm Hill and Wendy Wickizer March 4, 2002) states that "The effects are generally not cumulative impacts because uses related to different Timber Harvest Plans (THPs) are separated in time and distance so that their individual effects rarely reinforce or interact with each other...."

CAL FIRE will continue to monitor the scientific literature for significant new information about the potential effects of herbicides, both in general and when considering herbicide use for a specific project to be carried out under the ADFFMP.

The alternatives restrict the use of herbicides to varying degrees. Alternative G restricted the herbicide use in the management plan and requires project-specific analysis (RDEIR pages II-10 and 11):

> Alternative G would eliminate one of the management uses of herbicides permitted under Alternative C1 (treatment of native species for road maintenance purposes, unless needed for a specific fire prevention project) and impose further restrictions in the use of herbicides control of hardwoods to adjust conifer/hardwood stocking [ratios] and control of invasive weed species as part of an Integrated Weed Management program.
>
> In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks. JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions.
>
> Alternative G incorporated Alternative C1's provisions for an effective integrated pest management program. Adjusting imbalance in conifer/hardwood stocking levels by utilizing herbicides will be limited to specific reforestation situation on the east side of the Forest. In specific areas toward the east end of the forest, high tanoak stocking levels are capable of preventing native conifer establishment and growth. Herbicides may be used to decrease native hardwood stocking levels only when other options: are prohibitively expensive, dramatically increase fuel loading, are overly damaging to conifer regeneration, or are not likely to be successful.

> Integrated Weed Management would consider herbicides as a possible treatment for invasive plant species only under limited conditions. No application would be undertaken unless it is part of a long-term ecologically-based management approach. This program will utilize a combination of control methods evaluated for environmental safety and effectiveness. Environmental and public safety as well as aesthetic will be part of the decision-making process for selecting specific treatments....

The DEIR (pages VII.8-15 to -16) discusses the manner in which CAL FIRE will consider and make use of new information that may be identified with respect to specific herbicides and specific applications. The role of DPR in this process also is identified.

Response to Comment 68
Indicative of current herbicide use levels, page VII.8-10 identifies that only 20 pounds (active ingredient basis) of herbicides were applied on JDSF over a four-year period beginning in 2000. Pages VII.8-10 and 11 of the 2005 DEIR address the amount of herbicides that could potentially be used on JDSF based on the DFMP (Alternative C1):

> The low level of herbicide use on the Forest in recent years is indicative of the low level of management activity in general, in addition to the request for reduced herbicide use from the public. When management activity levels on the Forest increase following the implementation of the DFMP, herbicide use levels may increase above those of the past several years. However, it is not anticipated that herbicide use will increase to the levels of the early to mid 1990s.

Alternative G adds restrictions that will result in reduced herbicide use (RDEIR pages II-10 and 11 and Administrative Draft Final Forest Management Plan, Chapter 3), as compared to the DFMP. The Administrative Draft Final Forest Management Plan includes a sequence of evaluation factors that will limit use and potential for adverse effects (see response to comments 33 and 67 for details). These will be analyzed for each specific project and mitigations measures developed to avoid impacts from herbicide use.

Definitive estimates of future herbicide use are not possible at this time, as specific projects using herbicides have not been proposed. The analysis conducted for the DEIR considers the potential for significant and cumulative effects. The anticipated level of impact associated with each area of management, and associated with each of the alternatives considered, is included at the end of each resource subject analysis. A formal risk assessment was not conducted in association with each herbicide. Please see the discussion of herbicide regulation in Section VIII 8.2.3 of the DEIR. The Administrative Draft Final Forest Management Plan, though programmatic with respect to vegetation management, includes specific guidance that is related to forest conditions. This includes the direction with respect to the quantity of even-aged management, road management measures, and use of IWM. By implementing IWM principles, the Board is confident that management will be more efficient and effective, and that significant impacts related to invasive plants and control methods can be avoided, as demonstrated by the analysis in the DEIR and RDEIR.

Response to Comments 69-71
The Hazards section does disclose the use of potentially toxic substances such as fuels and lubricants as well as pesticides (DEIR VII.8.9-10). With the management measures proposed, the analysis of the potential for these compounds to cause hazards was found to be less than significant (DEIR pages VII.8.9-20 through -21and RDEIR pages III-105 through -110).

In providing information on the five herbicides, the DEIR discloses information on compounds other than the active ingredients, where they are relevant. California registers surfactants in consideration of their ingredients and potential toxicity. Because the use of herbicides is selective, there will be minimal use of tank mixes. Dyes will seldom be needed. All herbicide use will conform to existing restrictions and regulation.

For an herbicide to be legal for use in California, it must undergo federal and state toxicology evaluations of the active ingredient and any degradates or contaminants. In developing treatment prescriptions for projects, JDSF will select from registered materials to best balance effectiveness and risk to the environment and humans. This will include reviewing toxicological information on both active ingredients and adjuvants.

The premise in the comment that inerts or breakdown products have not been subject to study is not valid. Many of the toxicology studies test the entire formulation, not just the active ingredient. Study of biological effects of the herbicides will necessarily include consideration of breakdown products as biotic systems interact with the compounds. The responses to the more detailed comments below reveal that these compounds are studied and understood, and do not represent a major source of uncertainty. The DEIR recognizes that information on herbicides is dynamic. DEIR VII 8.-15 describes how CAL FIRE would check for significant new information when herbicide projects are proposed.

The products (including inerts, adjuvants, active ingredients, degradates and contaminants) being used for forestry applications do not appear to be leaving the treatment area and therefore do not pose an exposure risk to the general public or to the beneficial uses of water downstream of areas that have been treated; see response 136 regarding water monitoring. It is not necessary to know every possible active and inactive ingredient that could be used and all the known toxicological effects and endpoints associated with these substances to make a decision regarding the potential future use as described in the EIR. The products have been in common use for forestry applications for years and in some cases decades. The method of application has also been common practice for more than a decade. Effects of the past applications have been evaluated through watercourse monitoring as well as through casual observation by CAL FIRE inspectors when they have done stocking inspections on treated stands, preharvest inspections on adjacent stands, and other inspections in or near treated stands in the course of their regular duties.

For the adjuvant that is most problematic, the DEIR acknowledged that the surfactant commonly associated with the glyphosate formulation Roundup “is substantially more toxic than glyphosate and that POEA is the primary toxic agent of concern for fish.” (DEIR Appendix 13)

The comment is requesting information that is beyond the scope of the proposed management plan’s programmatic approach to vegetation management and its associated environmental analysis (DEIR, RDEIR, and FEIR). Specific inerts and degradates are addressed in the responses that follow.

Response to Comment 72

The comment letter provides an extensive list of toxicity related comments and states that the Board needs to include this information and include mitigations in the EIR. As described in the DEIR at page VII.8-15, CAL FIRE reviews information to determine if it is significant new information. If there is significant new information CAL FIRE will alert California Department of Pesticide Regulation (DPR) and obtain an evaluation of the information. The Board has reviewed the information provided by CATS. The following responses reflect a review of the information to determine if any was significant new information. Mitigation would be required if any of the information led to a determination that a significant environmental effect was likely to occur. No such information was identified. Measures that will reduce risk to human and environmental health are contained in DEIR, RDEIR and FEIR; these are summarized below in response to comment 135. The analysis in the DEIR and RDEIR did not find that the usage of herbicides,

under the alternatives that included it on JDSF, would result in significant adverse impacts. This analysis includes Alternative G, which is the basis for the Administrative Draft Final Forest Management Plan.

The bulk of the information below is known information that was available for the registration process or has been reviewed in other documents. Information on herbicide use and cautions are available on the herbicide's specific label and Material Safety Data Sheet. The California Environmental Protection Agency, Department of Pesticide Regulation, maintains a web site with information (www.cdpr.ca.gov/docs/label/m4.htm) as does the National Pesticide Information Center (http://npic.orst.edu/) and the Extension Toxicology Network (http://extoxnet.orst.edu/). The UDSA Forest Service has compiled information on herbicides used in wildlands in technical risk assessments at http://www.fs.fed.us/foresthealth/pesticide/risk.shtml. Reviews of toxicology and herbicide effects routinely use the EPA Human Health Hazards categories and Ecotoxicological Categories (http://www.epa.gov/oppfead1/labeling/lrm/chap-07.htm) and are compiled in the DEIR appendix.

The potential for adverse effects from the use of herbicides is a result of the inherent characteristic of the compound and the quantity used and/or exposure. For responses 73 though 158, the responses focus on the characteristics of the compounds. For brevity sake, the exposure component of the potential for effect is not included for each comment. The quantity of pesticide used and exposures will be limited, and has been previously addressed. RDEIR, Alternative G includes this (p. II-10):

> In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks. JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions.

The Administrative Draft Final Forest Management Plan direction is more specific and is listed in response 33, above. The Administrative Draft Final Forest Management Plan will also limit the types of vegetation management that would be considered for herbicide use. Herbicides will not be used for roadside vegetation treatment purposes unless there are significant over-riding management concerns to specific areas, such as fire prevention.

DEIR page VII.8-17 lists as part of the applicable standards and procedures for herbicide application in Mendocino County measures that would prevent harm to the applicators during the application process:

> Protective gear must be worn, including, but not limited to, the following for every pesticide application:
> - Protective eyewear (Applicators must have side and brow protection eyewear and carry a pint of eyewash on their person, if a chemical label specifies eyewear is required)
> - Chemical resistant gloves
> - Long sleeved shirt
> - Shoes and socks

The net result of these limitations is that herbicide use will be low, carefully analyzed and constrained. The findings of no significant impact regarding herbicides (DEIR pages VII.8-20 to -21 or RDEIR page III-105) are valid.

Response to Comment 73
For clopyralid, SERA (2004a) provides the following information: There is uncertainty about the toxicological status of one ingredient in Transline formulation. The inerts (59%) listed in the Transline MSDS are Isopropyl alcohol and Polyglycol 26-2, but the relative amount of inerts in the formulation is not disclosed (C&P Press 2003 in SERA):

> On the U.S. EPA list of inerts used in pesticides (U.S. EPA/OPP 2003), the polyglycol with this CAS number is listed as polyoxypropylene mono(di-sec-butylphenyl) ether and classified as a List 3 inert. List 3 inerts designate those inerts for which the available toxicology data are insufficient to classify the compound as of toxicologic concern....

The third inert is believed to be water. Regarding the total toxicity of both inerts and active ingredients SERA (2004a) further notes:

> Dow AgroSciences (2003) provided clarification of this issue and identified the studies submitted to U.S. EPA that were accepted as relevant to Transline. These studies do not indicate any substantial differences between Transline and clopyralid. This is consistent with the publicly available information on the three inerts contained in Transline.

Response to Comment 74
The human health precautionary statements on the Transline label carry the lowest level of warning; “Caution”. Information on clopyralid is contained in DEIR Appendix 13.

Appropriate protective clothing is to be worn by applicators (page VII.8-17).

Response to Comment 75
Regarding the tests of reproductive and teratogenic effects SERA (2004a) notes:

> ...two oral teratogenicity studies have been conducted in rabbits, one gavage teratogenicity study has been conducted in rats, and four dietary reproduction studies have been conducted in rats. Other than a decrease in maternal body weight, which is consistent with results of subchronic and chronic toxicity assays of clopyralid, these studies report few signs of toxicity in dams or offspring. At doses that cause no signs of maternal toxicity (i.e., doses below about 100 mg/kg/day) no reproductive or teratogenic effects are apparent. The available data suggest that clopyralid does not produce developmental effects at doses that do not produce maternal toxicity.

Doses high enough to cause maternal death would obviously have adverse effects on unborn offspring.

Response to Comment 76
The persistence trait of clopyralid in the soil is disclosed in Appendix 13. The information cited does not represent significant new information. Also see response 78, other research found clopyralid degradation to be relatively rapid in soil (SERA 2004a):

Response to Comment 77
The information about the potential for clopyralid residue in compost to damage non-target plants is disclosed in Appendix 13. The Appendix listed the more relevant regulatory change in California, cancellation of registrations for specialty lawn products. This demonstrates how the pesticide regulatory system is responsive to new information. The Transline label contains a precaution statement about composting or mulching.

The DEIR does not propose composting or making mulch from treated plants.

Response to Comment 78
This information was disclosed in Appendix 13. Recent detailed analysis conducted for the Forest Service includes this (SERA 2004a):

> ...Clopyralid does not bind tightly to soil and thus would seem to have a high potential for leaching. While there is little doubt that clopyralid will leach under conditions that favor leaching—sandy soil, a sparse microbial population, and high rainfall—the potential for leaching or runoff is functionally reduced by the relatively rapid degradation of clopyralid in soil. A number of field lysimeter studies and the long-term field study by Rice et al. (1997) indicate that leaching and subsequent contamination of ground water are likely to be minimal...

Response to Comment 79
The comment about volatility of clopyralid is from a 1990 EPA document. Information Ventures (1995) includes the following; "III. Environmental Effects/Fate Air: Volatilization: Clopyralid does not evaporate easily." Tu et al. (2001) states that Clopyralid is not highly volatile.

The 1999 Transline label approved by EPA does not list volatility among the Environmental Hazards. Under the General Use Precautions it includes:

> Avoiding Injury to Non-target Plants; This product can affect susceptible broadleaf plants directly though foliar contact and indirectly by root uptake from soil in treated areas. Do not allow spray drift to come in contact with vegetables, flowers....or other desirable broadleaf crops or ornamental plants.

Given the other information available, and that the 16-year-old EPA quote is cited out of context, this comment provides no basis to be considered as significant new information.

Response to Comment 80
The full caution from Information Ventures (1995) states: "Do not allow careless application or spray drift. Do not permit spray or spray drift to contact desirable plants as very small quantities may injure susceptible plants". Regarding Non-Target Toxicity for Plants it states: "Contact with non-target plants may injure or kill the plants." Drift control is important practice as it benefits many resources. The Transline label was quoted in response to comment 79.

Response to Comment 81
This comment references an apparent broadcast application. As expected with this herbicide's selectivity, the broadleaf plants declined and grasses increased. SERA (2004a) summary of this work shows the largest decline in mean canopy cover for alien broadleaves. Broadcast (as opposed to directed) application can be expected to affect the species that are susceptible to the herbicide whether they are alien or native. Directed applications would be the predominant method used at JDSF.

Response to Comment 82
Transline's major use in wildlands is to control of yellow star thistle, an invasive weed. In Appendix 7B the DEIR discloses that this species is limited to roadside locations in the eastern portions of the forest. Any potential application would be specifically to roadside infestations within the forest. JDSF's only native grassland (Bob Woods meadow) is not located in the eastern part of the forest.

Response to Comment 83
The International Organization for Biological Control – West Palaearctic Regional Section (Includes Europe) has a more recent analysis of the relative risk to beneficial insects from pesticides in a toolbox database http://www.iobc.ch/toolbox.html#5 . It rates clopyralid as being "harmless or slightly

harmful" for eight of nine arthropods and as "moderately harmful" to one. The dose tested is over 50% higher than the maximum rate that is legal for use in California.

Response to Comment 84
This herbicide would be used for control of yellow star thistle. Applications are timed to prevent seed formation. No applications will be conducted in the late summer or fall.

Response to Comment 85
Drift has been addressed in response 79 & 80. Please see those responses.

Response to Comment 86
At JDSF applications of Transline would be directed at actively growing target species, specifically yellow star thistle. Little Transline will be deposited on soil. Little of that soil is expected to become windborne. The exact Information Ventures (1995) quote is; "Special Precautions: ... Soil: Do not move treated soil. Avoid situations where treated soil particles may blow into areas where susceptible plants grow." Given the applications considered, and the forested condition, there is little risk of wind born soil or vegetation harming non–target plants. Recently treated soil will not be moved.

In summary, regarding clopyralid, no new information has been presented in the comment letter that would require the Board to reevaluate the inclusion of this product as a potential herbicide for use in the EIR.

Response to Comment 8
The classification of glyphosate as a skin or eye irritant is included in Appendix 13. This was taken from the Roundup Pro MSDS. This formulation is a slight eye irritant and is essentiality non-irritating to skin. This is consistent with results from poison control centers. Only 2% had temporary injury to eyes with none reporting permanent damage (SERA 2003a).

SERA (2003a & 2002) reviewed Temple and Smith's New Zealand paper in context. Its value was to describe "health outcomes of accidental and intentional (e.g., suicide attempts) gross overexposures to glyphosate or its commercial formulations" (SERA 2003a).

Regarding glyphosate's potential as an endocrine disrupter, SERA (2003a) notes:

> Only three specific tests on the potential effects of glyphosate on the endocrine system have been conducted and all of these tests reported no effects. All of these assays are *in vitro* – i.e., not conducted in whole animals. Thus, such studies are used qualitatively in the hazard identification to assess whether there is a plausible biologic mechanism for asserting that endocrine disruption is plausible. Because they are *in vitro* assays, measures of *dose* and quantitative use of the information in dose/response assessment is not appropriate. For glyphosate, these studies do not indicate a basis for suggesting that glyphosate is an endocrine disruptor. Nonetheless, glyphosate has not undergone an extensive evaluation for its potential to interact or interfere with the estrogen, androgen, or thyroid hormone systems. Thus, the assessment of the potential endocrine effects of glyphosate cannot be overly interpreted.

Richard et al. (2005) recently conducted another *in vitro* study. It exposed cancerous placental cells and cellular material, microsomes, to glyphosate and Roundup at up to 2% concentrations for up to 48 hours. For placental cells, the lowest LD50 occurred at about a 0.6 % Roundup concentration for 48 hours. Though there is no way to directly compare cellular level to studies of exposure to living animals the concentration at 0.6% is equivalent to 3,367 ppm of active

ingredient (assuming formulation studied was equivalent to Roundup Pro). Contrast this value with the following from SERA (2003a):

> "A 2-year dietary study, in which rats were exposed to 0, 2,000, 8,000 or 20,000 ppm glyphosate in diet, examined morphology of the reproductive organs, mammary glands, and all major endocrine glands, including the testis, ovary, pituitary, and thyroid (Stout and Ruecker, 1990). No treatment-related effects on reproductive organs or endocrine glands were observed at or below the maximally tolerated dose (20,000 ppm in diet) which resulted in decreased weight gain and histopathologic changes in liver, stomach, and eye lens."

Another study from SERA (2003a):

> Subchronic studies, in which mice and rats were exposed to 3,125, 6,250, 12,500, 25,000, or 50,000 ppm glyphosate in the diet, examined morphology of all reproductive organs; mammary glands; and major endocrine glands, including adrenal, ovary, pancreas, parathyroid, pituitary, thymus and thyroid; the study also evaluated sperm counts and morphology and estrous cycle length (NTP, 1992). No treatment-related effects were observed on the morphology of reproductive organs or endocrine glands at or below the maximally tolerated dose (50,000 ppm in diet) which resulted in decreased weight gain in both rats and mice. A statistically significant decrease (20%) in sperm count was observed in male rats exposed to 25,000 or 50,000 ppm. NTP (1992) concluded that there was no evidence of adverse effects on the reproductive system of rats or mice, and summarized the findings as follows:
>
> *"Measures of sperm density, or the number of sperm/g caudal epididymal tissue, were reduced somewhat in male rats in the 2 highest dose groups (25,000, 50,000 ppm); other spermatozoal measurements were not different from controls in rats or mice. There was a slight lengthening of the estrous cycle in high dose female rats (50,000 ppm), but the biologic significance of these findings, if any, is not known."*

These studies demonstrate that living organisms tolerated doses higher than cultured cells. *(in vivo vs. in vitro*) At extremely high doses some effects could be suggested. The Richard et al. (2005) placental cell viability results cited in the comment do not seem to provide new evidence of toxicity or negative effects for cells in culture.

Richard et al. conducted several tests to examine the enzyme that catalyzes conversion of androgens to estrogens, aromatase. Several tests for longer duration (18 hour) using a serum–free medium which was "to optimize the visible effects of the compounds in the shortest period of time." They also note: "The physiological significance of the effects can be questioned, in regard to the concentrations used." The results of the serum-free medium tests showed a 50% decrease in armatase activity over 18 hours at a dose that would be approximately 224 ppm.

The Richard et al. study did find depression of aromatase activity at the sub-cellular microsome level. For glyphosate there was about a 12% decline in aromatase activity at about approximately 2,800 ppm with Roundup reducing activity 50% at the same dose (Figure 5). This is a dose that would kill 40 % of tested placental cells in culture (Figure1A- 48 hour). Roundup partially disrupted a chemical synthesis process in microsomes unprotected by cell structure. This is not surprising considering the dose. The role of Roundup as a "potential endocrine disrupter" should be considered cautiously given this context.

The relevance of Richard's laboratory study can be questioned when considering actual exposure scenarios. Per SERA (2003a):

> The available experimental studies indicate that glyphosate is not completely absorbed after oral administration and is poorly absorbed after dermal applications. Two dermal absorption studies have been published on glyphosate and both of these studies indicate that glyphosate is very poorly absorbed across the skin.

SERA (2003a) notes that 97% of glyphosate ingested is excreted unchanged. The Richard's study is constant with other studies showing Roundup can be more toxic in some situations than glyphosate alone. Hietanen et al. (1983, in SERA ibid) describes liver damage that could be attributed to several factors including the effects on cytochrome P-450 (responsible for the metabolism of a wide variety of endogenous compounds as well as xenobiotics). The possibility of effects on this process is known, thus Richard et al. dose not provide significant new information.

Response to Comment 88
The carcinogenic potential of glyphosate has been examined. SERA (2003a) noted problems with the Hardell and Erikson, (1999) study. In response to a USDA Forest Service concern the U.S. EPA (Tompkins 2000in SERA) responded that:

> The Office of Pesticides Programs Health Effects Division has reviewed the journal article entitled "A Case-Control Study of Non-Hodgkin Lymphoma and Exposure to Pesticides" and concluded that the study does not change EPA's risk assessment for the currently registered uses of glyphosate.

SERA (2003a) includes this information on this research from the most recent U.S. EPA/OPP (2002) assessment:

> This type of epidemiologic evaluation does not establish a definitive link to cancer. Furthermore, this information has limitations because it is based solely on unverified recollection of exposure to glyphosate-based herbicides.

The issue of N-nitrosoglyphosate is cited in comments from references that are 20 to 30 year old. The issue was reviewed in the 1993 RED. SERA (2003a) quotes the RED *(in quotes)* and provides additional information:

> "Technical grade glyphosate contains N-nitrosoglyphosate (NNG) as a contaminant. Carcinogenicity testing of nitroso contaminants is normally required only in those cases in which the level of nitroso compounds exceeds 1.0 ppm. Analyses showed that greater than 92% of the individual technical glyphosate samples contained less than 1.0 ppm NNG. The Agency concluded that the NNG content of glyphosate was not toxicologically significant."
>
> As part of the conduct of this risk assessment, data available to U.S. EPA for RED as well as the more recent data on the levels of *N-nitrosoglyphosate* and related compounds has been reviewed (Bernard 2002; Hirsch and Augustin 1987). This information is classified as trade secret under FIFRA and cannot be detailed in this risk assessment. Nonetheless, no information has been encountered in the CBI files or in the open literature that contradicts the above assessment in the RED. In addition, none of the recent reviews on the toxicity of glyphosate cite contamination with *N-nitrosoglyphosate (NNG)* as a concern (Cox 2002; WHO 1994; Williams 2000)."

Note from the review above, SERA (2003a), that no information from other sources had been found that contradicted the assessment.

Response to Comment 89
SERA (2003a) reviewed Yousef (1985). It noted that Yousef did not specify the actual dose but described it as proportions of 0.01 and 0.1 of the LD50 that would correspond to 38 and 380 mg/kg. SERA cited Schroeder and Hogan's (1981) 3-generation study in rats found no treatment-related effects of glyphosate on mating, fertility, or reproductive parameters at doses of 3, 10, or 30 mg/kg bodyweight. The NIC study (1992, in SERA 2003a) lists declines in sperm counts at higher rates than Yousef, 1,678 & 3,393 mg/kg/day. No effect was noted for the lower doses 205, 410, 81 mg/kg/day.

Among other limitations of Yousef et al.'s work cited by SERA are: not reporting the glyphosate formulation used, administering the dose by gelatin capsule which would result in a spike as chemical is ingested. Given these inconsistencies and documentation this study does not provide significant new information.

Regarding Daruich et al.'s (2001) 21 day exposure SERA (2003a) notes:

> Daruich et al. (2001) assayed effects of glyphosate on enzymatic activity in pregnant rats with a commercial formulation of glyphosate (specified as Herbicygon) that is used in Argentina. Changes in several biochemical parameters were noted but these were accompanied by significant decreases in food and water consumption. Since this study did not use a food and water restricted control, the observed effects cannot be attributed directly to glyphosate.

The studies authors were more guarded in describing results than the comment letter, the abstract noted the exposure "induces a variety of functional abnormalities in the specific activity of the enzymes in the studied organs of the pregnant rats and their fetuses."

Response to Comment 90
In considering the comments it is important not confuse the effects of the surfactant in the herbicide formulation "Roundup" with the effects of the active ingredient, glyphosate alone. Other formulations of glyphosate herbicides are now available from other manufactures so this is an important distinction. The Roundup surfactant is polyethoxylated tallow amine (POEA) or phosphate ester neutralized POEA (SERA 2003a).

It is well understood that these formulations' surfactants can have more toxic effects on aquatic organisms than glyphosate alone. This information is noted in DEIR Appendix 13 page 3. As surfactants are used to help move the active ingredients across plant membranes it should be no surprise that the Roundup formulations will have different and sometimes greater effects than glyphosate alone on other organism's membranes. Where appropriate, a glyphosate product without POEA, for example "Accord" or "Rodeo", can be used. It is important to review any information on glyphosate formulations within the context of the presence of added surfactants including POEA.

The Sawada et al. (1988) work reported on human poisoning. This paper includes a statement that the LD50 of POEA "less than one-third that of Roundup and its active ingredient." Per SERA (2003a) the animal toxicity test results show an oral LD50 for glyphosate alone of >5000 mg/kg, the formulations with inerts (i.e., Roundup) have a similar value, and POEA alone is 1200 mg/kg. The exact amount of surfactants in proprietarily formulations is confidential but SERA lists the maximum at 20%. Per SERA "the acute mammalian toxicity of different glyphosate formulations do not appear to differ substantially" and that "POEA and other surfactants used in glyphosate formulations may be severely irritating to the eyes, skin, and other mucosal surfaces such as the gastrointestinal tract and lungs."

The Walsh et al. (2000) study noted that Roundup decreased steroidogenesis; the active ingredient, glyphosate alone did not. They did not identify the compound in the Roundup formula that was responsible for this difference. Per SERA (2003a):

> In the Walsh et al. (2000) study, however, Roundup did inhibit steroid synthesis, probably due to the effects of the surfactant on membrane function. All of these assays are *in vitro* – i.e., not conducted in whole animals. Thus, such studies are used qualitatively in the hazard identification to assess whether there is a plausible biologic mechanism for asserting that endocrine disruption is plausible. Because they are *in vitro* assays, measures of *dose* and quantitative use of the information in dose/response assessment is not appropriate. For glyphosate, these studies do not indicate a basis for suggesting that glyphosate is an endocrine disruptor."

Diethanolamide is not listed in SERA (2003a), or in the 1993 EPA RED, as an inert in glyphosate formulations. Current EPA (2004a) inert listing for Diethanolamide is List 2: Potentially Toxic Other Ingredients/High Priority for Testing Inerts**.** EPA notes that many List 2 inert ingredients are structurally similar to chemicals known to be toxic; some have data suggesting a concern. The comment refers to an older EPA document on inerts that used an older classification system. The comment lacks relevant information including; concentration, product name or current reference. Given these problems, there is no basis for assuming that the comment provides significant new information.

Response to Comment 91
Drift from ground applications will vary depending on weather conditions, methods, and the amount of herbicide used. The physics of drift are well understood. Proposed JDSF glyphosate applications would be either cut stem applications or directed spray to individual target plants. Limiting foliar applications when wind speed exceeds five miles per hour as well as using equipment that minimize overspray and fine droplets are operational actions that will limit drift.

The EPA RED of 1993 noted additional research would be needed to fully evaluate the effects of glyphosate on non-target plants. It noted "risk reduction measures would be developed if needed, once data from these studies are submitted and evaluated (EPA 1993). Given that glyphosate herbicide labels have been updated since that date, there is no basis for assuming this comment provides significant new information.

Response to Comment 92
Appendix 13 notes the range of half-life in soil range from 2 to 172 days. Soil bacteria readily metabolize glyphosate with AMPA (Aminomethylphosphonate) as a major metabolite (SERA 2003a). EPA (2002) review of tolerances includes the following:

> Further degradation of AMPA to CO2 occurs at a slower rate than the initial degradation of glyphosate. Because of the strong binding of both glyphosate and AMPA to soil particles, there is very little uptake into plants of either glyphosate or AMPA from soil, even right after application of glyphosate.

Given the moderate temperate conditions and moist soils at JDSF, long soil degradation times are not expected.

Response to Comment 93
The comment letter provided no reference for the citation of "Frans, 2004". Scribner et al. (2002) detections were in the parts per billion (range 2.3 to <0.1) This data collections seemed to be focused on agricultural use as there were repeated references to pre emergent, post emergent and harvest season samples. For short-term exposures, the value of 2 mg/kg/day (parts per billion) is recommended by U.S. EPA's Office of Drinking Water (per SERA 2003a). Forestry uses buffers and other measures to reduce the risk to water relative to some agricultural uses.

Recent stream monitoring of forestry use found little concern for movement into water, see response 136 for details.

Response to Comment 94
Appendix 13 of the DEIR contains specific toxicity information for fish and aquatic organisms. The DEIR notes aquatic toxicity varies with the formulation. The RED (EPA 1993) recognized surfactants role in toxicity to aquatic organisms.

Given that glyphosate is a plant killing pesticide, some effects on algae would not be unexpected. SERA (2003a) reports ranges from EC50 values for technical grade glyphosate in algae reported by U.S. EPA/OPP (1993) are as low as 0.85 mg/L for *Skeletonema costatum* (a marine species) and as high as *Chlorella fusca*, with an EC50 of 377 mg/L for growth inhibition (Faust et al. 1994 in SERA 2003a). Pam et al. (2003) observed reduced cell numbers, but not amount of chlorophyll. The authors suggest this is due to a shift in species. The test was conducted for 14 days versus 4 in the other studies. The effects occurred at concentrations one or two orders of magnitude less than the other studies. Relyea et al. (2005c) found no loss of algae abundance at doses that had adverse effects on tadpoles.

See also response to comment 111.

Response to Comment 95
The effect of POEA has been discussed in the response to comment 87.

Response to Comment 96
Glyphosate interaction with soil organisms is complex. SERA (2003a) includes:

> As noted in Section 3.1.15.1, glyphosate is readily metabolized by soil bacteria with AMPA as a major metabolite. In addition, many species of soil microorganisms can use glyphosate as sole carbon source (Dick and Quinn 1995a; Dick and Quinn 1995b; Dotson et al. 1996; Wardle and Parkinson 1992a). Microorganisms, like higher plants, do have the shikimate pathway for the production of aromatic amino acids. Since glyphosate inhibits this pathway, toxicity to microorganisms may be expected (Cox 2002; Issa 1999).... Nonetheless, there is very little information suggesting that glyphosate will be harmful to soil microorganisms under field conditions and a substantial body of information indicating that glyphosate is likely to enhance or have no effect on soil microorganisms (Busse et al. 2001; Wardle and Parkinson 1990a, b; Wardle and Parkinson 1991).

The effects from intensive agricultural applications, or results of use with a genetically engendered crop specifically designed to be resistant to high levels of glyphosate application, are not relevant to the limited applications that would be conducted at JDSF.

Response to Comment 97
This quote from the RED (EPA 1993) should be considered in context, e.g. the registered use patterns. A broad-spectrum herbicide like glyphosate could have adverse effects on plants when broadcast sprayed. Endangered or special status plants can readily be protected by determining if they are present (survey) and avoidance. Targeting only specific species for treatment (directed application, which will be the predominant usage at JDSF) will also limit the potential for accidental harm to non-target plants. Because applications will be targeted and widely separated in both time and space on the forest there should be no long term exposures to mammals, birds or bees from glyphosate or other Roundup products.

Response to Comment 98
Glyphosate has a long and extensive record of studies and use. Some of these studies have been conducted by researchers that are clearly skeptical about glyphosate (Relyea, 2005). The

data have been reviewed by both state and federal regulatory agencies. The historic conduct of laboratories or marketing departments is not relevant to the actual safety of glyphosate or its formulations.

Response to Comment 99
This is information that is readily available. No new information has been provided.

Response to Comments 100-101
This section duplicates comments made previously. Regarding genotoxic (DNA damaging) effects would be also discussed as carcinogenicity. Response 88 addresses carcinogenicity. Regarding hormonal effects, Yousef et al. 1995 work was discussed in response 89. Regarding enzymatic effects, Dauich et al. (2001) was discussed in response 89a. Regarding the citation of Heitanen (1983) and El-Damerdash (2001) no references were provided for these citations. The Walsh study (2000) was discussed in response 90.

Response to Comment 102
The comment regarding pesticides causing birth defects is sweeping and does not specifically pertain to the project. Pesticides are a broad class of products and include fungicides, insecticides as well as herbicides. Only a limited number of herbicides are proposed for use at JDSF. They have been subject to testing on their potential for birth defects and genetic damage. The limitations on use of herbicides that will reduce any potential risk are summarized in response to comment 135.

The comment letter cites Garry et al. (2002) but provides reference for a 1996 article. In general the exposure that Garry studied, agriculture applicators have a higher potential exposure than the public or applicators at JDSF. The historic nature of the study may not reflect the current personal protective measures that applicators are required to use: gloves, complete coverage of arms and legs and protective eyewear.

SERA (2003a) reviewed Garry et al (2002):

> Garry et al. (2002) has conducted a self-reporting survey of individuals exposed to herbicides and other pesticides, including glyphosate. This study reports that 6 or 14 children of parents who had used phosphonamino herbicides had parent-reported attention deficit disorder. While Garry et al. (2002) indicated that the odds ratio for this is statistically significant (OR=3.6; CI 1.35 to 9.65), it should be appreciated that the use of lay diagnosed disease and self-reported exposure histories diminishes the utility of this study for hazard identification.

Garry et al. (2002) notes in that that:

> Regarding the herbicide glyphosate, our present study shows a tentative association between ADD/ADHD and use of this herbicide. *In vitro* studies by our group show that this product was not genotoxic in the micronucleus assay (*67*) and did not have significant pseudoestrogenic effects in MCF-7 cells (*37*). In a recent review of the toxicology of glyphosphate (*68*), little if any evidence of neurotoxicity was noted other than by intentional ingestion (*69*).

At the end of the “Birth Defects” section, with reference to glyphosate and phosphine this paper stated:

> Whether these observations were chance associations remains a concern. Further detailed neurodevelopmental studies are required to resolve these issues.

Given the limited utility of self-reported studies, the use of lay diagnosed disease, and that the authors found a "tentative" association that developmental studies do not reflect, this paper does not provide a basis to assume it provides significant new information.

Response to Comment 103
The more recent citations do include some additional detail not available in earlier assessments. They do not provide new information on the relative hazard of glyphosate use or relative environmental effects. Note that Garry et al. (2002) quoted above did not make any generalizations based on the information now available.

Response to Comment 104
The relative toxicity of the different glyphosate formulations containing POEA has been addressed previously; see response to comment 87. No references are provided in the comment letter the citations of Folmar et al. (1987), Martinez et al. (1990) and Mitchell et al. (1987). These three studies are cited in SERA (2003a) with regard to surfactants. The information on the relative toxicity of Round up verses glyphosate has been discussed previously. Mitchell et al.'s 1987 work is on the effects of Rodeo. The formulation contains glyphosate with a surfactant that appears to be X-77®, a non-ionic alkylphenol ethoxylate-based surfactant. The study showed that this surfactant modestly increases the toxicity of Rodeo - e.g., decreases the LC50 value by about 30% (Mitchell and Chapman 1985a in SERA 2003a). No significant new information is provided in the comment.

Response to Comment 105
Richard et al. (2005) was discussed in the response to comment 87. Inerts were discussed previously in the response to comment 90.

Response to Comments 106 and 107
SERA (2003a) reviewed Hardell and Eriksson (1999) and contacted EPA for analysis. The U.S. EPA (Tompkins 2000) response is included with SERA and notes following:

> The Office of Pesticides Programs Health Effects Division has reviewed the journal article entitled "A Case-Control Study of Non-Hodgkin Lymphoma and Exposure to Pesticides" and concluded that the study does not change EPA's risk assessment for the currently registered uses of glyphosate.

This issue is also addressed in the most recent U.S. EPA/OPP (2002) assessment:

> This type of epidemiologic evaluation does not establish a definitive link to cancer. Furthermore, this information has limitations because it is based solely on unverified recollection of exposure to glyphosate-based herbicides.
>
> Given the marginal mutagenic activity of glyphosate and the failure of several chronic feeding studies to demonstrate a dose-response relationship for carcinogenicity and the limitations in the available epidemiology study, the Group E classification given by the U.S. EPA/OPP (1993a, 2002) appears to be reasonable. As with any compound that has been studied for a long period of time and tested in a large number of different systems, some equivocal evidence of carcinogenic potential is apparent and may remain a cause of concern, at least in terms of risk perception (e.g., Cox 2002). While these concerns are understandable, there is no compelling basis for challenging the position taken by the U.S. EPA.

The de Roos et al. (2003) study was a pooled analysis of three case control studies of non-Hodgkin's lymphoma. Glyphosate was among the pesticides "associated with a possible increased non-Hodgkin's lymphoma incidence". Mc Duffie et al. (2001) did a non-Hodgkin's

lymphoma case control study of 517 cases. The results for glyphosate were mixed and it was not among the factors in the final model (nor was MCPA). The de Roos et al. (2005) study is based on a large prospective cohort, 57,311 applicators with 2,088 cancers in the study. They found no association with non-Hodgkin's lymphoma. They did identify a "suggested association between multiple myeloma and glyphosate exposure, based on a small number of cases."

The references cited do have some suggestions of effects but they are gleaned from variable sample size. Some authors include cautions about the nature of this data. The EPA and SERA (2003a) conclusions seem reasonable. The comments do not provide a basis for significant new information.

Response to Comment 108
This comment is almost identical to comment 91. Please see the above response to that comment.

Response to Comment 109
This comment is identical to comment 93. Please see the response to that comment.

Response to Comment 110
This comment is identical to comment 94. Please see the response to that comment.

Response to Comment 111
This is a more detailed version of comment regarding frogs in comments 94 and 110. Please also see the response to comment 94 as well.
Lajmanovich's 2003 study was study has been cited in Releya (2005b):

> Lajmanovich et al. (2003) examined the impact of Kleeraway (another formulation of glyphosate that contains the POEA surfactant) on a South American tadpole *(Scinax nasicus)* and found an $LC50_{48h}$ of 1.74 mg AI/L.

This Lajmanovich LC50 for frogs is within one order of magnitude of others developed for different frog species, not an unexpected result.

Howe et al. (2004) detailed acute toxicity LC50 for multiple formulations and frog species. The values ranged from 2 to 9 mg (formulation glyphosate acid equivalents)/L with formulations containing POEA being more toxic. Chronic exposure (42 days) was at 0.6 & 1.8 9 mg (formulation glyphosate acid equivalents)/L. No chronic effects were noted for glyphosate alone but were noted for POEA containing formulations.

Dr. Rick Relyea has published several recent studies on pesticide impacts on amphibian and experimental aquatic communities:

- Relyea,R. A. (2005a) The Impact of Insecticides and Herbicides on the Biodiversity and of Aquatic Communities, *Ecological Applications,* 15(2), Pp. 618–627
- Relyea, R. A., (2005b). The Lethal Impacts of Roundup and Predatory Stress on Six Species of North American Tadpoles. Arch. Environ. Contam. Toxicol. 48, 351–357
- Relyea, R. A., N. M. Schoeppner, And J. T. Hoverman , (2005c), Pesticides and Amphibians: The Importance of Community Context *Ecological Applications,* 15(4), Pp. 1125–1134

The Relyea 2005a paper used a tank community with amphibian and insect predators, frog and snail herbivores and zooplankton. There was high tadpole mortality at a dose of 3.8 mg /L for Roundup. This is well within an order of magnitude of the LC50 from laboratory studies (see above). The Relyea paper notes:

> Roundup reduced tadpole richness by 70% by completely exterminating two species (leopard frogs and gray tree frogs) and nearly exterminated a third species (wood frogs). Roundup did not have a significant effect on toads, spring peepers, and the spotted salamanders, although few toads survived even in the control treatments, making it difficult to assess the effects of Roundup on survival. These reductions in tadpole survival were concomitant with a decrease in predator biomass, suggesting that Roundup also caused a trophic cascade from the herbivores to the predators.

The Relyea 2005(b) paper, "The Lethal Impact or Roundup on Aquatic and Terrestrial Amphibians," was reviewed as it is specific to a glyphosate-containing product. The concentration that the tadpoles were tested in was 3.8 mg a.e./L with a resulting mortality of 96–100%.

The paper on community context (Relyea 2005c) included predators in the tanks. It used a lower dose and noted better survival than in 2005b. (1.3mg a.i./L with 40% survival). It also found that Roundup had no indirect effects on the amphibian community via predator survival or algal abundance. He noted that Roundup did not affect algae numbers at this dose.

These experiments used mesocosms (outdoor cattle tanks with several species present). The authors note the importance of transition from foundational laboratory studies to more realistic and natural experimental venues. Given this emphasis on realism there are some concerns regarding this study. The Roundup label states "Do not apply directly to water, to areas where surface water is present or to inertial areas below the mean high water mark." In an accidental overspray of a hidden small pool, the vegetation obscuring the pool would tend to intercept herbicide before it reaches the surface. The authors note the concentration is a "worst case scenario".

If there is risk of exposing aquatic organisms, a non-POEA formulation of glyphosate can be selected. JDSF applications are directed applications to terrestrial vegetation and will be in conformance with label requirements. The type of exposure tested above would not be expected at JDSF. The greater toxicity of the Roundup formulation on aquatic species is noted in Appendix 13 of the DEIR.

Although the mesocosms testing is interesting, the results are within known values, therefore any new information was not significant.

Response to Comment 112
This comment is identical to comment 96. Please see the above response to that comment.

Reviewing the information presented by the comment letter for glyphosate; recent research was presented. Upon review of this information, effects described were within the range of those previously known or did not provide a basis to assume new effects, thus the comment letter has presented no significant new information. No significant effect regarding the use of glyphosate products as proposed in Alternative G and the Administrative Draft Final Forest Management Plan was identified.

Response to Comment 113
The Board reviewed the comments for significant new information on imazapyr. None was identified. The 22-year-old EPA document cited in the comments was not readily available. The comments do not include any information about actual dose related to the effects listed. SERA (2004b) summarizes 14 dermal animal tests; bleeding and congested lungs were not listed among the effects, though there were pneumonia deaths in some studies.

The dermal effects of imazapyr were noted in DEIR Appendix 13-4. The comments do not provide new information on that topic. Dermal effects are minimized by protecting applicators' skin from exposure by wearing gloves and long sleeved shirt and long pants. Protection measures are summarized in response to comment 135.

The dermal exposure information places imazapyr in the moderately irritating category (TLD50=>2000 mg/kg or 1.92 mL/kg per SERA, 2004b). SERA (2004b) compiled dermal tests including one by Lowe (1988) who found the product is considered to be "no more than slightly toxic by single skip applications." Other tests at lower doses stated the "test material is considered to be mildly irritating to rabbit skin."

Two formulations are used; Arsenal is an aqueous solution designed to be mixed with water and a surfactant. Chopper is an emulsifiable concentrate that can be mixed with penetrating oils, some other similar non-aqueous liquid, and/or water. The respective MSDS have slightly different dermal data, based on the formulations. Arsenal is >5000mg/kg with a rating of mildly irritating. Chopper is >2000mg/kg with a rating of irritating. Both readily fall within the "Caution" rating.

SERA (2004b) provides details regarding one of ten mice that died in a test at high oral dose (5000 mg/kg or 25 mL/kg.). "Necropsy revealed congestion of liver, kidney, and intestinal tract, and hemorrhagic lungs."

Imazapyr's affect on eyes as reviewed in SERA (2004b) would fall in the caution range: "no corneal opacity; irritation reversible within 7 days." The MSDS for Arsenal and Chopper differ slightly but fall in the same "Caution" rating. The Tu et al. (2001) statement is based on formulations; "... some formulations (for instance, the inert ingredients in Chopper® and Stalker®) can cause severe, irreversible eye damage."
Animal studies do result in negative effects at doses that approach the LD50. None of the information provided in the comment is new or indicates significant information beyond that evaluated for the DEIR.

Response to Comment 114
Quinolinic acid is a photolytic (light) breakdown product of imazapyr. Quinolinic acid is also metabolite of tryptophan, a naturally occurring and essential amino acid in mammals. Given soil contains many naturally occurring compounds that can be irritating to eyes or lungs, humans minimize eye and lung exposure to soil, therefore this route of exposure imazapyr poses little threat.

SERA (2004b) considers the neurotoxicological aspects of this compound:

> Schwarcz et al. (1983) noted that quinolinic acid, a photolytic (though not metabolic) breakdown product of imazapyr, causes neurotoxic effects at very low doses when injected directly into the brains of rats (i.e., intracerebral injection). It is possible that the neurologic effect identified by these studies (Medical Scientific Research Laboratory 1992, as cited by Cyanamid 1997; Salamon et al. 1983c,d) resulted from contamination of the administered dose by a photolytic breakdown product, rather than as a result of imazapyr administration. However, as noted in Section 3.1.15.1, quinolinic acid levels in the brain are regulated by an active transport system and it does not seem likely that sufficient quinolinic acid would be present in imazapyr to cause frank signs of toxicity. This supposition is supported by the fact that signs of neurotoxicity have not been noted in other studies on reproductive or developmental effects and neurotoxicity has not been noted in standard acute and chronic toxicity studies. In addition, none of the studies in the imazapyr database reported histopathological changes in nervous tissue. Thus, the weight of evidence does not support the assertion that imazapyr is likely to have neurotoxic potential.

As a breakdown product in soils it would be unlikely to come in contact with eyes, skin or the respiratory system of the casual forest visitor. It would not be present during application.

Response to Comment 115
The information on soil half-life and persistence are constant with that provided in the DEIR.

Imazapyr mobility in soils is noted in SERA (2004b). The degradation halftime in soil is highly dependent on microbial population (SERA 2004b). Descriptions of soil mobility vary. Mobility of imazapyr is decreased in soils with; higher microbial activity, low ph, moderate temperatures, high organic and or clay content (CMDAR 2003, Cornell undated, SERA 1999). Thus the "usual behavior" will vary with climate and soil. This information places Tu et al. (2001) quote in context. At JDSF the soil and climatic factors favor less soil mobility than other locations. The major forest soil types are fine loams with pH values that shift from approximately 5.5 to 5.2 with depth.

Tu et al.'s description of movement of soils particles appears to be based on McDowell et al.'s (1997) work and is the result of soil erosion. The abstract for this paper describes half-life and the movement of herbicide in the soil profile. SERA (1999) also include some information from this work, but no reference to soil movement citing this author. There is little potential for soil disturbance that would result in mobilizing soil particles at JDSF, given the type of applications anticipated, (cut surface or directed foliar).

The fate of imazapyr in water is complex. The Kd, the ratio of the concentration of a chemical adhered to soil particles, depends on the physicochemical properties of both the soil as well as the chemical being bound to the soil (Winegardner, 1996 in SERA, 1999). Kd values in the range of 1.24 to 3.02 mL/g have been reported for silt loam soil by McDowell et al. (1997). Values for other soils range from 0.06-0.09 mL/g for sandy soil to 4.55 mL/g for pond sediment. SERA (1999) notes that the complexity of the soil processes makes reliance on Kd values an over simplification. The Ko/w can be related to soil by the equation Ko/c = Kd/oc, where oc is the organic carbon content of the soil (mg organic carbon/mg soil). The "certos" imazapyr information cites a Ko/c (organic carbon water partition coefficient) of 8.81 (units not listed). SREA (2004b) lists four Ko/c; 100, 46, 30.6(sand), & 99.8 (silt loam) ml/g. The "certos" absorption coefficient provides no new information on movement in soil or water.

Response to Comment 116
As noted the movement from soil to water is complex. Michael and Neary (1993) sampled both buffered and unbuffered applications to Alabama costal plains. Berisford et al.'s paper was not readily available but the relevance of results from a perched water table in the southern costal plane is limited given the geology at JDSF. Rashin and Garber's 1993 Washington work was compiled in Neary and Michael (1996). The application rate was smaller by one order of magnitude (2.2 vs. .01 kg/ha) and the detection was lower by two orders of magnitude (130 vs 1. mg/m3) than Michael and Neary's work. Both these were for aerial application, a method that is not proposed for use on JDSF.

Response to Comment 117
The DEIR Appendix 13 noted that the risk to non-target plants would be higher with imazapyr than other herbicides. The supposition from the comment that this risk to non-target plants is "extremely hazardous" is not supported in Tu et al. (2001). The labels for Chopper and Arsenal both contain cautions about damage to non-target plants from roots that are grafted or in close proximity to treated area. For the types of application proposed at JDSF (cut surface or directed foliar), special status plants can be buffered to prevent any potential effect.

For imazapyr, no significant new information was provided that would alter the consideration of this herbicide in the DEIR.

Response to Comment 118
The effects noted on kidney and liver weight and function are studies designed to determine chronic toxicity of triclopyr (EPA RED, 1998). The RED makes no statements regarding "fetotoxicity" but did discuss reproductive effects. The DEIR notes that triclopyr is slightly fetotoxic, based on a discussion in SERA (2003b) and the MSDS.

Response to Comment 119
TCP is a breakdown product of both triclopyr and an insecticide, Chlorpyrifos. Based primarily on Chlorpyrifos, the EPA reviewed research and has lowered the chronic reference doses (RfDs) for TCP. The EPA has incorporated the new information where appropriate. Many papers by the principle authors cited in the comment letter were reviewed and included as references by the EPA (2000).

Response to Comment 120
SERA (2003b) reviewed Spencer et al.'s (2000) work and noted a problem in the methodology for calculating the urine excretion values that could have under or overestimated the amount excreted. SERA notes that Spencer's higher values make very little difference to the assessment of risk.

Response to Comment 121
The EPA RED is the evaluation of the data available for triclopyr in 1998. It documents the potential human health and environmental risks of the current product uses, and establishes decisions and conditions under which these uses and products will be eligible for re-registration. The RED called for additional cautions about use in areas with shallow ground water, addressing concerns about the relative mobility.
There is no reference for the comment letter's citation of "Stark, 1983".

Response to Comment 122
The comment cites Anudo et al. (2002) study and describes it as study in Native American Gathering areas. The actual document states the study's purpose was to "determine dissipation and off-site movement of four forestry herbicide products containing glyphosate, triclopyr, or hexazinone on native plant materials". The amounts detected at 50-100 feet from the treatment areas were small (0.3 to 0.06 ppm) and infrequent (3 of 20 samples) occurring on ceanothus (shrubs). This value is 30 times lower than the mean residue level for ceanothus in application sites. The type of treatment sampled, broadcast application for reforestation of large reforestation sites, is not anticipated at JDSF, reducing the potential for off site movement of triclopyr. The details of the Tahoe National Forest monitoring were not provided. The comment letter may be referring to an incident that has been cited in litigation. This detection occurred as the result of research that created a worst-case scenario: a major rainfall event, and a research plot with compacted soil, and with no erosion slowing surface organic material. In an affidavit, Dr. Robert Powers noted the movement of triclopyr was a result of the movement of the soil itself from the atypical impacted research site (D. Bakke personal communication). Use of triclopyr under the conditions that resulted in the soil movement at the research area is not proposed at JDSF.

Response to Comment 123
SERA (2003b) noted that minimum quantity of an inert is 1% and that Dow Elanco had indicated that no individual inert is present at greater than 6% in Garlon 3A or Garlon 4. The amount of kerosene in Garlon 4 is small and its toxicity is known. This presents no new concerns.

Response to Comment 124
The RED (EPA 1998) includes further analysis that notes:

> ... total of 379 (Ground Water Database) wells were sampled and 5 wells were found to contain triclopyr residues. The major degradate of triclopyr, TCP, is both mobile and persistent. EPA is requiring a label advisory warning

> users that under certain conditions, use of this chemical may result in groundwater contamination.

The EPA RED (ibid) prescribes this information for end product labels:

> This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This demonstrates EPA addressed concerns by requiring label language.

Response to Comment 125
Pryridinol is a component of TCP 3,5,6-trichloro-2-pyridinol which is a metabolite of triclopyr and other pesticides (see response to comment 119, above). The word "pryridinol" alone may be either a function of authors referring to the chemical by a more general name or reference to another compound. There are other pyridinol compounds such as 3,5-Dichloro-2,6-dimethyl-4-pyridinol; an effective anticoccidial agent used in poultry (Medical Dictionary Online 5/06). For the purpose of this response, the Board assumes that references to pryridinol refer to TCP. See above responses to comments 119 on human health and 124 for discussion of the EPA approach to the water issue.

Response to Comment 126
The comment general statement attributed to the USGS about relative concentrations "degradates" (breakdown products or metabolites) was not found in the cited source, USGS Circular 1144 (1998). Some metabolites and breakdown products were sampled for, but not TCP. The context of the quote attributed to the US FWS is unavailable. The RED for triclopyr considered breakdown products as does the SERA (2003b) Risk Assessment prepared for the USDA Forest Service. It is unclear which risk pesticide risk assessments were referenced by US FWS. Regarding the relevance of La Clair et al. (1998), this study involved an insect growth regulator, *S*-methoprene and its breakdown products.

Response to Comment 127
The USGS (1999) study roughly compared retail purchases to stream content. All triclopyr detections were below the "Freshwater aquatic-life criteria" and most were 5,000 times less that the chronic value (0.1 vs. 506 ppm.)

Response to Comment 128
Berrill et al.'s 1994 paper is cited in Appendix 13 of the DEIR. Berrill noted the relative toxicity of the ester and amine formulations of triclopyr. Information is readily available on the MSDS for Garlon 4 and Garlon 3A. "Perkins et al. 2000" was cited in the comment letter, but no reference was provided.

Response to Comment 129
The quote from the nine-year-old RED (EPA 1998) regarding "awaiting further limitations" is of limited relevance. The section in context:

> **A. Manufacturing-Use Products**
> **1. Additional Generic Data Requirements**
> The generic data base supporting the re-registration of triclopyr for the above eligible uses has been reviewed and determined to be substantially complete. The Agency is requiring additional confirmatory data to better characterize the fate and chronic toxicity to fish of triclopyr, specifically its 3,5,6-trichloro-2-pyridinol (TCP) degradate, in the aquatic environment. A fish early life stage study (guideline 72-4) using rainbow trout, coho or chum salmon is required for TCP because aquatic concentrations of TCP may be

> greater than 1% of the LC50 (1.5 ppm) for rainbow trout (the most sensitive species). A one-year duration aerobic metabolism study (guideline 162-4) is also required. Previous aerobic aquatic metabolism studies have not fully characterized the degradation of TCP. The Agency encourages registrants to conduct the new aerobic metabolism study using natural waters and sediment from native habitat for the fish species selected for the early life stage test.

SERA noted that "The TCP study was required by the U.S. EPA/OPP (1998a) but completed after the RED was published." EPA (2004b) more recently revisited the concern regarding listed salmonids. This document did not make reference to the need for additional information.

Response to Comment 130
This comment contents has been discussed in the response to comment numbers 126, 128, and 129, above. It provides no new information.

Response to Comment 131
Regarding Kreutzweister et al. (1995), the results did indicate there was growth reduction at concentations of 0.45mg/L and 0.25mg/L, which are close to the LD50 (0.79-1.76 mg/L) from Kreutzweister (1994). It is not surprising that doses high enough to cause mortality would also affect growth. The 1995 paper also noted that at lower concentrations there were indications that the growth of the youngest trout was reduced. The authors note; "These results were in general agreement with the predictions of laboratory time-toxicity tests."

JDSF is not considering aerial applications. Johansen and Green (1990 in SERA 2003b) result's had LC50's close to those of Kreutzweister and others.

Response to Comment 132
With regards to aquatic invertebrates SERA (2003b) notes:

> The available LC50 values, while not as extensive as those for fish, suggest that most invertebrates are about equally or somewhat less sensitive than fish to the various forms of triclopyr. Some families of invertebrates (Ephemeroptera, Plecoptera, Trichoptera, Odonata) are much more resistant than fish to Garlon 4 (Kreutzweiser et al. 1992).

The information on toxicity to fish is well established and has been the subject of five previous comments.

Response to Comment 133
The toxicity to birds was noted in Appendix 13 of the DEIR as being "slightly toxic to birds". This is based on feeding studies where birds would experience the effect of any TCP that was metabolized from triclopyr. EPA RED (1998) notes "These data indicate that TCP is slightly toxic or practically non-toxic acutely to the bird species tested." The RED included mitigations that reduced the level of concern for birds to acceptable. Given that the JDSF use of triclopyr will be limited and directed to target vegetation, the risks to birds will be lower than those evaluated for broadcast and agricultural applications in other risk assessments (for example, EPA 1998, SERA 2003b).

Response to Comment 134
Triclopyr could affect gorse spider mites, the subject of the Searle and others paper from 1990, in two ways. It could directly affect the insect or, if the herbicide was successful in killing the target gorse, the spider mites might die from lack of food. Fortunately gorse has not become a major problem at JDSF as the result of the ongoing IWM program.

The fact that any changes in vegetation, including herbicide application can have varying effects on other organisms is not unexpected. Boggs et al. (1991) states; “Our results indicate that man-induced habitat modifications can alter host parasite relationships in the community.”

The Prezio et al.(1999) study looked at gastropods in habitat that had been changed by brush cutting and herbicide use. Details available from the research project website http://www.pfc.forestry.ca/ecology/ferns/fsnow/index_e.html provide more context than available from the abstract. The brush cut areas had declines in only deciduous trees with all other vegetation increased in the years following treatment. In contrast the herbicide treatments reduced deciduous trees, shrubs and in one case, ferns. The treatments changed the microsites as well. The authors suggest the decline in gastropods in herbicide treated areas was due to changed microclimate and decreased litter decomposition. Litter decomposition changes would be presumably is a result of changes in inputs (vegetation) and microclimate. This factor suggests the possibility the results were a consequence of habitat manipulation not the herbicide use itself.

SERA (2003b) includes this in the discussion of terrestrial microorganisms based on Chakravarty & Sidhu and others work:

> ***4.4.2.3. Microorganisms–*** The potential for substantial effects on soil microorganisms appears to be low. As summarized in Section 4.3.2.4, experimental studies conducted in artificial growth media suggest a very high degree of variability in the response of soil bacteria and fungi totriclopyr with NOAELs of up to 1000 ppm in some species and growth inhibition at concentrations as low as 0.1 ppm in other species. As summarized in Table 4-4, an application rate of 1 lb/acre is estimated to result in longer term soil concentrations that are well below 0.1 ppm – i.e., in the range of about 0.02 to 0.05 ppm – and peak concentrations in the range of about 0.2 ppm. Thus, if the laboratory studies are used to characterize risk, transient inhibition in the growth of some bacteria or fungi might be expected. This could result in a shift in the population structure of microbial soil communities but substantial impacts on soil – i.e., gross changes in capacity of soil to support vegetation – do not seem plausible. This is consistent with the field experience in the use of triclopyr to manage vegetation.

This conclusion seems valid for JDSF as well. The assumption that herbicide effects on fungi in a laboratory would be equal to that in the field is conservative. JDSF directed applications focused at specific vegetation, would result in less uniform effects than under broadcast application.

The comment provides no significant new information regarding triclopyr.

Response to Comment 135

The comment letter states that the Board has failed to include measures that eliminate significant impacts from proposed herbicide use. No significant impacts were identified regarding the use of herbicides for Alternatives C1-C2 (DEIR VII.8-10 though 22) and for Alternative G (RDEIR III-105 to110) for the limited herbicide use proposed. Alternative G virtually eliminates one management use (treatment of native species for road maintenance) and imposes grater restrictions on two other uses (RDEIR III-105). The environmental analysis has identified measures that reduce the risk to human and environmental health.

The specific and limited list of herbicides available for use narrows the potential for negative effects. The list of herbicides and basic characteristics are included in DEIR Appendix 13. The reliance on Integrated Weed Management and limiting situations where herbicides are considered for use reduces the potential for any negative effects. The RDEIR, Alternative G eliminates one category of herbicide use (RDEIR p. II-10). This alternative also imposes further restrictions on the use of herbicides for both hardwood control and invasive weeds (RDEIR p. II-10 &11).

The Administrative Draft Final Forest Management Plan, Chapter 3, includes the following direction for herbicide use:

> CAL FIRE and the BOF recognize there is public controversy regarding herbicide use. A total ban on herbicide use would compromise research opportunities and the broad demonstration value of the Forest and could result in adverse environmental and economic consequences. JDSF staff will adopt the following limitations to potential herbicide use:
>
> - No herbicide will be used unless it is integral to long-term, ecological based management. Projects will be proactive rather than reactive. These considerations will limit and focus any herbicide use. Long-term management will often integrate a variety of treatment techniques.
> - Public and environmental safety is a priority. When herbicide use is indicated, JDSF staff will reduce risk by selecting appropriate herbicide formulations and application techniques.
> - Recognize that some forest visitors may experience negative aesthetic reaction to dead treated plants, even if they are invasive weeds. Herbicide use will be evaluated for aesthetics where treatments could have this potential effect.
>
> This plan limits the types of vegetation management that would be considered for herbicide use. Herbicides will not be used for roadside vegetation clearance to treat native vegetation, unless there are significant over-riding management concerns specific to the area, such as fire prevention. Additional guidance for potential consideration of herbicides use for restoration of historic conifer/hardwood ratios or for reforestation has been discussed in this chapter under Timber Sales.

The FEIR and RDEIR have clearly identified measures, which are incorporated into the Administrative Draft Final Forest Management Plan, that will programmatically reduce the potential for adverse effects of herbicide use. Avoidance and mitigation measures are developed on a site-specific basis. The regulatory process for individual use of herbicides is described in DEIR p. VII.8-13 to 18. Individual herbicide applications are based on label restrictions and Pest Control Recommendations that are CEQA equivalents. Generic buffer distances were not included in programmatic analysis as an adequate buffer for one situation may be unsatisfactory for others.

Response to Comment 136

The project-specific planning process, including compliance with labels, pesticide regulations, and pest control recommendations, will provide adequate water quality protection. The Board has not conducted extensive evaluations because the anticipated use is low, as are the risks. The discussion in the DEIR and in the responses to several comments, above, support the finding of low risk.

The comment speculates concerning indirect movement via soil particles that have adsorbed herbicides. This scenario is unlikely to deliver significant amounts of herbicide to water because the bulk of the herbicide will be deposited on the plant. Minimizing sediment delivery to watercourses is an important goal for water quality and protection of salmonids and is emphasized throughout the DEIR and the Administrative Draft Final Forest Management Plan. Project-specific mitigation will be developed when a risk of herbicide movement to watercourses is anticipated.

The concern stated that the herbicides referenced in the DEIR have been found in water that they were not intended to be in. While records of movement into water can be found for various historic uses, relevant ground based monitoring of forestry applications has not found significant migration of herbicide residues to surface waters. Limited monitoring of watercourses by the North Coast

Regional Water Quality Control Board following forestry herbicide applications did not find detectible levels of residues when application was ground based (http://www.cdpr.ca.gov/docs/empm/pubs/tribal/min06-98.htm). No aerial application is anticipated (DEIR appendix 13). Green Diamond (owner of approximately 400,000 acres in Del Norte, Humboldt and Mendocino Counties) has reported in recent Timber Harvesting Plans (quote from Timber Harvesting Plan 1-06-230 HUM, page 143) "… 28 years of monitoring data from aerial applications with BMP implementation clearly demonstrate that forestry applications of herbicides have little, if any immediate or incremental impact on water quality or aquatic habitat. Additionally, six years of voluntary monitoring of ground based herbicide application with BMP implementation have shown similar results."

There is no basis to expect that the limited use of herbicides will result in any degradation of the water quality in the project area. Each potential treatment will consider environmental and public safety, and be required to mitigate potential impacts.

Response to Comment 137
The relative risk to fish and amphibians from some herbicide formulations is well understood and has been addressed in the DEIR and within this response to comments. Significant impacts to both listed and non-listed species can be avoided by simple measures, including use of the appropriate herbicide formulation, specification of an appropriate buffer, and use of safe and appropriate application techniques to prevent movement of the herbicide into watercourses. The site specific analysis is required to address any threats to these species. Significant impacts to amphibians or fish are not expected to occur. See response 136, monitoring of watercourses for herbicide residues resulting from forestry ground applications, has shown no reason for concern.

Response to Comment 138
A single state listed rare plant species has been found on JDSF. The Humboldt Milk vetch *(Astragalus agnicidus*) was discovered in abundance within an area that had been recently harvested. Two other species (*Fritillaria Roderickii* and *Pleuropogon hooverianus*) are considered likely to occur on the Forest, but have not been found to date (refer to Tables VII.6.2.1 and VII.6.2.2 in the DEIR; asterisks in the tables designate plants that have been documented on JDSF to date). Known occurrences are mapped and protected. The risk to rare plants that could exist on JDSF but have not yet been located will be minimized by the survey requirements detailed in the RDEIR. On a project-specific basis, both planning and operational measures can be used to protect special status plants.

The Administrative Draft Final Forest Management Plan is not a Timber Harvesting Plan subject to the Forest Practice Rules (FPRs). The Administrative Draft Final Forest Management Plan's potential environmental impacts have been addressed in the DEIR, RDEIR, and FEIR per standard CEQA requirements, not per certified regulatory program requirements. However, timber operations conducted pursuant to the management plan are subject to the FPRs. Please see the DEIR at page II-9 through -16 for a discussion of the role of the Forest Practice Rules relative to the Management Plan for JDSF.

Response to Comment 139
CAL FIRE employees have applied most of the herbicide utilized within the past 3 to 6 years. Exposure has been minimized by proper training, use of appropriate equipment, and proper application technique for targeted vegetation. The citation of "CA DPR 1998" in the comment is not appropriately referenced, and the Board is unable to evaluate the value of this study. Given the limited and appropriate use of herbicides on JDSF, with application by trained persons with appropriate application and personal protection equipment, significant impacts to applicators are not expected to occur.

Response to Comment 140
The comment is a repeated reference to the triclopyr study addressed in response to comment 120.

Response to Comment 141
None of the herbicides that are considered for use at JDSF have label requirements for protective clothing beyond those listed for worker protection standards (example: respirator or water proof clothing). Excessive barrier clothing can increase applicator fatigue as well as reduce mobility and safety. Applicators will be protected from exposure during routine applications by worker protection standards. If a specific project would place applicators at an unanticipated risk for higher exposure, the application techniques can be modified or other mitigations used on a project-specific basis.

Response to Comment 142
CAL FIRE shall comply with label requirements for specific types of gloves if and when Garlon 4 is used.

Response to Comment 143
The Administrative Draft Final Forest Management Plan and EIR do not include a proposal to use organophosphate insecticides, 2-4D, fungicides, or growth retardants. Applicators at JDSF will comply with standards for glove cleaning.

Response to Comment 144
All applications of herbicides would be well within the regulated legal structure for use in California and additional site specific analysis. The California EPA evaluates and regulates worker protection standards as does the Federal EPA. Given the small quantity of herbicide use anticipated, the limited applicator exposure, diligent compliance with worker protection measures, and the ability to implement project specific protection measures, no formal risk assessment is necessary. The comment has not identified any unique worker risk inherent in JDSF applications. Applicator risk will likely be further reduced as a result of the limited use of herbicides specified in the Administrative Draft Final Forest Management Plan (Chapter 3).

Response to Comment 145
Chemical sensitivity can be broken into two groups. Risk assessment methodology recognizes that some individuals may be more sensitive to chemicals than others (for example; infants, toddlers, and the elderly). The methodology also recognizes the variation in reaction to chemicals among individuals, which is formalized in EPA risk assessments as an uncertainty factor (Whitford et al.1999). Herbicides registered with EPA must undergo a risk assessment that evaluates this type of sensitive individual.

The paper by Kretzer et al. (1999) examines multiple chemical sensitivity or MCS. This could be considered a second type of sensitivity. He notes:

> There is great controversy over the notion of a disorder in which the victim develops wide-ranging symptoms to many unrelated chemicals at conventionally subtoxic exposure levels, but through toxicologic mechanisms....

And

> Despite the fact that there is little substantive research supporting a toxicologic explanation for this condition, and that medical researchers disagree vigorously about its nature and etiology, MCS is rapidly becoming an established diagnosis on the basis of public belief and political fiat.

Definitive science on this subject does not exist. The concern is speculative in nature. Chemical exposure can be effectively minimized by using a range of site specific measures, including notification and posting, temporary closure, selecting techniques that will reduce exposure to treated foliage, and minimization of the number of compounds by utilizing adjuvant and dyes only when needed. The choice of specific measures would be dependent on the location of the treatment site relative to forest visitor use and environmental site factors.

Treatments will be of limited areas and short time frames reducing risk of exposure. See response 72 for a summary of measures that will limit use, reducing any risk of exposure.

Response to Comments 146 to 158
The Board has examined the product-specific comments for relevant new information that would affect the analysis of herbicide use. Although there are interesting new research techniques, the relative risk of using the specific products remain unchanged.

The comments include statements about pregnant women, fetuses and infants. As noted above, the standard risk assessment recognizes that these groups may be more sensitive and addresses that fact in regulatory process. A response to concerns relative to generic toxins, unnamed pesticides, or herbicides not considered for use at JDSF is beyond the scope of the analysis necessary. The responsibilities of CAL FIRE and other agencies for evaluation of information on herbicides have been noted previously. Comments 147 to 158 are either: non specific in nature, involve pesticides or herbicides that are not proposed for use at JDSF, or are repeated citations of information already presented in the comment letter (for example, see response 87 for a detailed discussion of the Richard, 2005 document).

Potential use of herbicides on JDSF use is limited and cautious. The DEIR VII.8-16 notes:

> Cumulative impacts are unlikely because herbicide uses related to different control projects are separated in time and distance so that their individual effects do not reinforce or interact with each other. Herbicide use under the FMP is neither widespread nor frequent. Herbicide may be used to reduce weed competition with small seedlings, to release the young trees from competition with brush, or to eliminate exotic weeds. Forestry herbicide uses are substantially less, in both frequency and amount, than in agricultural or urban settings.

Response to Comment 159
IWM will focus decisions regarding invasive plant control upon consideration of the ecological response of the proposed treatment. The ecological nature of the JDSF IWM Program and other management approaches under the Administrative Draft Final Forest Management Plan also were addressed above in the responses to comments 9-11, 23, and 34. Further, please see responses below.

Response to Comment 160
The comment postulated an effect has little relevance to the planned action at JDSF. Early geminating invasive weeds like cheat grass, are not a major invasive weed problem within the State Forest. Many vegetation control techniques beside herbicides would logically generate dead organic matter, for example, mowing, cutting, hand pulling, grubbing. Nutrient cycling is more complex in the redwood forest than the grasslands that cheat grass degrade. Dead invasive weeds would be a minor small part of the annual carbon cycling in the redwood forest. In actuality, areas with organic ground cover seem to be at lower risk for the establishment of the most invasive grass species (jubata grass) at JDSF. The comment provides no basis for a significant indirect effect.

Response to Comment 161
Wooten and Renwyck (2001) reviewed USDA Forest Service invasive weed projects in Northwest Washington in the report titled “Risky Business: Invasive species management on National Forests”. . No specific references to “exponential increases” were found searching this document. The comment’s premise that the use of herbicides in areas where non-native weed plants exist frequently results in expansion of non-native species, is a narrow view. At JDSF, a suite of native and non-native plants will expand depending on the treatments, site conditions and competition

with other plants. The species- and site-specific approach proposed at JDSF would avoid broadcast or extensive treatments such as mowing when treatments would result in undesirable species shift. The DEIR and Administrative Draft Final Forest Management Plan recognize the ecological basis of invasive plant control as an important element of IWM at JDSF.

Response to Comment 162
The reference is utilized out of context in the comment. A review of McDonald and Everest (1996) indicates that the focus was upon improving growth of ponderosa pine seedlings growing with the rhizomatous drought tolerant shrub bear-clover (*Chamaebatia foliolosa*). Cheatgrass is a Siberian exotic that actively grows on the site before native bear-clover and ponderosa pine have initiated new spring growth. The application, timed to control bear-clover, occurred when cheatgrass had competed its life cycle. If controlling cheatgrass was an objective, the timing of applications could be modified to target cheatgrass. Cheatgrass is not a significant invasive plant problem in the Forest. Project objectives and ecological responses of plants are more relevant to the shift in species than herbicide use per se.

Response to Comment 163
Harper and Whitehead (1994) reports results of treatment designed to set back competing vegetation in order to allow conifer seedlings to become established. The results, as quoted in the comment, note that “invaders” became established. The “five main species” are, in fact, native to North America. The use of the term “invader” in this context appears to refer to a species that becomes established following disturbance (i.e., early seral). The comment assumes erroneously that “invading” plant species are invasive exotic weeds. Herbicides and other vegetation management methods such as those reported are utilized to modify species composition. The proposed IWM approach recognizes this fact, and will utilize a target species focus to insure that native species diversity is maintained.

Response to Comment 164
Sirmard et. al. (1998) provides information on grazing effects following clearcutting, as well as conifer response. Widespread changes in vegetation can have the potential to affect wildlife. At JDSF, the treatment activities will be focused on target species, and treatment areas will be limited. Many of the invasive weeds at JDSF have low palatability to wildlife. The fact that Sirmard’s results varied with vegetation type supports the concept that site-specific evaluations are preferable to generalized programmatic direction. The DEIR and Administrative Draft Final Forest Management Plan provide for such site-specific evaluations.

Response to Comment 165
In responding to a number of previous comments, the Board has explained that a sound ecological basis is critical to effective invasive weed management. The proposed IWM approach is ecologically based and minimizes the effects of vegetation control measures. The DEIR and DFMP also emphasize adaptive management. This approach will allow JDSF staff to monitor and learn, thus improving outcomes.

Each of the six comments regarding “Herbicides as a disturbance factor for invasive weeds” was reviewed for relevance. Reviewed in context of JDSF commitment to proactive ecologically based IWM, there is no support for the comment premise of a “potential significant impact”

Response to Comment 166
The DEIR (see sections VII.6.2, VII.8, VIII.5, VIII.7.3, and Appendix 13) and RDEIR (section III.6.3, III.8, IV.4, and IV.6) specifically address the potential for cumulative effects from herbicide use and invasive species, and found that a significant impact would not occur.

The comment includes several statements that postulate a cumulative effect. Though JDSF has a history of forest management, herbicide use has been light in the last decade.

For adverse cumulative herbicide effects to occur, the effects of prior uses would have to have persisted and combined with present and future potential effects. Herbicides commonly used in forest management applications typically degrade fairly quickly as noted in the information provided in DEIR Appendix 13. In living organisms these products, do not tend to bioaccumulate (build up and concentrate over time). They are used in relatively small quantities, though county-wide forestry use can be measured in the thousands of pounds, it's a small fraction of the tons of soil and living organisms present. Forestry-related herbicide use does not typically occur in one place year after year. There is no basis to assume there has been any significant accumulation of herbicides in the effected environment.

The comment letter provides no reference for the statement that both the Noyo and Big River Watersheds are impacted by pesticides (no pesticide related CA Water Board TMDL listing for these watersheds exists). Using the figures from the comment letter, approximately 1,350 lbs of pesticides have been applied in the two watersheds in contrast to approximately 1.2 million pounds for Mendocino County. The Noyo and Big River watersheds comprise 7.6 % of the acreage in Mendocino County and they account for 0.1% of the pesticide usage by this measure. Given the analysis in the DEIR and RDEIR, as well as the Administrative Draft Final Forest Management Plan's limitations on herbicide use described in this and other responses, the Board finds that there will be no cumulative effects to human health, aquatic species, wildlife, and native plants.

Response to Comment 167

The table that follows lists forestry use relative to county-wide pesticide use for the last three years available. It shows that forestry use has declined from the 2002 use (18,706 lbs and 15,561 acres DEIR VII.8-9) and typically accounts for approximately ½ of one percent of total pesticide use in the County by weight, despite the extensive forestlands. County-wide pesticide use has declined in these last three years as well when measured by weight. Forestry related herbicide treatments were implemented on approximately 1/3 of one percent of the county land base.
A more local area, bracketing JDSF lands on the north and south, comprised of approximately 266,600 acres was identified using township and range. The area was not extended to the east as this is a different watershed with different land uses; to the west is the ocean. For these lands surrounding JDSF, past forestry and timberland herbicide usage use varied annually from 74% to 35 % of total pounds used within this smaller area. The annual variation in use ties to the fact that the major forestry use in this area, reforestation, typically occurs only once or twice a rotation (~45-80 years) on a given area. Note that for the most recent data, 2005, with 40% of the use for forestry, these applications took place on less than one percent of the land area queried surrounding JDSF. With treatments dispersed across the landscape, any potential effects are dispersed as well. The pesticide use data indicate that there is little potential for a resultant cumulative impact, given the relatively low level of usage and the lack of mechanisms for accumulation over space and time.

See also the response to comment 137 in DEIR comment letter P-177 from Richard Grassetti.

Pesticide Use Patterns in Mendocino County Relative to Forestry Use						
Analysis Area	**Year**	**Pounds of All Pesticides Applied**	**Pounds of Pesticides Applied for Forestry & Timberland Applications**	**Fraction of Total Pesticide use for Forestry & Timberland Applications**	**Acres of Forest & Timberland Treated***	**Acres of Forest & Timberland Treated as fraction of Total Acres Examined**
Mendocino County (2,482,050 acres)	2003	1,475,689	10,032	0.68%	9,277	0.37%
	2004	1,162,903	5,189	0.45%	6,255	0.25%
	2005	1,213,174	6,287	0.52%	9,382	0.38%
JDSF and Neighboring Areas (266,600 acres)	2003	5,389	3,976	73.79%	2,673	1.00%
	2004	3,659	1,298	35.48%	1,414	0.53%
	2005	4,256	1,724	40.49%	2,244	0.84%
* Reports may count acreage more than once if more than one pesticide has been applied. For the county-wide numbers not enough information was available to remove duplicate acres. For the JDSF and neighboring areas, the acres that were obviously duplicated for a given location were removed.						
Source: DPR website and DPR staff, October 2007.						

References:

Achuff, P.L., A.W. Bailey, and L.M. Brusnyk. 1990. Non-native plant management in western region national and historic parks: issue analysis and recommendations. Report by D.A. Westworth and Associates Ltd., for Canadian Parks Service, Environment Canada. 128 pp.

Ando, C., Li, L., Walters, J., Gana, C., Segawa, R., Sava, R., Barry, T., Lee, P., Tran, S., White, J., Hsu, J., Goh, K. 2002. Residues of forestry herbicides in plants of interest to Native Amercians in California national forests. Department of Pesticide Regulation.

Archer, Amy J. 2001. Taeniatherum caput-medusae. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [May 2006].

Bakke,David (2006). Pesticide-Use Specialist/Invasive Plants Program Manager, Region 5, USDA FS. Personal communication. Email with part of R. Powers affidavit.

BASF. 2003. Material Safety Data Sheet for Arsenal Applicators Concentrate. Product number 579611. BASF Corp. Research Triangle Park, NC

BASF 2002. Material Safety Data Sheet for Chopper Herbicide. Product number 579622. BASF Corp. Research Triangle Park, NC

Belsky, A. Joy and Dana M. Blumenthal. 1997. Effects of Livestock Grazing on Stand Dynamics and Soils in Upland Forests of the Interior West. Conservation Biology Volume 11, Number 3, April.

Berrill M, et al (1994), Effects of low concentrations of forest use pesticides on frog embryos and tadpoles, Environ toxicology and chemistry, 657-664, v.13(4), 1994.

Boggs James F., Scott T. McMurry, David M. Leslie, Jr., David M. Engle, and Robert L Lochmiller. 1991. Influence of Habitat Modification on the Community of Gastrointestinal Helminths of Cotton Rats. Journal of Wildlife Diseases, Vol27-4 pp 584-593

Brossard, Carla C. (JDSF files, undated). A test of Removal/Control Techniques for French Broom. Assoc. For Biology, St Mary's Collage of California, Moraga CA.

CDFA California Department of Food and Agriculture, Integrated Pest Control Branch. Weed information sheet. Encycloweedia.Dyer's woad. http://www.cdfa.ca.gov/phpps/ipc/weedinfo/isatis.htm (5/06)

CDFA California Department of Food and Agriculture. Integrated Pest Management Branch. Encycloweedia. Italian thistle. http://www.cdfa.ca.gov/phpps/ipc/weedinfo/carduus.htm (5/06)

Cornell University (1985) Imazapyr, isopropylamine salt Herbicide Profile 9/85,CHEMICAL FACT SHEET FOR ARSENAL http://pmep.cce.cornell.edu/profiles/herb-growthreg/fatty-alcohol-monuron/imazapyr-iso-salt/herb-prof-arsenal.html (5/06)

CMDAR. Commonwealth of Massachusetts, Department of Agricultural Resources, 2003 IMAZAPYR, Right of Way Fact Sheet, Dated November 26, 2003 http://www.mass.gov/agr/pesticides/rightofway/Imazapyr2005.pdf (5/06)

Daruich, J., Zirulnik, F., Gimenez, M. 2001. Effect of the herbicide glyphosate on enzymatic activity in pregnant rats and their fetuses. Environ Res. 85(3): 226-31. Abstrct from: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11237511&query_hl=12&itool=pubmed_docsum (5/06)

De Roos AJ, Zahm SH, Cantor KP, Weisenburger DD, Holmes FF, Burmeister LF, et al. (2003). Integrative assessment of multiple pesticides as risk factors for non-Hodgkin's lymphoma among men. Occup Environ Med 60:E11.

De Roos, Anneclaire, Aaron Blair, Jennifer Rusiecki, Jane Hoppin, Megan Svec, Mustafa Dosemeci, Dale Sandler and Michael Alavanja (2005)Cancer Incidence among Glyphosate-Exposed Pesticide Applicators in the Agricultural Health Study. Environmental Health Perspectives. Vol. 113 -1, |January

Dow.1999. Tansline Specialty Herbicide Label. Dow Agrosciences LCC

EPA. 1993 Reregistration Eligibility Decision (RED) for Glyphosate, Office of Prevention Pesticides and Toxic Substances, September 1993, United States Environmental Protection Agency, Washington, D.C.

EPA. 1998, *Reregistration Eligibility Decision (RED) for Triclopyr,* Environmental Protection and Toxic Substances October 1998, United States Environmental Protection Agency, Washington, D.C.

EPA .2000. Toxicology Chapter for Chlorpyrifos. DP Barcode D263892, Case 818975,Submission S576466, PC Code 059101. Special Review and Reregistration Division. Office of Prevention, Pesticides and Toxic Substances Memorandum from Deborah Smegal, Re-Registration Branch 3,Health Effects Division to Mark Hartman, Chemical Review Manager, dated April 18, 2000

EPA 2002. Glyphosate; Pesticide Tolerances, Environmental Protection Agency. Final rule. http://www.epa.gov/fedrgstr/EPA-PEST/2002/September/Day-27/p24488.htm

EPA 2004a Inert Ingredients ordered alphabetically by Chemical Name. Updated August 2004 from Inert (other) Pesticide Ingredients in Pesticide Products - Categorized List of Inert (other) Pesticide Ingredients http://www.epa.gov/opprd001/inerts/alphacomplete.pdf

EPA .2004b. Triclopyr Butoxyethyl Ester - Analysis of Risks to Endangered and Threatened Salmon and Steelhead. December 1, 2004 Genifer Maree Tarkowski, Environmental Field Branch, Office of Pesticide Programs

Garry Vincent F., Mary E. Harkins, Leanna L. Erickson, Leslie K. Long-Simpson, Seth E. Holland, and Barbara L. Burroughs. 2002. Birth Defects, Season of Conception, and Sex of Children Born to Pesticide Applicators Living in the Red River Valley of Minnesota, USA. from monograph: Impact of Endocrine Disruptors on Brain Development and Behavior. Environ Health Perspect. 110 Suppl 3:441-9.

Hardell, L., Eriksson, M. 1999. A case-control study of non-Hodgkins lymphoma and exposure to pesticides. Cancer: J of Amer. Cancer Society. 85(6): 1353-1360.

Harper, G. and R. Whitehead. 1994. Evaluation of forest vegetation community dynamics, biodiversity and wildlife forage values 8 years after herbicide and manual brushing treatments on the Bush River Trial site. Working Plan. E.P. 1179. B.C. Min. For., Research Branch, Victoria. http://www.for.gov.bc.ca/research/forprod/fordyn/projects/ep1179/ep1179htm. (5/06)

Healthy Schools Act of 2000. An act to add Section 48980.3 to, and to add Article 4 (commencing with Section 17608) to Chapter 5 of Part 10.5 of, the Education Code, and to add Article 17 (commencing with Section 13180) to Chapter 2 of Division 7 of the Food and Agricultural Code, relating to school safety. Approved by Governor September 25, 2000. http://www.cdpr.ca.gov/cfdocs/apps/schoolipm/school_ipm_law/17_ab2260.pdf (6/06)

Holloran, Pete, Anouk Mackenzie, Sharon Farrell, and Doug Johnson (2004) The Weed Workers' Handbook, A Guide to Techniques for Removing Bay Area Invasive Plants. The Watershed Project, California Invasive Plant Council

Hoshovsky, Marc. 1986. Element Stewardship Abstract for *Cytisus scoparius* and *Genista monspessulanus*, Scotch Broom, French Broom. The Nature Conservancy, Arlington, Virginia. http://tncweeds.ucdavis.edu/esadocs/documnts/cytisco.pdf. (5/06)

Howe, C.M.; Berrill, M.; Pauli, B.D.; Helbing, C.C.; Werry, K.; Veldhoen, N. 2004. Toxicity of glyphosate-based pesticides to four North American frog species. Environmental Toxicology and Chemistry, 23(8): 1928-1938.

Huckins, Eddie and Jonathan Soll. 2004. Controlling Scotch (Scots) Broom (*Cytisus scoparius*) in the Pacific Northwest. The Nature Conservancy, The Global Invasive Species Initiative. http://tncweeds.ucdavis.edu/moredocs/cytsco01.pdf. (5/06)

Information Ventures. 1995 Clopyralid methyl, Pesticide Fact Sheet. Prepared by Information Ventures, Inc. under U.S. Forest Service Contract. November 1995

International Organization for Biological Control – West Palaearctic Regional Section (Includes Europe) has a more recent analysis of the relative risk to beneficial insects from pesticides in a toolbox database http://www.iobc.ch/toolbox.html#5 (5/06)

Kedzie-Webb, S., R. Sheley, and S. Dewey. 1996. Dyer's Woad: A Threat to Rangeland in Montana. Montguide. MT 9614. Montana State University, Bozeman, Montana. (CDFA) California Department of Food and Agriculture. Integrated Pest Management Branch.

Encycloweedia. Italian thistle. Abstract from http://www.cdfa.ca.gov/phpps/ipc/weedinfo/carduus.htm

Kretzer Richard, Raymond R. Neutra, and Nan Lashuay. 1999 Prevalence of People Reporting Sensitivities to Chemicals in a Population based Survey. American Journal of Epidemiology, Vol. 150-1 pp.1-12

Kreutzweister D. P., S. B. Holmes and D. C. Eichenberg. 1994. Influence of exposure duration on the toxicity of triclopyr ester to fish and aquatic insects. Archives of Environmental Contamination and Toxicology .Vol.26 – 1, pp 124 - 129. Abstract from: http://www.springerlink.com/(yxvt3aaib5o2ux2yptclstix)/app/home/contribution.asp?referrer=parent&backto=issue,19,22;journal,110,221;linkingpublicationresults,1:100119,1 (5/06)

Kreutzweiser, D., Thompson, D., Capell, S., Thomas, D., Staznik, B. 1995. Field evaluation of triclopyr ester toxicity to fish. Arch. Environ. Contam., Toxicol. 28: 18-26. Abstract from: http://md1.csa.com/partners/viewrecord.php?requester=gs&collection=ENV&recid=3782494 (5/06)

La Clare James J., John A. Bantle, and James Dumont. 1998. Photoproducts and Metabolites of a Common Insect Growth Regulator Produce Developmental Deformities in *Xenopus* .*Environ. Sci. Technol.,* 32(10), 1453 -1461, 1998. Abstract from: http://pubs.acs.org/cgi-bin/abstract.cgi/esthag/1998/32/i10/abs/es971024h.html (5/06)

Michael, J.L. and D.G. Neary. 1993. Herbicide dissipation studies in southern forest ecosystems. Environ. Toxicol. Chem. 12: 405-410.

Michael, Jerry and Daniel Neary. 1993. Herbicide dissipation studies in southern forest ecosystems, Envrion. Tox. and Chem. Vol.12 pp 405-410

McDonald, Philip M.; Everest, Glen A. 1996. Response of Young Ponderosa Pines, Shrubs, and Grasses to Two Release Treatments. United States Department of Agriculture, Forest Service, Pacific Southwest Research Station P.O. Box 245 Berkeley, California 94701-0245 Research Note PSW-RN-419. Abstract from: http://www.treesearch.fs.fed.us/pubs/2865 (5/06)

McDowell, R. W, L. M. Condron, B. E. Main & F. Dastgheib (1997). Dissipation of imazapyr, flumetsulam and thifensulfuron in soil**.** Weed Research Volume 37- 6 pg 381. Abstract from: http://www.blackwell-synergy.com/links/doi/10.1046%2Fj.1365-3180.1997.d01-73.x (5/06)

McDuffie, Helen, Punam Pahwa, John McLaughlin, John Spinelli, Shirley Fincham, James Dosman, Diane Robson, Leo Skinnider, Norman Choi. (2001) Non-Hodgkin's Lymphoma and Specific Pesticide Exposures in Men: Cross-Canada Study of Pesticides and Health. Cancer Epidemiology, Biomarkers & Prevention, *Vol. 10, 1155–1163, November 2001*

Monsanto .2001. Martial Safety Data Sheet for Roundup pro Herbicide. Version 1.1 Monsanto Company

Neary, Daniel , Jerry Michael. 1996. Herbicides - Protecting long-term sustainability and water quality in forest ecosystems. New Zealand Journal of Forestry Science, Vol. 26 pp.241-264

Pan, Y., Vaivoda, A., Foster, E. 2003. Effects of bromacil, diuron, glyphosate, and sulfometuron-methyl on periphyton assemblages and rainbow trout. – Final report. Portland State University, Oregon Dept. of Transportation, Federal Highway Administration, Oregon Division.

Peluso M; Munnia A; Bolognesi C; Parodi S. 1998. 32P-postlabeling detection of DNA adducts in mice treated with the herbicide RoudUp. Environ Mol Mutagen 1998;31(1):55-9

Prezio, J., Lankester, M., Lautenschlager, R., Bell, F. 1999. Effects of alternative conifer release treatments on terrestrial gastropods in regenerating spruce plantations. Can. J. For. Res. 29:1141-1148. Abstract from: http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_abst_f?cjfr_x99-085_29_ns_nf_cjfr7-99 (5/06)

Raj, Prasad. 2002. Scotch Broom, Cytisus scoparius L. in British Columbia. Natural Resources Canada. http://www.pfc.cfs.nrcan.gc.ca/biodiversity/broom_e.html. (5/06)

Relyea,R. A. (2005a) The Impact of Insecticides and Herbicides on the Biodiversity and of Aquatic Communities, *Ecological Applications,* 15(2), Pp. 618–627 Abstract

Relyea, R. A., (2005b). The Lethal Impacts of Roundup and Predatory Stress on Six Species of North American Tadpoles. Arch. Environ. Contam. Toxicol. 48, 351–357

Relyea, R. A., N. M. Schoeppner, And J. T. Hoverman , (2005c), Pesticides and Amphibians: The Importance of Community Context *Ecological Applications,* 15(4), Pp. 1125–1134

Richard, S., Moslemi, S., Sipahutar, H., Benachour, N., Seralini, G. 2005. Differential effects of glyphosate and Roundup on human placental cells and aromatase. Environmental Health Perspectives. 113(6): 716-20.

Sawada, Y., Nagai, Y., Ueyama, M., and Yamarnoto, I. 1988. Probably toxicity of surface active agent in commercial herbicide containing glyphosate. Lancet 1 (8580): 229

Scribner, E., Battaglin, W., Dietze, J., Thurman, E. 2002. Reconnaissance data for glyphosate, other selected herbicides, their degradation products, and antibiotics in 51 streams in nine Midwestern states. US Geological Survey. Open-file report 03-217

SERA. 1999. Imazapyr (Arsenal, Chopper, and Stalker Formulations) Final Report. Prepared for: USDA, Forest Service. USDA/FS Contract No. 53-3187-5-12. United States Department of Agriculture. by: Syracuse Environmental Research Associates, Inc. SERA TR 98-21-14-01b. Fayetteville, New York. May 6, 1999

SERA. (2002) Neurotoxicity, Immunotoxicity, and Endocrine Disruption with Specific Commentary on Glyphosate, Triclopyr, and Hexazinone: Final Report. SERA TR 01-43-08-04a. for Animal and Plant Health Inspection Service (APHIS) United States Department of Agriculture. GSA Contract No. GS-10F-0082F. Prepared by Patrick Durkin and Gary Diamond. Syracuse Environmental Research Associates, Inc. Fayetteville, New York. February 14, 2002

SERA. 2003a. Glyphosate -Human Health and Ecological Risk Assessment, Final Report Prepared for: USDA, Forest Service, Forest Health Protection. GSA Contract No. GS-10F-0082, Syracuse Environmental Research Associates, Inc. Fayetteville, New York

SERA. 2003b. *Triclopyr -Revised Human Health and Ecological Risk Assessment, Final Report*. Prepared for: USDA, Forest Service Forest Health Protection SERA TR 02-43-13-03b GSA Contract No. GS-10F-0082F Syracuse Environmental Research Associates, Inc. Fayetteville, New York, March 15, 2003.

SERA 2004a Clopyralid -Human Health and Ecological Risk Assessment - Final Report. SERA TR 04-43-17-03c. Prepared for: USDA, Forest Service Forest Health Protection GSA Contract No. GS-10F-0082F.Prepared by Patrick Durkin and Mark Follansbee, Syracuse Environmental Research Associates, Inc. New York, December 5, 2004

SERA 2004b Imazapyr - Human Health and Ecological Risk Assessment – Final Report. SERA TR 04-43-17-05b. Prepared for:USDA, Forest Service Forest Health Protection, GSA Contract No. GS-10F-0082F. Prepared by Patrick Durkin and Mark Follansbee Fayetteville, New York December 18, 2004

Simard, Suzanne, Heineman, Jean, and Youwe, Phil. 1998. Brushing and Grazing Effects on Lodgepole Pine, Vascular Plants, and Range Forage in Three Plant Communities in the Southern Interior of British Columbia: Nine-Year Results. LMH 45. B.C. Minitry of Forests, Forestry Division Services Branch. Upper McKay Creek Study pgs. 35-45.

Sierra Nevada Ecosystem Project. 1996. Use of a Deterministic Fire Growth Model to Test Fuel Treatments, section author Jan W van Wagtendonk. In: Sierra Nevada Ecosystem Project: Final report to Congress, Volume II, Assessments and scientific basis for management options. Davis: University of California, Centers for Water and Wildland Resources. Chapter 43.

Tarkowski, Genifer M. (2004) Triclopyr Butoxyethyl Ester - Analysis of Risks to Endangered and Threatened Salmon and Steelhead, report dated December 1, 2004, Environmental Field Branch, Office of Pesticide Programs.

Tu, Mandy, Callie Hurd, & John M. Randall 2001 "Weed Control Methods Handbook: Tools and Techniques for Use in Natural Areas) Nature Conservancy, Version date: April 2001

USDA Forest Service. 2000. Noxious Weed Management Strategy. Pacific Southwest Region. Prepared by Cheri Rohrer and James R. Shackeford. Recommended by Stephen Paulson. Approved by John Neisess.

USGS Circular 1144. 1998. Water Quality on the Central Columbia Plateau; Washington and Idaho, 1992-1995 National Water-Quality Assessment (NAWQA) Program : U.S. Geological Survey. Alex K. Williamson, Mark D. Munn, Sarah J. Ryker, Richard J. Wagner, James C. Ebbert, and Ann M. Vanderpool

USGS. 1999. Pesticides Detected in Urban Streams During Rainstorms and Relations to Retail Sales of Pesticides in King County, Washington. U.S. Department of the Interior, U.S. Geological Survey. USGS Fact Sheet 097-99. Dated April 1999

Young, Steve L. (2003) Exploring Alternative Methods for Vegetation Control and Maintenance Along Roadsides, Final Report Dated 2/14/2003 Hopland Research & Extension Center, University of California, Contract #65A00062 for Caltrans

Walsh, L., McCormick, C., Martin, C., Stocco, D. 2000. Rounup inhibits steroidogenesis by disruptiong steroidogenic acute regulatory (StAR) protein expression. Environ Health Perpect. 108: 769-776.

White, D.J. and E. Haber 1983. (Internet date 2003) Invasive plants and their biology, impact and control options. From: Invasive Plants of Natural Habitats in Canada, Canadian Wildlife Service, Environment Canada. 121 p ://www.cws-scf.ec.gc.ca/publications/inv/11_e.cfm (10/07)

Whitford, Fred, Joel Kronenberg, Manager, Curt Lunchick, Jeffrey Driver, Robert Tomerlin, Jeff Wolt, Henry Spencer,Carl Winter, Gary Whitmyre, (New 10/1999),

Pesticides and Human Health Risk Assessment Policies, Processes, and Procedures, Purdue Pesticide Programs, Purdue University Cooperative Extension Service http://www.btny.purdue.edu/Pubs/PPP/PPP-48.pdf (5/06)

W.H.O.(World Health Organization), 2005. WHO Guidelines for Drinking-water Quality. http://www.who.int/water_sanitation_health/dwq/chemicals/glyphosateampa290605.pdf) (5/06)

Wooten, G. and M. Renwyck. 2001. Risky Business: Invasive Species Management on National Forests. Kettle Range Conservation Group. Spokane, Washington. http://www.kettlerange.org/weeds/ (5/06)

Zouhar, Kris. 2003. Bromus tectorum. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ (5/06)

E-36

From: Pete Stanton [unca_pete@juno.com]
Posted At: Saturday, February 11, 2006 8:54 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

Take the logging industry bribery money you get, and re-invest it in killing children in Iran (with them new fancy baby nukes). Just tell the loggers you lost it.

Sincerely,

Pete Stanton
4 Achange Rd.
grover beach, CA 94115

1

Email Letter E-36

Response to Comment 1
Comment noted.

E-37

From: djconnel@ieee.org
Posted At: Wednesday, February 01, 2006 8:11 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose the proposed management plan for Jackson State Forest. I support immediate, serious preservation efforts for this valuable natural resource. Please do not allow the logging industry to exert its influence here.

Sincerely,

Daniel Connelly
omitted
San Francisco, California 94107
cc:
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

1

Email Letter E-37

Response to Comment 1
Opposition to the DFMP noted. Support for a preservation oriented management plan noted. The logging industry has the same opportunity for public comment that is provided to all. The management plan adopted for JDSF will not be based on logging industry influence. The management direction of JDSF derives directly from legislative statutes, regulations, and policies set by the State Board of Forestry and Fire Protection. A discussion of the legislative mandate for the state forest system can be found in section II of the DEIR. See General Response 2 and 17.

Kraemer, Candace E-38

From: nnordicn@comcast.net
Posted At: Thursday, February 09, 2006 6:00 PM
Conversation: Jackson Forest
Subject: Jackson Forest

1 Please do not go back to the old days. We need to think of future generations and what we are leaving
2 them. Please extend the public comment period in that I have been unable to read all of the 1,500 pages.

Norbert Rypp
P.O. Box 295
Kirkwood, CA 95646

Email Letter E-38

Response to Comment 1
The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions**.** See also General Response 15.

Response to Comment 2
See General Response 5.

E-39

From: brinecekristy@yahoo.com
Posted At: Tuesday, February 28, 2006 11:08 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I personally disagreed with the proposal management plan for Jackson State Forest because of their plans such as clear cutting, large-scale commercial logging, herbicide uses and cutting off the oldest second-growth stands. In addition, it will affect the Jackson State Forest wildlife, species habitat, and the recreation of hiking, horseback riding, bike riding and camping.

2 Jackson State Redwood Forest is view by the California Department of Forestry as a lumber and source of revenue; on the other hand, Jackson State Redwood Forest is viewed by people like us, ones whom are writing in support to prevent massive logging of the state forest?s recreational and ecological treasures. Therefore, I am writing this letter supporting the restoration of Jackson State Redwood Forest.

Sincerely,

Tiffany Vue
180 Sconce Way
Sacramento, California 95838
cc:
Senator Deborah Ortiz
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger
Assembly Member Dave Jones

1

Email Letter E-39

Response to Comment 1
Please see Response to Form Letter 2.
See also General Response 7, 9, 10, 11, 12, 14 and 15.

Response to Comment 2
Support for a more restoration oriented management plan noted. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of timber production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. CAL FIRE has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees.

E-40

From: WBReid@Compuserve.com
Posted At: Tuesday, February 28, 2006 8:12 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I have been spending a portion of my summer in and around Jackson State Forest for 25 years. Since moving to Seattle in 1997, my wife and I have made an annual trip to California, with the primary reason being our two-week visit to Jackson State Forest and the surrounding area. Generally we are in California spending our money for a month each year, and we encourage several other people to make similar trips.

1,2,3 I find it distressing and appalling that the proposed management plan for the Forest allows for clear cutting, cutting older trees, and big logging operations. It seems to me that one of our precious few natural forests is being threatened by heavily monied forces, and I oppose strongly the management plan as it stands. Once places like Jackson State
4,5,6 Forest are cut down (not to mention damaged by herbicide use and insufficient protection for the streams) they are gone for all generations to come.

7,8,9,10 I personaly want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

Please take action to save this wonderful place for all our children.

Sincerely,

W. Bruce Reid
3030 S. Bradford St.
Seattle, Washington 98108

1

Email Letter E-40

Please see Response to Form Letter 2.

Response to Comment 1
See General Response 2 and 10.

Response to Comment 2
See General Response 9.

Response to Comment 3
While no definition of "big logging operations" is provided in the comment, it can be assumed that the comment relates to the overall quantity of harvesting. While the comment does not go directly to the contents of the EIR, or the analysis therein, the following response is provided.

The legislative mandate for the forest is to demonstrate sustainable and economic forest management. The economic component of this mandate requires the use of commercial logging operations. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of timber production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to "less than significant". See also General Response 16.

Response to Comment 4
See General Response 2. The main portion of JDSF was purchased by the State over a period of years from 1947 to 1951 from a private seller. At that time, most of the lands were in a cut-over condition, with relatively low stocking. CAL FIRE has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees. The forest that you see today is the result of 50 years of forest management that included timber harvesting. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. See also General Response 15.

Response to Comment 5
See General Response 7.

Response to Comment 6
See General Response 11.

Response to Comment 7
See General Response 8 and 9.

Response to Comment 8
See General Response 11 and 12.

Response to Comment 9
See General Response 14.

Response to Comment 10
See General Response 2.

IV.3 Responses to Individual DEIR E-Mail Comments E-41 to E-113

This section presents responses to individual public comments (i.e., not form letter or form letter based) received via e-mail. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

E-41

From: richard@rinc.com
Posted At: Tuesday, February 28, 2006 5:25 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

Common, people. For once, do the righ thing. Save this forest for research, habitat and recreation. It's our forest. Don't turn it over to profiteers.

Sincerely,

Richard Childs
Box 888
Albion, California 95410
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

Email Letter E-41

Response to Comment 1
See General Response 2, 11, 12 and 14. The JDSF management plan will continue to provide for research, habitat protection, and recreation. There are no plans to "turn it over to profiteers".

E-43

From: MandrO@SacCounty.net
Posted At: Tuesday, February 07, 2006 2:34 PM
Conversation: Support draft EIR Alternative F

Subject: Support draft EIR Alternative F

Dear Members of the Board:

Jackson State Forest is an important public resource belonging to all Californians. I am very concerned that Jackson Forest has not been managed in a way that adequately balances the needs of fish and wildlife and the desires of most Californians with the Department's desire to log the forest. 1

Many times I had driven by Jackson State Forest, but because I knew nothing about it, I never stopped. One day, my husband and I decided to finally stop and take a hike through the Forest. We brought our picnic lunch and proceeded along what I now know was a logging road. We were looking forward to exploring the Forest and experiencing a "typical" forest, alive with animals and health. 2

You probably know where this story is going. When we came upon the clearcutting, the trashed landscape, and the deadness, I was so upset that we immediately hiked back to the car with our uneaten lunches.

I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson. 3

Sincerely,

Olga Mandrussow
2627 U Street, Apt. 9
Sacramento, CA 95818-1837

1

6

Email Letter E-43

Response to Comment 1
See Response to Form Letter 6.

Response to Comment 2
See General Response 2, 10 and 14. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII.9 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in section VII.14. Further analysis of potential impacts to aesthetic resources relating to Alternative G and the ADFFMP can be found in RDEIR section III.2 and III.14. The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). The DEIR/RDEIR analysis of these potential impacts found that application of several mitigation measures would reduce the potential negative impacts to less than significant.

Response to Comment 3
Support for Alternative F noted.

E-44

From: coolside@aol.com
Posted At: Wednesday, February 15, 2006 9:29 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I am particularly concerned about the draft environmental document(Draft EIR) and the proposed management plan for Jackson State Forest. Proposals are inadequate for the protection of the public's interest, especially with regards to salmon and the protection 1 of salmon streams. I am also concerned that public use will be curtailed (or made unpleasant) as public managed properties are turned over for the old-style damage of 2 clearcut logging. There are modern forestry practices for logging that must be insisted on, regulated, and enforced. The total public use of the land must be considered, 3 including recreation.

4 The draft EIR is too large and expensive for most individuals to personally review; so we must hold you, as a public official, personally responsible for making decisions that take recreational and educational use of the forest as seriously as the claims of logging. We 5 must hold you responsible for seeing that logging is done without destroying or seriously damaging the other uses of the forest.

Sincerely,

Christine Hartzell
909 Portage Ave
Three Rivers, Michigan 49091

1

Email Letter E-44

Response to Comment 1
See General Response 11.

Response to Comment 2
See General Response 10.

Response to Comment 3
See General Response 14.

Response to Comment 4
See General Response 5.

Response to Comment 5
See General Response 2 and 15. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions**.**

E-45

From: broupome@kona.net
Posted At: Wednesday, March 01, 2006 1:49 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I am a Californian by birth and by heart (born in Long Beach, raised in Altadena) and it truly saddens me to see the State letting an opportunity to protect and enhance one of its precious redwood forests slip through its fingers.

2 The population, and the demand for quality recreational opportunities, are greatly expanding. Along with the Golden Gate Bridge, the redwoods are a symbol of California and a tourism draw.

3 There is unquestionably greater public benefit - and I believe greater economic future - in preservation and restoration than in clearcutting and other consumptive practices. Yet this choice is not even being seriously considered.

4

5 Significant logging activities probably cannot, and certainly will not, be accomplished without significant environmental damage. Please take a longer-range view and rewrite your management plan to protect the Jackson State Forest for all people for all time.

Sincerely,

Carolyn Pomeroy
59-148 Olomana Rd.
Kamuela, Hawaii 96743

1

Email Letter E-45

Response to Comment 1
See General Response 2.

Response to Comment 2
See General Response 14.

Response to Comment 3
See General Response 10.

Response to Comment 4
See General Response 4.

Response to Comment 5
See General Response 6 and 15. Support for a preservation oriented management plan noted. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions.

Kraemer, Candace E-46

From: Stacey Smith [Stacey22@adelphia.net]
Posted At: Friday, February 24, 2006 11:32 AM
Conversation: Jackson State
Subject: Jackson State

To, Whom it may concern.

1

I am writing to express my great concern reguarding Jackson State Demonstration Forest. This Forest has had an active management plan in effect and working until current legal issues. Up until these current legal issues, the forest was actively managed. Reducing the fire hazard, eliminating any disese ridden treesto help to keep the forest healthy, and planting and restoring for future. As well as managing the forest, they maintained the roadways, keeping them open and useable to the public, and the water ways.

While the forest is being held up by legal issues it is being naglected, which is allowing any problems caused by mother nature to spread, and worsen. Not only is mother nature causing errotion, diseses to spread, making an unhealthy forest, we also have inconsiderate people dumping trash, and causing problems to the roads, waterways, and everything else.

When the forest is aloud to be activly managed, most of the conserns are taken care of. The roads are maintained, the waterways are keep open, and it is closely watched not allowing our forest to turn into a "dump." Along with the maintance to ensure a healthy forest for our future, the State is also collecting revenue, to help with the state parks.

2

I fill that our forest have been carefully maintained, allowing new growth to become healthy, and letting mother nature take it's course. Look at the other once mangaged forests that have now became State Parks. They are not maintained. The road ways are washing away, and unuseable. The waterways are full of down trees, and not flowing naturally. Dieses are spreading to healthy trees. The sun light is inaduquate for healthy growth. No one is planting new trees, to unsure for their future. We are not able to access once useable property for recreactional preposes. The fire hazard is greatly induced. How is a major fire going to be stopped? The roads are not 100% useable. The down timber, dry brush is just a big match waiting to be lit.

This scares me, what is going to happen to all of our forests? Are we going to allow selfish people to keep putting legal suits on the State, bringing us deeper in debt, stopping our forests to be managed and allow it to grow un-healthy?

Please allow our forest to be maintained, to be accessable to the public, to stop dieses from spreading, to help reducess the fire hazards, to help give our State some more funding.

Please stop this legal battle, and start helping to insure the future of our forest.

Stacey Anderson
Fort Bragg, CA 95437
stacey22@adelphia.net

Email Letter E-46

Response to Comment 1
The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan. The ADFFMP contains provisions to address forest health, road management, and aquatic resources.

The Board recognizes the fact that the loss of revenue in recent years has precluded some management activities. In particular, an absence of significant revenue has reduced the level of road maintenance and improvement, as well as other aspects of forest management, such as timber stand improvement, stream restoration, research, and recreation. However, some level of management associated with these activities has occurred.

The Board believes that active management includes strong forest security, which will improve the level of environmental protection, and will reduce the impacts upon aesthetics caused by illegal dumping.

Response to Comment 2
Support for the past management noted (see General Response 2). JDSF will not be converted into a park. The management plan will continue the tradition of a working forest landscape that serves to demonstrate viable and sustainable forest management. Proposed management activities relating to botanical resources, timber resources, and protection from the spread of diseases can be found in the DEIR sections VII.6.2, VII.6.3, and VII.6.4 respectively. Proposed management activities relating to fire prevention and protection measures can be found in section VII.8. The Board supports a balanced, multiple-use concept that provides high levels of resource protection and sustained production of high quality timber products while allowing continued public access for recreation.

Kraemer, Candace E-47

From: CBecker43@aol.com
Posted At: Wednesday, March 01, 2006 9:49 AM
Conversation: Jackson Plan
Subject: Jackson Plan

I finally got through with the choices on the two plans. I wanted to express my choice for choosing PLAN D.

Briefly, I think plan D combines the best elements possible at this point in time. AND thank you so for giving all of us more time to wade through everything related to the Management Plan Draft Environmental Impact Report. Carol Becker, Fort Bragg.

Email Letter E-47

Response to Comment 1
Support for Alternative D noted.

E-48

From: seavey@biostat.wisc.edu
Posted At: Thursday, February 09, 2006 11:38 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose the clear-cutting of the Jackson State Forest.
Who would benefit? The forest belongs to the public. I have enjoyed camping in this forst, and have, of course, brought revenue to the state on trips to this forest

Sincerely,

Beverly Seavey
301 N Midvale Blvd #3
Madison, Wisconsin 53705

1

Email Letter E-48

Response to Comment 1
See General Response 2, 10, and 14.

E-49

From: patotzka@pacbell.net
Posted At: Monday, February 13, 2006 9:18 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

Every week, I am bombarded with email alerts of how our 'society' is attacking this forest, or that arctic region. When will our govt and other buracracies stop thinking only of the all mighty dollar and start planning on preserving what's left on this planet as Nature intended it to be?

This goes for Jackson State Forest in Northern California.
Please just leave it alone--the land belongs to the People--NOT the corporations whose only interest is a lesson in short-sighted destruction for profit.

Sincerely,

Lori Patotzka
2066 Camel Lane #24
Walnut Creek, California 94596
cc:
Senator Tom Torlakson
Mendocino County Board of Supervisors
Assembly Member Guy Houston
Governor Arnold Schwarzenegger

1

Email Letter E-49

Response to Comment 1
See General Response 2, 15, 16, and 17. Support for a preservation oriented management plan noted.

E-51

From: spelman@u.washington.edu
Posted At: Monday, February 13, 2006 10:33 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 We travel for hundreds of miles to enjoy the Jackson Forest.
It's recreational use of just about the best state forest I know. Please don't take that away. I oppose the new (proposed) management plan for the Jackson Forest. Most of the alternatives offered by the plan seem to emphasize commercial logging at the expense of more sustainable recreation.

2 The draft environmental document's Alternative E seems closest to my view in that it promotes restoration of old growth, but it is ruled out as contrary to Board of Forestry policy. (?!?) That seems backwards to me.

3 The draft EIS concludes that the state's proposed heavy logging plan (Alternative C) can be carried out with "less than significant environmental impacts." On the face of it, that seems absurd, but I'll admit that the EIS is so huge that I was unable to review it thoroughly. I'd say that right there you were contrary to Board of Forestry policy, which is supposed to give concerned citizens the ability to review and understand the proposed plans of action.

4

5 Is it really Board of Forestry policy to favor industry in such a lopsided manner over other forest users (and the long-term health of local communities)?

Sincerely,

Peter Michaelsen
720 34th Avenue
Seattle, Washington 98122

1

Email Letter E-51

See Response to Form Letter 2.

Response to Comment 1
Opposition to the DFMP noted. See General Response 2, 4 and 14.

Response to Comment 2
See General Response 8, 9, and 4.

Response to Comment 3
See General Response 6.

Response to Comment 4
See General Response 3, 4, and 5.

Response to Comment 5
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. See also General Response 16 and 17.

E-52

From: kbrun@mcn.org
Posted At: Tuesday, February 14, 2006 11:24 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

Dear Board of Forestry, I am a neighbor of Jackson State Forest in Mendocino. I hike in the forest (especially Forest History Trail area) on a regular basis. I have not had time to review the EIR. However, I do want to let you know that I support the regeneration of old growth, restoration of habitat, and recreational opportunities. Our public forest should not primarily support logging interests or be seen in purely economic terms. Even if this were so, Mendocino's economy is becoming more dependent on tourism, and cutting down the older stands will not help our community's development. Please keep in mind the people who live in this area and who appreciate the forest. Also keep in mind that Jackson is the largest publicly owned redwood forest in the country, something special to take care of and preserve for future generations.
Thank you for your consideration.
Sincerely, Katherine Brun P.O. Box 1102 Mendocino CA 95460

Sincerely,

Katie & Aaron Brun
PO Box 1102
Mendocino, California 95460
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

Email Letter E-52

Response to Comment 1
See General Response 2, 8, 9, 11, 12, 14 and 15.

Kraemer, Candace E-53

From: Information and Referral [ir@mountaincommunityresources.org]
Posted At: Tuesday, February 21, 2006 3:55 PM
Conversation: Jackson Demonstration Forest
Subject: Jackson Demonstration Forest

Please revisit the EIR for the forest and make sure that more protections are put in place to protect the ecosystem.

Thank you!

Laurie Jacobs
Scotts Valley, CA

Email Letter E-53

Response to Comment 1
The Board has developed a management plan that incorporates elements of several alternatives. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. See General Response 2, 8, 9, 10, 11, 12, 13 and 15.

Kraemer, Candace E-54

From: Charles Smith [cfsmith@napanet.net]
Posted At: Monday, February 06, 2006 11:20 PM
Conversation: Jackson Demonstration Forest
Subject: Jackson Demonstration Forest

Mr. George Gentry
Executive Officer
Board of Forestry

Dear Mr. Gentry,

Let's use our common sense and keep the Jackson Demonstration Forest Forest going. It's a wonderful resource.

Please feel free to pass this along to anyone whom you feel should be be informed.

You guys at the Board of Forestry do a very creditable and important important job. Keep up the good work.

Regards,
Charles Smith
Smith-Madrone Winery
St. Helena, Ca

Email Letter E-54

Response to Comment 1
The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan.

E-55

Kraemer, Candace

From: Kevin Lozaw [klozaw@comcast.net]
Posted At: Thursday, February 09, 2006 9:44 PM
Conversation: Jackson Demonstration Forest
Subject: Jackson Demonstration Forest

February 9, 2006
George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460
Email: board.public.comments@fire.ca.gov

Dear Mr. Gentry:

FL5 I would like to comment on the Draft Environmental Impact Report for Jackson Demonstration State Forest. I believe that alternative C-1, the proposed project, permits excessive logging and provides insufficient protection for old-growth forest, wildlife habitat, and watercourses.

I strongly request that you to revisit the environmental impact report for Jackson Demonstration State Forest, and develop an alternative that would more effectively safeguard and restore the natural forest ecosystem; fish and wildlife habitat; and water quality (including the end of herbicide use).

1 Importantly, the practice of clearcutting as a management tool should be eliminated and carry with it a heavy fine. This fine should both direct monetary compensation as well as reforestation of the clearcut land. Additionally, logging rights should be terminated on an area equal to four times the area that was clearcut (i.e. the clearcut plus "treble damages"). It must also be of equal quality. This prohibition should be permanent as well as binding on the entity's parent(s) and subsidiary(s) that exist now or in the future.

2 The natural wonder of our Old Growth Forests must be protected. We must allow them, at a minimum, to remain in tact, with no further harvesting of any kind and be protected by generous buffer zones to ensure their health.

FL5 Finally, I respectfully request that the Board of Forestry extend the public comment period another 60 days. The size and complexity of a 1500-page EIR makes it impractical for the public to respond during the statutory 60 day period allowed for public comment.

11/13/2007

Thank you,

Kevin Lozaw
Lozaw Photography
San Anselmo, California
C: 415.260.9950
Fax:415.459.4082
www.InnerVisionPhoto.com

Email Letter E-55

See Response to Form Letter 5

Response to Comment 1
See General Response 2 and 10. The practice of clearcutting is not a violation of law as long as it complies with the applicable Forest Practices Rules.

Response to Comment 2
See General Response 8 and 9.

Kraemer, Candace E-56

From: Nancy Schroeder [graceyruth@sbcglobal.net]
Posted At: Monday, February 13, 2006 10:21 PM
Conversation: Jackson Demonstration State Forest
Subject: Jackson Demonstration State Forest

February 13, 2006

Dear Mr. Gentry,

1 I believe the Draft EIR for the Jackson Demonstation State Forest inadequately addresses the needs of the environment and favors the timber industry. There can be a solution that allows me to go to the hardware store and buy the lumber I need to fix my deck and that also protects the ecosystem of the forest.

2 Old growth trees are the most resistant to fire and disease, and they are also the most beautiful. They 3 must be ardently protected from all logging. Water quality is consistently under attack, therefore 4,5 clearcutting and herbicide use must be prohibited.
Fish and wildlife will also thank you for this approach.

6 Being that the DEIR is so extensive, please extend the public comment period.
Thank you for your attention.

Nancy Schroeder

5/22/2006

Email Letter E-56

Response to Comment 1
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. See also General Response 2 and 17.

Response to Comment 2
See General Response 8 and 9.

Response to Comment 3
See General Response 11.

Response to Comment 4
See General Response 10.

Response to Comment 5
See General Response 7.

Response to Comment 6
See General Response 5.

E-57

From: Peter Parker [ptparker@earthlink.net]
Posted At: Wednesday, March 01, 2006 10:04 AM
Conversation: Jackson State Draft Report

Subject: Jackson State Draft Report

Board of Forestry and Fire Protection
Sacramento, CA

March 1, 2006 at 2:00 P.M.

Dear Sirs:

1 I am a former member of Director Richard Wilson's Citizens Advisory Committee. After due consideration of all of the Alternatives available I favor Alternative D (Citizens Advisory Committee Proposal). After more than a year of meetings and deliberation our committee favored uneven aged management and harvesting less than is grown in order to maintain good forest habitat, esthetics and canopy cover in order to minimize adverse watershed effects. The maintenance of a productive forest, able to supply the needs of an 2 ever expanding California population with a renewable building material are very important considerations in my decision.

This plan will maintain a high lever of habitat protection while keeping this working forest producing revenue for the State and valuable resources for it's citizens.

Sincerely,

Peter T. Parker
Former Member Citizens Advisory Committee

1

Email Letter E-57

Response to Comment 1
Support for Alternative D noted. The ADFFMP incorporates several elements from Alternative D. See General Response 2

Response to Comment 2
See General Response 10, 11, and 12. See also E-24, Response to Comment 1, 2 and 5. The ADFFMP restricts the use of even-age management to 26 percent of the forest. Within that restricted area a mix of even and uneven-age management will occur. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below the current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values (including wildlife habitat, aesthetics, and watershed processes) have been mitigated to "less than significant". Taken as a whole, the implementation of the ADFFMP is expected to have many beneficial impacts to the overall forest health of JDSF.

The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). The DEIR/RDEIR analysis of these potential impacts found that application of several mitigation measures would reduce the potential negative impacts to less than significant. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII-94 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in section VII.14.

The management plan will include a high level of protection for aquatic habitat, and will provide for continued recovery of this valuable resource. Please see DEIR Section VII.6.1 for the assessment of potential impacts to aquatic species. See also General Response 11.

The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. See also General Response 15.

E-58

From: Nancy A. Smith [rnsmith@mindspring.com]
Posted At: Sunday, February 12, 2006 10:29 AM
Conversation: Jackson Forest

Subject: Jackson Forest

Dear Mr. Gentry,
Regarding the Draft Environmental Impact Report for Jackson Demonstration State Forest; as a native Californian and citizen whose family has enjoyed the California forests for generations, I, we (20 of us who are of voting age now) feel the Alternative C-1 proposed project allows for too much logging of our beautiful old growth forest, wildlife habitat and rivers and creeks. There needs to be more protection of these irreplaceable jewels of our heritage. We need an alternative that will protect wildlife habitat including fish by protecting the water quality, and preserve the old growth from harvest.

These trees cannot be replaced and are among the few areas left where we can experience our old growth forests as some of our ancestors saw them. Taking a new look at our state treasure here would mean eliminating clear-cutting to manage areas, and the use of herbicide.

Also we would like to request an extension of the comment period for at least a few months since the new, voluminous EIR requires serious study. I am sure this would be easy for you to accommodate, because you are not in the business of bamboozling the public with a last minute, large (1,500 pages) volume containing information they have no time to comment on let alone read and understand. This political tactic we have seen too much of on the federal level with the current administration and we do not want that corruption of process to pollute our California decision making processes; as I am sure you would agree.
Sincerely,
Nancy A. Smith

1

Email Letter E-58

Response to Comment 1
See General Response 8 and 15.

Response to Comment2
See General Response 12.

Response to Comment 3
See General Response 11.

Response to Comment 4
See General Response 10.

Response to Comment 5
See General Response 7.

Response to Comment 6
See General Response 5.

E-59

From: Dennis [manytrees@myway.com]
Posted At: Wednesday, February 01, 2006 7:31 PM
Conversation: Jackson DEIR

Subject: Jackson DEIR

Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

I am a professional forester and forest landowner and I have had the opportunity review the Jackson Demonstration State Forest DEIR. It is time to listen to professionals and accept this document. I find it very comprehensive, easily understood, and clearly evaluates the environmental issues. JDSF can be a viable resource for small and large forest landowners, by providing scientific analysis of forest management alternatives. The preferred alternative (Alternative C1) recognizes the need to balance the uses of JDSF and does not support any single use management program. Timber harvesting is one of the primary tools to not only conduct research in, but to help enhance the States environmental and timber resources. Without this tool there will be a decay of this viable resource along with a decline in the associated economical and social benefits.

Thank you for the opportunity to respond to this DEIR.

Sincerely,
Dennis Bebensee, RPF #368
7490 Shasta Forest Drive
Shingletown, CA 96088
530 474 4838
manytrees@myway.com

No banners. No pop-ups. No kidding.
Make My Way your home on the Web - http://www.myway.com

1

Email Letter E-59

Response to Comment 1
The Board generally agrees with these comments. Support for Alternative C-1 noted. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products.

E-60

From: forester@nature.berkeley.edu
Posted At: Monday, February 06, 2006 5:59 PM
Conversation: Draft EIS Public Comment

Subject: Draft EIS Public Comment

Dear George Gentry,
I would like to take a moment to comment on the new Draft EIS report for Jackson Demonstration State Forest. As a Mendocino High School graduate and a current researcher at UC Berkeley, I would like JDSF to stay a demonstration forest open for research. Forest research is extremely important to make certain the state's forests are healthy and productive while providing the state with continuous forest habitat, recreation, clean water, timber, and all kinds of forest products. CDF has managed JDSF since 1947 to achieve many different goals most importantly, I believe, research for new methods of sustainable forest management. Please keep California green and golden and provide opportunity for research in the future.

Thank you for your time,

Erica Meta Smith
M.F. Student
O'Hara Silviculture Lab
Dept. of Environmental Science Policy and Management
137 Mulford Hall # 3114
Berkeley, CA 94720-3114

1

Email Letter E-60

Response to Comment 1
Nearly the entire land base of JDSF will remain available for research. See General Response 2.

E-61

From: Jade Lai [meinmaz2@yahoo.com]
Posted At: Saturday, February 25, 2006 6:59 PM
Conversation: Comments on the Mission of the California State Forestry Board

Subject: Comments on the Mission of the California State Forestry Board

Feb 25, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

The citizens of California are urging you to be true to the mission of protecting California's State Forests from short sighted corporate objectives that will destroy precious habitat, contribute to the increased probability of natural disasters, and forever deprive the citizens of California of irreplaceable forest lands for all generations to come.

Surely, you must have family members who have experienced the spirtual healing that comes from being in the wilderness. If not, I strongly suggest that you go on a camping trip as soon as possible.
You may not make rash decisions based on what lobbyists can offer.
Your children and grandchildren will thank you for taking a responsible stand. It is time that all good and responsible humans take a stand on many issues that affect the future of the planet.
Long live Earth and all the Creatures. Respect what God so lovingly provided.

Thank you.

Sincerely,

Sincerely,

Jade Lai
58 BCarmelita Street
San Francisco, CA 94117

1

Email Letter E-61

Response to Comment 1
See General Response 2, 11, 12, and 15. The ADFFMP remains consistent with enabling legislation and Board policy. It is based on thoughtful, careful analysis and planning by professionals in their field. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The ADFFMP represents a reasonable balance between production, protection, restoration, and recreation. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

E-62

From: David Studebaker [dhstudebaker@earthlink.net]
Posted At: Saturday, February 11, 2006 12:30 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

To: Calif State Forestry Board,
It's my understanding you are considering a plan for the management of the Jackson Demonstration Forest that would effectively enhance the wildlife and the redwood trees within its borders. I urgently implore you to accept and fully implement that plan so that this forest can continue to serve the quality of life for all CValifornians that we prize so highly. We're looking to you for enlightened and intelligent leadership in this matter.
With fervent hope,

David Studebaker
518 Almer Road, #4
Burlingame, CA. 94010

Sincerely,

David Studebaker
518 Almer Rd Apt 4
Burlingame, CA 94010-3900

1

Email Letter E-62

Response to Comment 1

The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The plan is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

E-63

From: Alyssa Gobby [shinysheepie@aol.com]
Posted At: Saturday, February 25, 2006 5:54 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 25, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

The Red Woods should not be destoryed it should strive for futrue generations

Sincerely,

Alyssa Gobby
213 Koch Ave
Placentia, CA 92870-1927

1

Email Letter E-63

Response to Comment 1
JDSF will remain a redwood forest. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. See General Response 2 and 15.

E-64

From: Mary Matzek [mgmatzek@sbcglobal.net]
Posted At: Friday, February 10, 2006 5:29 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 I stand in awe of the only "CANOPY" forests we have left in North America. I'm pensive and renewed when I visit these places of solitude; and I'm respectful. I am not allowed to remove a twig or a cone from a state or national forest or park and I don't. I understand that millions or even thousands of people visit and if each person took a cone, we would change our communal property and insure its destruction. Why then would our State Forestry Board even think that it is okay with WE THE PEOPLE to change things and put Jackson State Demonstration Forest at risk?????
I'm old enough to remember the stands of dead Chestnut trees on the East Coast that was the other North American canopy tree that is now gone, an ecological disaster of major proportions. It is imperative that we save what little we have left before we reach the point of no return. Mass deaths of fish, frogs, wildlife. We may be destroying our own habitat, our weather, by destroying our earths cover. I strongly urge you to wait for the science before allowing anything that destroys or harms our State Forest. Please adopt
2 ALTERNATIVE F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Sincerely,

Mary Matzek
1579 Pennsylvania Gulch Rd
Murphys, CA 95247-9553

1

Email Letter E-64

Response to Comment 1
See General Response 2 and 15. JDSF's management direction derives directly from legislative statutes, regulations, and policies set by the State Board of Forestry and Fire Protection. Per Board policy, the primary purpose of JDSF is to conduct innovative demonstrations, experiments, and education in forest management (Board of Forestry Policy 0351.2). The legislation that provided for establishment of JDSF makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of forest management on JDSF. Rather than putting the forest "at risk", the ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

Since its inception, JDSF has been managed as a research and demonstration forest. JDSF serves as a unique resource for developing the science that will guide the development of improved management practices and future forest practice rules. To support the research and demonstration mandate there has been an effort to maintain a viable outdoor laboratory by managing the forest to create diverse stand and habitat types. This diversity is needed to assess the effects of a broad range of management activities. Requests to manage JDSF for a single purpose, such as development of late seral and old growth stand conditions, while important, will severely limit the research and demonstration potential of the forest. The diverse habitats created by a broad spectrum of management practices has allowed for flexibility and opportunity for research as the issues and concerns involved in forest management have evolved over the past 60 years.

Response to Comment 2
Support for Alternative F noted. See General Response 4.

E-66

From: Eleanor Antin [eantin@ucsd.edu]
Posted At: Friday, February 10, 2006 9:09 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

More attacks on the remaining fraction of our natural reserve? And again just to chop down trees to make more back yard furniture? its disgusting. Don't destroy more of California. The Jackson State Demonstration Forest has been protected for years. Why would any member of the state administration even consider changing what has been a stable plan for so long, unless there is some nefarious reason that we don't yet know. There can be no logical reason, there can only be a suspicious one. And attacking redwoods when there are so few left, is downright criminal. I'm not normally rude but there are a lot of us devastated by the paving over of California and the stealing away of our natural lands. We'll protest this one long and hard.

Sincerely,

Eleanor Antin
4016 Arroyo Sorrento Rd
San Diego, CA 92130-2611

1

Email Letter E-66

Response to Comment 1
See General Response 2. JDSF is a demonstration forest, not a reserve or park. It has been actively managed for the past 60 years to demonstrate maximum sustained production of high quality timber products. It remains "protected" from land use conversion to other purposes, including making it a park or reserve. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of older forest and late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

Please see also General Responses 2, 4, 8, 9, 11, 12, and 15.

E-67

From: Jon Krueger [jpk@rawbw.com]
Posted At: Friday, February 10, 2006 10:14 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

Please adopt Alternative F, the "Older Forest Emphasis"
plan.

Why?

Because F is the best balance between nature and the timber industry.

Becase F protects fish and wildlife.

And because Jackson Demonstration State Forest isn't replaceable. We can't just manufacture another coastal redwood forest.

I urge you to adopt Alternative F. Thank you for considering my comments.

Sincerely,

Jon Krueger
4631 Gatetree Cir
Pleasanton, CA 94566-6033

1

Email Letter E-67

Response to Comment 1
Support for Alternative F noted. The Board has found that some elements of Alternative F may not comply with legislation and policy related to state forest management (see DEIR Table VI.1). The ADFFMP has been developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of older forest and late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Please see General Responses 2, 4, 11, 12, and 15.

E-68

Kraemer, Candace

From: Christian Hellwig [cphellwig@yahoo.com]
Posted At: Sunday, February 19, 2006 10:57 AM
Conversation: Jacson SDF EIR
Subject: Jacson SDF EIR

Greetings,

1 Because this forest contains significant stands capable of supporting old-growth dependent habitat, because these stands and adjacent forest land may support federally and/or state listed species, and because any forest harvesting conducted on this land may contribute to erosion and reduction in water quality in streams and moreover may reduce habitat values of bordering riparian areas, this forest should be minimally managed henceforth. No further timber harvesting of any kind should be conducted in this forest, and the natural fire cycle should be allowed to resume.

2 Thanks and regards,

Christian Hellwig
310 Hillside Ave
Mill Valley CA 94941

Relax. Yahoo! Mail virus scanning helps detect nasty viruses!

5/22/2006

Email Letter E-68

Response to Comment 1
See General Response 2, 8, 9, 11, 12 and 15**.** Desire to end all harvesting noted (see General Response 16). The legislative mandate that created JDSF and guides its management is very clear that demonstration of sustainable and economic forest management is one of the primary purposes of JDSF. By providing research opportunities and demonstrating responsible and innovative forest management techniques JDSF influences management practices well beyond its boundaries.

Response to Comment 2
The ADFFMP calls for the use of prescribed fire as resources allow (see Section VII.8.1 for a detailed discussion of fire related issues). Fire is recognized as a natural ecosystem process, however long-standing fire suppression policies have altered the fuel loading and forest structure characteristics on JDSF, which will alter the fire behavior characteristics such that reintroduction of fire on the landscape may not imitate naturally occurring fire intensity. There is potential for using JDSF as an area for site-specific research in the use of fire as a management tool. The use of fire can facilitate fire hazard reduction, silvicultural and habitat research, and ecosystem management research. Prescribed fire requires careful implementation to avoid impacts to other resource values, such as rare plants, heritage resources and private property.

E-69

From: Eric G. Wertz [EWertz@spi-ind.com]
Posted At: Monday, January 30, 2006 2:05 PM
Conversation: JDSF Public Comment

Subject: JDSF Public Comment

Dear Board Members,
With regards to the current proposed activity associated with Jackson Demonstration State Forest (JDSF) I would like to respond with overwhelming support for the proposed management of Jackson as a demonstration forest. I believe that this park can both be managed for timber production, scientific research as well as public enjoyment. I would like to encourage the board to support the state activities associated with JDSF and allow the forest to be managed as it was initially designated for, demonstration.

Sincerely,
Eric Wertz

1

Email Letter E-69

Response to Comment 1
Support for past management and Alternative C1 noted. JDSF is not a park. JDSF will continue to be managed as a research and demonstration forest, including sustainable timber harvesting, while providing recreation opportunities. See General Response 2 and 14.

E-70

From: Jay Gayner [burgercreek@hotmail.com]
Posted At: Monday, February 20, 2006 6:47 AM
Conversation: JDSF DEIR

Subject: JDSF DEIR

Dear BOF Members,

The Alternative that I support is C1. I was tempted to select D because that alternative better fits my personal philosophies, but Jackson needs greater flexibility. I suspect, though, that if Alternative C1 is ultimately selected, it will likely result in the EIR being strangled in litigation for some time to come.

Thank you,

Jay Gayner

1

Email Letter E-70

Response to Comment 1
Support of Alternative C1 and a plan that allows management flexibility noted. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP contains elements from several alternatives and is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest (see also General Response 2). It is hoped that any further litigation can be avoided.

E-71

Kraemer, Candace

From: Lawrence Wiezner [votewiesner@earthlink.net]
Posted At: Thursday, February 23, 2006 11:03 AM
Conversation: Jackson State Forest(SCH#2004022025)
Subject: Jackson State Forest(SCH#2004022025)

Gentlemen:

I am writing in regard to the actions to be taken by CDF on Jackson State Forest in the Draft Environmental Impact Report. I would hope that the forest would remain, as it has in the past, a demontrational forest; where the State can demonstrate the positive effects of sound forestry practices. It is to the credit of the State that it has taken a stand of timber from approximately 10,000 board feet per acre of commercial timber fifty years ago to an average of 40,000 board feet per acre today, while harvesting timber throughout that period. The forest is now in exceptional good condition and affords the opportunity to become a true gem as a demonstrational forest.

Lawrence R. Wiesner
Post Office Box 421
Santa Rosa, CA 95402-0421

Lawrence Wiezner
votewiesner@earthlink.net
Why Wait? Move to EarthLink.

5/22/2006

Email Letter E-71

Response to Comment 1
Support for past management noted. JDSF will continue to be managed as a research and demonstration forest, including sustainable timber harvesting. See also General Response 2.

E-72

Kraemer, Candace

From: Matthew Wilkinson [mattywilky@yahoo.com]
Posted At: Thursday, February 09, 2006 7:59 PM
Conversation: Jackson State Forest- logging
Subject: Jackson State Forest- logging

Mr. Gentry,

I grew up visiting the Jackson State Forest several times a year as retreats from my family's more urban home in the bay area. I remember as a child my fascination with the immensity of the forest and the bounty of salmon in the river. I also remember my feeling of horror at seeing for the first time the devastation caused by increased logging and clear cutting inside Jackson State Forest. Seeing the bare hillsides and the river devoid of spawning salmon made a huge and lasting impression on me of the power of mankind to destroy nature. 1, 2, 3

I beg you to reconsider the plan to go ahead with the same logging practices that have caused so much destruction there. I still visit the area many times a year, and I feel I have an interest in seeing this piece of our shared heritage protected and maintained for generations to come. Please extend the 60 period of review in order that more people may have a chance to review the issue and commment on it. The State Forests are a public resource and I think more people should be given a chance to become involved in the debate of how to manage them. 4

Thank you very much,

Matthew Wilkinson
854 56th St.
Oakland CA 94608

Yahoo! Mail
Use Photomail to share photos without annoying attachments.

5/22/2006

Email Letter E-72

Response to Comment 1
The ADFFMP calls for a reduction in the annual harvest of timber when compared to the previous management plan. See General Response 2 and 15.

Response to Comment 2
See General Response 10.

Response to Comment 3
See General Response 11.

Response to Comment 4
See General Response 5.

Kraemer, Candace E-73

From: GLENDON BOOTHE [g_boothe@sbcglobal.net]
Posted At: Monday, February 20, 2006 8:59 PM
Conversation: Jackson State Forest Logging
Subject: Jackson State Forest Logging

Please preserve as much of this beautiful forest as possible-if we cut it all down as proposed, there will be nothing left for future generations to enjoy, as well as all the rest of us in this present lifetime!!!!!!!!!! NO to the planned debauchery of Jackson State Forest! Thankyou, GRB

5/22/2006

Email Letter E-73

Response to Comment 1
See General Responses 2, 15 and 16.

Opposition to the proposed DFMP noted. The DFMP does not propose to "cut it all down". The main portion of JDSF was purchased by the State over a period of years from 1947 to 1951 from a private seller. At that time, most of the lands were in a cut-over condition, with relatively low stocking. CDF has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees. The forest that you see today is the result of 60 years of forest management that included timber harvesting.

The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below the current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to "less than significant".

E-74

From: Evie Dwyer [evie@federales.com]
Posted At: Sunday, February 12, 2006 11:00 AM
Conversation: Jackson State Park

Subject: Jackson State Park

I want to save the beauty of this park and nearby area for me children and grandchildren. My family has camped here as well as other Calif.
State Parks, and they have provided us wonderful vacations to enjoy the beauty of the outdoors as well as nurture our family relationships. We have never been able to afford fancy vacations, and I see all the beautiful State Parks at risk from commercial interests. I hope you will examine your plans. Sincerely, Evelyn Dwyer

1

Email Letter E-74

Response to Comment 1
See General Responses 2, 14 and 15.

JDSF is not a park. It has been actively managed for the past 60 years to demonstrate maximum sustained production of high quality timber products. It remains protected from land use conversion to other purposes, including making it a park or reserve. Past management has resulted in a landscape that is conducive to multiple-use, including recreation. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation. Proposed management will continue with harvest levels set well below growth. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

E-75

From: Gene Wixson [gnwixson@yahoo.com]
Posted At: Sunday, February 05, 2006 8:59 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Board members,

I support alternative B in the Jackson forest EIR. I feel that we have plenty of underused parks in this state and not nearly enough usable timberland. It is time to let the foresters and science again have control of this valuable resource. The state of California as well as Mendocino county need the income as well as the jobs that this forest can again provide.

Sincerely.
Gene Wixson
24251 Sherwood Rd.

Willits Ca. 95490

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around http://mail.yahoo.com

1

Email Letter E-75

Response to Comment 1
Support for Alternative B noted. JDSF will remain a demonstration forest. See response to Form Letter 4. See also General Response 2.

E-76

From: Virginia Matzek [vam@stanford.edu]
Posted At: Monday, February 13, 2006 11:43 AM
Conversation: Jackson State Forest--a special place!

Subject: Jackson State Forest--a special place!

Feb 13, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

I've been visiting the beautiful state parks and state forests along the North Coast for years, and I know what a wonderful place the Jackson State Forest is. It is contiguous with more heavily visited forests where I have hiked, watched birds, collected mushrooms, and photographed wildflowers. It provides animal habitat and critically important watershed services. 1, 2

I will be disappointed if you don't adopt the so-called "Alternative F" for dealing with timber harvesting in this valuable resource. 3

We have to be responsible stewards for the future, or else there is no future. Thank you for considering my comments.

Sincerely,

Virginia Matzek
2745 Kipling St
Palo Alto, CA 94306-2428

1

Email Letter E-76

Response to Comment 1
See General Response 12.

Response to Comment 2
See General Response 11.

Response to Comment 3
Support for Alternative F noted. The Board has found that some elements of Alternative F may not comply with legislation and policy related to state forest management (see DEIR Table VI.1). The ADFFMP has been developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of older forest and late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. Please see General Response 2, 4, and 15.

E-78

From: tjh2ogal@yahoo.com
Posted At: Thursday, February 02, 2006 6:10 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly support the proposed management plan for Jackson State Forest. I support the plan's commercial logging, more than adequate stream protection measures, proper use of herbicide(s), and continued recreational use as is already establisheed.

I personally want Jackson Demonstration State Forest (JDSF) maintained as a demonstration redwood/doug fir forest as originally authorized, this would include all formes of forest management as well as the multiple uses of habitat, recreation, education and research.

The Draft EIR concludes that the state's proposed (for profit) commercial logging plan (Alternative C1) can be carried out with "less than significant environmental impacts." I support this conclusion wholehartedly!

The draft environmental document is very thorough and comprehensive. In my opinion, the Draft EIR meets and exceeds its legal obligation to provide the information and analysis necessary to be able to make informed judgements on the environmnental effects of the project under the CEQA guidelines established for environmental protection.

Sincerely,

Tamara Hanna
PO Box 2826
Chino, California 91708
cc:
Senator Bob Margett
Assembly Member Gloria Negrete McLeod
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

1

Email Letter E-78

Response to Comment 1
Support for Alternative C1 and the completeness of the DEIR noted. JDSF will remain a demonstration forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. See also General Response 14.

E-79

Kraemer, Candace

From: Ray Parsons [oldpar@sbcglobal.net]
Posted At: Friday, February 10, 2006 8:15 AM
Conversation: Jackson State Forest
Subject: Jackson State Forest

Hi,
1 Please keep destructive logging out of Jackson
2 State Forest and extend the public comment period. Thank you.
Nancy Parsons
1130 Miles Ave.
Pacific Grove, Ca. 93950

5/22/2006

Email Letter E-79

Response to Comment 1
Desire to end all harvesting noted. See General Response 2, 15, and 16.

Response to Comment 2
See General Response 5.

E-80

Kraemer, Candace

From: William O'Neil [wco7171@msn.com]
Posted At: Thursday, February 09, 2006 10:45 AM
Conversation: Jackson State Forest
Subject: Jackson State Forest

1 Dear Mr. Gentry; Please reject the current CDF C-1 EIR for Jackson Forest ,which allows extensive
2 harvesting in this sensitive ecosystem. Could you also extend the public comment period for another 60 days, so interested parties have a chance to study the new EIR.
Thank you,

Sincerely,- William O'Neil

Email Letter E-80

Response to Comment 1
Opposition to Alternative C1 noted. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. See also General Response 2, 15, and 16.

Response to Comment 2
See General Response 5.

E-81

Kraemer, Candace

From: M Rothman [megrothman@yahoo.com]
Posted At: Friday, February 10, 2006 9:03 AM
Conversation: Regarding Jackosn State Forest
Subject: Regarding Jackosn State Forest

Dear George Gentry,
I love this land. My family has a cabin surrounded by this forest.

1 I respectfully request that you extend the public comment period another 60 days. The complexity and sheer volume of the 1500-page EIR makes it difficult for the public to respond during the too-brief period allowed for public comment.

2 Let's make sure a plan is in place that will emphasize other values
3,4 besides timber extraction, one that will protect old growth, wildlife,
5,6,7 watersheds, recreation, and the scenic beauty of California's largest state forest.

Meg Rothman

11/13/2007

Email Letter E-81

Response to Comment 1
See General Response 5.

Response to Comment 2
See General Response 2, 15 and 16.

Response to Comment 3
See General Response 8.

Response to Comment 4
See General Response 12.

Response to Comment 5
See General Response 11.

Response to Comment 6
See General Response 14.

Response to Comment 7
The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). The DEIR/RDEIR analysis of these potential impacts found that application of several mitigation measures would reduce the potential negative impacts to less than significant. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII-94 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in section VII.14. Further analysis of potential impacts to aesthetic resources relating to Alternative G and the ADFFMP can be found in RDEIR section III.2 and III.14. See also General Response 14.

E-82

From: tomhazelleaf@yahoo.com
Posted At: Thursday, February 09, 2006 3:25 PM
Conversation: Support draft EIR Alternative F

Subject: Support draft EIR Alternative F

Dear Members of the Board:

Please support draft EIR Alternative F for the Jackson State Forest.

Alternative F provides substantial environmental protection and enhances the preservation of fish and wildlife while still allowing timber production.

It is time for the Jackson State Forest to have reasonable management.

Tom Hazelleaf
4656 Fir Avenue
Seal Beach, CA 90740

1

Email Letter E-82

Response to Comment 1
Support for Alternative F noted. The Board has found that some elements of Alternative F may not comply with legislation and policy related to state forest management (see DEIR Table VI.1). The ADFFMP has been developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of older forest and late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts. Please see General Response 2, 4, 11, 12, and 15.

E-83

From: Jonny Vasic [jvasic@msn.com]
Posted At: Monday, February 27, 2006 12:03 AM
Conversation: Save the Jackson Redwoods!

Subject: Save the Jackson Redwoods!

1 I CALL FOR REJECTION of the Draft Management Plan due to the logging of the oldest second-growth mature forest stands (between 80 and 110 years old), due to plans for widespread clearcutting and other commercial logging, due to inadequate protection for streams from warmer temperatures and sedimentation which can harm or kill native salmonids, and due to plans to use herbicides.

2,3,4,5

6 Also, there are no plans to accomodate more recreation in the area, while much of the mature forest at key current recreational sites such as Brandon Gulch and West Chamberlain Creek areas will be logged, while leaving just small â€œfacadeâ€? buffer areas near trails and campgrounds -- and some logging can even occur within these â€œ facadeâ€? buffer areas!

7 The best alternative presented is Alternative E which would manage the forest for a return to late-seral forest conditions.Â However, even that alternative is lacking because it does not call for (or allot funds for) the decommissioning of hundreds of miles of roads which wreak havoc on stream habitat or the active restoration of salmon habitat in streams.Â Thus, the Proposed Alternative C1, and the Draft JDSF plan in general, should be rejected!Â

Don't just search. Find. Check out the new MSN Search!
http://search.msn.click-url.com/go/onm00200636ave/direct/01/

Email Letter E-83

See Response to Form Letter 2

Response to Comment 1
Opposition to Alternative C1 noted. See General Response 9.

Response to Comment 2
See General Response 10.

Response to Comment 3
The legislative mandate for the forest is to demonstrate sustainable and economic forest management. The economic component of this mandate requires the use of commercial logging operations. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below the current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to "less than significant". See also General Response 16.

Response to Comment 4
See General Response 11.

Response to Comment 5
See General Response 7.

Response to Comment 6
See General Response 14. The preparation of a timber harvest plan is a functional equivalent of the EIR process under CEQA. This includes an impacts assessment, a multidisciplinary agency review process and public review. Since the site-specific management actions and possible effects cannot be pre-determined with any degree of certainty, it is preferable to conduct environmental assessment and to design specific mitigation while each project is planned designed and reviewed. See DEIR section VII.14.3 for further discussion of proposed management measures relating to recreation.

Response to Comment 7
See General Response 13.

E-84

From: Richard Birecki [richbirecki2000@yahoo.com]
Posted At: Friday, February 10, 2006 11:42 AM
Conversation: please protect redwoods

Subject: please protect redwoods

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

I ant my kids tyo be able top see redwoods. These beautiful trees should be protected. There ned to be wild, pristine places. Redwoods help asorb carbon dioxide, provide shade, and beauty.

Please help protect them!

Thanks
Richard

Sincerely,

Richard Birecki
3001 Ross Rd
Palo Alto, CA 94303-4103

1

Email Letter E-84

Response to Comment 1
See General Response 2, 14, and 15. Support for a preservation oriented management approach noted. JDSF is not a park or wilderness area. It has been actively managed for the past 60 years to demonstrate maximum sustained production of high quality timber products. It remains protected from land use conversion to other purposes, including making it a park or reserve. Past management has resulted in a landscape that is conducive to multiple-use, including enjoyment of natural beauty and other forms of recreation. Current trends in forest management place greater emphasis on developing practices that provide increased protection to the non-timber resource values including, but not limited to, aquatic and wildlife habitat, aesthetics, and recreation. Although aesthetics will not be adopted as the primary purpose of the forest, the ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation.

Past management has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees. Proposed management will continue with harvest levels set well below growth. The protection from conversion to other land uses and the increase in standing timber insures that JDSF serves as a carbon “sink”. A detailed discussion of carbon sequestration as related to the various alternatives can be found in section VII.16 of the DEIR and section III.16 of the RDEIR. See also Response to E-116.

Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

E-85

From: marcuse@history.ucsb.edu
Posted At: Tuesday, February 07, 2006 3:36 PM
Conversation: Support Alternative F for Jackson State Forest

Subject: Support Alternative F for Jackson State Forest

Dear Members of the Board:

Please don't allow logging in Jackson State Forest. Alternative F, the "Older Forest Emphasis" is a much better plan that looks to our future without destroying never-renewable resources.

Sincerely,

Harold Marcuse
932 West Campus Ln.
Goleta, CA 93117-4343

1

Email Letter E-85

Response to Comment 1
See General Response 2,15, and 16. Alternative F does allow logging. Alternative F is estimated to have produced an average annual harvest of 19.3 million board feet during the first decade. The ADFFMP estimates an average annual harvest of approximately 20 to 25 million board feet during the first decade. As noted in the general response listed above, this forest was purchased by the State in a cut-over condition and 60 years of active management, including substantial timber harvesting, has produced the forest that you see today, which clearly demonstrates that forests are not "never-renewable resources". Under the ADFFMP remnant old growth trees and stands will be protected from harvest (see General Response 8) and increasing late seral habitat and older forest structure will be one of the goals of future management (see General Response 9, 11 and 12).

E-86

Kraemer, Candace

From:	Sergio Monteiro [monteiroserge@yahoo.com]
Posted At:	Saturday, February 25, 2006 1:07 PM
Conversation:	Public comment on the Dract Management Plan
Subject:	Public comment on the Dract Management Plan

This letter is about the Draft Management Plan

I am calling for the rejection of the raft Management Plan. I oppose the logging of the oldest second-growth mature forest stands. According to what I read on books and professional journals the clearcutting and similar commercial logging causes damage to the streams, fish and the environment in general. Commercial logging practices are also a sore to the eye. Some humans are capable of aesthetics feelings and these have as much rights as the ones that measure everything by the immediate economic advantage for a limited number of persons.

The best alternative presented is Alternative E which would manage the forest for a return to a closer condition to the one existing when the white invaders from Europe arrived. Note that even that alternative is lacking strength because it does not call for (or allot funds for) the decommissioning of hundreds of miles of roads which wreak havoc on stream habitat or the active restoration of salmon habitat in streams. Consequently I am opposing Proposed Alternative C1, and the Draft JDSF plan in general, which should be rejected.

Sergio Monteiro
1325 Wellesley Ave. # 209
Los Angeles, CA 90025
(310) 442 - 9107
monteiroserge@yahoo.com

_o
_ \<,_
(_)/ (_)

Sergio Monteiro
monteiroserge@yahoo.com

Yahoo! Mail
Bring photos to life! New PhotoMail makes sharing a breeze.

9/19/2007

Email Letter E-86

Response to Comment 1
See General Response 9.

Response to Comment 2
See General Response 10, 11, 12 and 15. The commenter fails to provide any reference to published materials so a reasoned response is not possible.

Response to Comment 3
The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). The DEIR/RDEIR analysis of these potential impacts found that application of several mitigation measures would reduce the potential negative impacts to less than significant. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII-94 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in section VII.14. Further analysis of potential impacts to aesthetic resources relating to Alternative G and the ADFFMP can be found in RDEIR section III.2 and III.14. See also General Response 14.

Unlike parks, the management of JDSF is not aimed primarily at aesthetics and recreation. The enabling legislation that guides the management of JDSF declared it to be in the public interest to purchase cut-over private lands "for the purpose of demonstrating economical forest management" (PRC4531) using "forest management practices designed to achieve maximum sustained production of high quality timber products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries and aesthetic enjoyment" (PRC 4651).

Current trends in forest management place greater emphasis on developing practices that provide increased protection to the non-timber resource values including, but not limited to, aquatic and wildlife habitat, aesthetics, and recreation. Although aesthetics will not be adopted as the primary purpose of the forest, the ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation.

Response to Comment 4
See response to Form Letter 2. Opposition to the DFMP and qualified support of Alternative E noted.

E-87

From: Mike Marvier [MMarvier@spi-ind.com]
Posted At: Wednesday, February 01, 2006 9:10 AM
Conversation: RPF SUPPORT NEEDED FOR JACKSON DEMONSTRATION STATE FOREST (JDSF)

Subject: RPF SUPPORT NEEDED FOR JACKSON DEMONSTRATION STATE FOREST (JDSF)

Please support Alternative C1 - the Preferred Alternative.

Thanks

Mike A. Marvier
RPF 2629

1

Email Letter E-87

Response to Comment 1
Support for Alternative C1 noted.

F-88

From: Becca Rollins [beccasrollins@hotmail.com]
Posted At: Friday, February 10, 2006 11:41 AM
Conversation: Redwoods=happiness

Subject: Redwoods=happiness

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

Please adopt and implement Alternative F.

Thank you,

Becca Rollins
Torrance, California

.

Sincerely,

Becca Rollins
4733 Highgrove Ave
Torrance, CA 90505-5519

1

Email Letter E-88

Response to Comment 1
Support for Alternative F noted.

Kraemer, Candace E-89

From: Stephen Vernon [svlaw@ix.netcom.com]
Posted At: Thursday, February 16, 2006 4:29 PM
Conversation: Please Don't Approve the Jackson State Forest Draft EIR
Subject: Please Don't Approve the Jackson State Forest Draft EIR

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection

Re: *Jackson State Forest Draft EIR*

Dear Mr. Gentry:

See FL 5 / 1 Alternative C-1 of the Draft Environmental Impact Report for Jackson "Demonstration" State Forest would permit too much logging and provide too little protection for irreplaceable old-growth forest, wildlife habitat, and watersheds. The resulting permanent damage to these values and to our state would far outweigh the short term, principally financial benefits, principally to logging interests.

2 As a former Washingtonian who has seen the long term devastation of clearcutting closely, I am particularly upset about the disingenuous permission for clearcutting (which evokes the Japanese requests to kill whales for "research," that somehow end up in restaurants).

3 The importance of your decision transcends merely local considerations: it is also important to preserve the credibility of our rich country when we ask other, poor countries to preserve their forests and wildlife.

Accordingly, please reject the draft environmental impact report for Jackson Demonstration State Forest, and insist upon an alternative that would:

See FL 5
- preserve our ecosystem heritage, especially old growth;
- protect our water;
- avoid poisonous, polluting herbicide use;
- and eliminate clearcutting.

Thank you,

Stephen Vernon
VERNON LAW OFFICE
2300 Geng Road, Suite 200
Palo Alto, California 94303-3323
Direct: (650) 493-8483
Fax: (650) 493-6160
svlaw@ix.netcom.com

5/22/2006

Email Letter E-89

See response to Form Letter 5.

Response to Comment 1
The value of managing JDSF as a research and demonstration forest goes far beyond the short term financial gains (see General Response 2). The enabling legislation that guides the management of JDSF declared it to be in the public interest to purchase cut-over private lands "for the purpose of demonstrating economical forest management" (PRC4531) using "forest management practices designed to achieve maximum sustained production of high quality timber products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries and aesthetic enjoyment (PRC 4651). The ADFFMP represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts. The plan incorporates significant advancement in the management practices aimed at protection and restoration of environmental resources, while remaining consistent with enabling legislation. See General Response 8, 11, 12, 15, 16 and 17.

Response to Comment 2
See General Response 10. Regulation of logging in California incorporates high levels of resource protection when compared to many other timber producing regions, including the State of Washington. However, California imports approximately 70% of its forest products with much of that coming from regions with lower levels of environmental protection. This serves to highlight the value of JDSF for the purpose of providing an area dedicated to research and demonstration of sustainable, economic forest management here in California.

Response to Comment 3
The Board supports the idea that California can demonstrate sustainable, economic forest management. By demonstrating forest management that incorporates high levels of resource protection as a viable enterprise that can be economically and environmentally sustainable, JDSF serves this purpose.

E-90

From: oaklandis@hotmail.com
Posted At: Tuesday, February 14, 2006 1:12 PM
Conversation: Management Plan

Subject: Management Plan

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 The draft EIR is a cumbersome, inaccessible, and overpriced tome that seems intended to
2 keep out public scrutiny. However, one thing is certain. It is wrong in its conclusions
3 regarding the various alternatives. Additionally, it fails to acknowledge the viability and importance of restoration of our state forest.

4 I oppose the proposed managemnt plan. I oppose the draft EIR. I oppose clearcutting. I favor restoration and proper stewardship of our public lands. I urge you to do the same.

Sincerely,

scott kravitz
3827 cesar chavez st.
san francisco, California 94131
cc:
Senator Carole Migden
Mendocino County Board of Supervisors
Assembly Member Mark Leno
Governor Arnold Schwarzenegger

1

Email Letter E-90

Response to Comment 1
See General Response 5.

Response to Comment 2
See General Response 3. The commenter fails to provide any specifics regarding the claim that the DEIR is wrong in its analysis of the alternatives. A reasoned response is not possible.

Response to Comment 3
See General Response 4. The ADFFMP has been developed by blending the elements and management strategies of several alternatives. The plan emphasizes that restoration and maintenance of functioning ecological systems is of high priority. Proposed management activities in the ADFFMP include: accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions and older forest structure, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. The current plan is based on a monitoring and adaptive management feedback system. Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary in response to the results that are observed. The plan is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. The Board and CAL FIRE believe that the Administrative Draft Forest Management Plan and DEIR/RDEIR have sufficiently addressed the potential environmental impacts and, in addition, allowed the flexibility needed in a management plan to monitor and adjust management activities as needed. See also General Response 2 and 15.

Response to Comment 4
Opposition to the DFMP and DEIR noted. See General Response 10.

E-91

From: Kevin Casey [kcasey@fs.fed.us]
Posted At: Monday, January 30, 2006 2:07 PM
Conversation: JSDF

Subject: JSDF

Board of Forestry,

Stop the madness....allow JSDF to perform its mandated function.
Approve the preferrred alternative and put this forest BACK TO WORK.

/s/ K. Casey
RPF #2698
++++++++++++++++++++++++++++++
Kevin Casey
Vegetation Inventory & Monitoring
Remote Sensing Lab, McClellan, CA
office: 916-640-1252
mobile: 530-305-6446
kcasey@fs.fed.us
++++++++++++++++++++++++++++++

1

Email Letter E-91

Response to Comment 1
See General Response 2. The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan.

E-92

Kraemer, Candace

From: Hal Wagenet - Supervisor [hal@hals-pals.org]
Posted At: Sunday, February 26, 2006 3:00 PM
Conversation: JDSF DEIR comment
Subject: JDSF DEIR comment

Dear YG and the Board;

We've done our best in Mendocino County.

The rest is up to you...

Best Regards,

Hal Wagenet
3rd District Supervisor
Mendocino County

Email Letter E-92

Response to Comment 1
Comment noted.

Kraemer, Candace E-93

From: Louise Young [loyo@mcn.org]
Posted At: Sunday, February 19, 2006 5:23 PM
Conversation: Support for Alternative "D" JDSF Management Plan EIR
Subject: Support for Alternative "D" JDSF Management Plan EIR

Dear Board members,

I have been a Mendocino County resident and homeowner for nine years. I have participated actively in efforts to reach a balanced approach to the JDSF Management Plan EIR since I moved here.

I applaud the decision of the Mendocino County Board of Supervisors in choosing Alternative "D" as their option. This is not so much a compromise as a reflection of changing times in Mendocino County. It does not mean an end to logging, but brings forward the long neglected opportunity to develop some areas of Jackson Demonstration State Forest for recreational use.

I also support adoption of Alternative "D" as the most viable approach for proper management of a forest environment.

Thank you for the opportunity to comment.

Louise Young
43300 Airport Road
Little River, CA 95456
e-mail: loyo@mcn.org

Email Letter E-93

Response to Comment 1
Support for Alternative D noted. See also General Response 14. The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

Kraemer, Candace E-94

From: Mark Pritchard [mark.pritchard@cranemills.com]

Posted At: Tuesday, January 31, 2006 9:01 AM

Please support the Jackson State Demonstration forest as a productive and healthy forest for sustaining research and forest products for the state of California

Mark Pritchard
7200 Wells Fargo Way
Corning, CA
96021

Email Letter E-94

Response to Comment 1
The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. See also General Response 2 and 15.

E-95

From: Perrin Lam [plamcopy@ix.netcom.com]
Posted At: Thursday, February 16, 2006 3:58 PM

Dear sir,

A fox shouldn't be in charge of a henhouse.

Resign while you still have a shred of integrity.

1

Email Letter E-95

Response to Comment 1
Comment noted.

E-96

From: dotischler@earthlink.net
Posted At: Thursday, February 02, 2006 9:24 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 The proposed management plan for the Jackson State forest is deeply flawed and one-side. It ignores the value of the forest in maintaining a healthy Mendocino salmon fishery and
2 fails to exploit the forest's potential for education, research, and non-motorized recreation. In the long term these other uses will provide more benefit to the local economy and more value to the rest of Californians.

Sincerely, Dan Tischler (fisherman, diver, mushroom hunter, hiker, etc) 6249 Valroy Dr San Jose

Sincerely,

Dan Tischler
6249 Valroy Dr
San Jose, California 95123
cc:
Senator Abel Maldonado
Assembly Member Rebecca Cohn
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

1

Email Letter E-96

Response to Comment 1
See General Response 11.

Response to Comment 2
See General Response 2 and 14.

E-98

From: rpe3@eoni.com
Posted At: Tuesday, February 07, 2006 11:33 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly support the proposed management plan for Jackson State Forest. Whatever silvicultural prescription you feel necessary should be implemented.

This "leave it alone" attitude that is espoused by many environmental groups is wasteful and deleterious to the forests of our country. I believe we should let the California state forestry staff do their jobs without the political interference that abounds today.

I appreciate the opportunity to comment.

Sincerely,

Robert Ellingson
PO Box 866
Baker City, Oregon 97814

1

Email Letter E-98

Response to Comment 1
Support of DFMP and management flexibility noted. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products.

E-100

From: Alvin Sacks [alvin_sacks@yahoo.com]
Posted At: Thursday, February 09, 2006 3:49 PM
Conversation: Comment on proposed change

Subject: Comment on proposed change

1 Your proposed "change" back to logging as usual (only more so) is an insult to the public intelligence. We simply cannot sacrifice our precious forest lands to the whims of corporate greed. The law was appropriately changed before, and should not be reversed.

2 Further, the time for public comment is absurdly short and should be doubled. Consider the length of the document!

Al Sacks

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around http://mail.yahoo.com

1

Email Letter E-100

Response to Comment 1
See General Response 2, 15, 16, and 17. The forest is not being managed based on "whims of corporate greed". The legislation that guides the management of the state forest systems remains unchanged. The ADFFMP calls for a reduction in harvest levels over the previous management plan.

Response to Comment 2
See General Response 5.

E-101

From: Todd Enders [toddenders@hotmail.com]
Posted At: Friday, February 10, 2006 5:18 PM
Conversation: COMMENT ON JACKSON EIR: disturbed by proposed decrease in value of state asset

Subject: COMMENT ON JACKSON EIR: disturbed by proposed decrease in value of state asset

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Mr. Gentry:

1 I am alarmed at the Draft Environmental Impact Report for Jackson Demonstration State Forest. I feel the proposed project will permanently degrade the value of a public asset and impact critical parts of our infrastructure and food supply.

1 Alternative C-1 permits penny-foolish, pound-foolish logging practices that injure the value of this asset owned by the public, to make life easier on corporations. Corporations are not California citizens, and are supposed to die off if they can't compete without a government handout.

2 I urge you to develop an alternative that would eliminate all clear-cutting, protect old-
3 4 growth sections of forest from any logging, improve the stream-side and watershed buffers,
5 and ban the use of poisons and herbicides
-- except on corporate welfare recipients.

6 Also, the public comment period should be extended. Few of us in the public have time to even hear about an EIR being issued in the holiday shadow, much less to read it.

I hope you'll see fit to adjust your proposal such that it serves the public's interest instead of the interests of corporations.

Thank you,

Todd Enders
650 Church St. #1
San Francisco, CA 94114

1

Email Letter E-101

Response to Comment 1
See General Response 2. The commenter is unclear how the proposed project will "permanently degrade the value of a public asset and impact critical parts of our infrastructure and food supply". A reasoned response is not possible.

The Administrative Draft Final Forest Management Plan (ADFFMP), based on Alternative G, establishes a high degree of protection to all of the associated resource values. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The current plan is based on a monitoring and adaptive management feedback system (ADFFMP, Chapter 5). Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary in response to the results that are observed. The commitment to monitoring and adaptive management will ensure that resource conditions are on the correct trajectory to meet the stated management goals. The plan is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. The management plan represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts.

The enabling legislation requires that the forest is actively managed to demonstrate sustainable and economic forest management. The comment provides no supporting information on the claim that harvesting on JDSF provides a "government handout" for corporations. All sales greater than 100,000 board feet and/or $10,000 in value are required to be sold through a bid process to ensure that the State receives fair market value. The sale of timber will result in both direct and indirect timber related employment, but that does not equate to a "handout".

Response to Comment 2
See General Response 10.

Response to Comment 3
See General Response 8.

Response to Comment 4
See General Response 11.

Response to Comment 5
See General Response 7.

Response to Comment 6
See General Response 5.

E-103

From: Gail Macmillan [gail@theredwoods.org]
Posted At: Friday, February 10, 2006 3:35 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

I have visisted the Jackson Demonstration State Forest and strongly urge you to adopt Alternative F, the "Older Forest Emphasis"
plan for management.

Alternative F would enhance fish and wildlife habitat as well as balance environmental protection with a timber program.

This forest is an important link in the coastal redwood range and needs to managed as such to ensure its viability as a healthy ecosystem.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Gail Macmillan
127 Baltimore Ave
Corte Madera, CA 94925-1420

Email Letter E-103

Response to Comment 1
Support for Alternative F noted. See response to Form Letter 6 and 7 in the Form Letter section. Also see General Response 9, 11 and 12.

E-104

From: ginafarr@farrvisions.com
Posted At: Thursday, February 02, 2006 4:12 PM
Conversation: Oppose mgmt plan *Jackson State Forest*

Subject: Oppose mgmt plan *Jackson State Forest*

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 My family and I very strongly OPPOSE the proposed management plan for Jackson State Forest.

Jackson State should be restored to an old growth redwood forest for all of us to enjoy and to protect important wildlife habitat.

The Draft EIR completely omits the restoration that we are asking for. This truly IS our land, the American public and California residents, and not every potentially money-making dime of it belongs to corporate interests.

2 Further, you have failed to meet your obligation to provide the information and analysis the public needs.

3 Are you responsible for the careful managements of our treasured forests on behalf of everyone, or are you simply a tool of the logging industry and opposed to the public interest?

4C We need an alternative to clear-cutting and habitat/recreational destruction.

Sincerely,

Gina Farr
336 Forrest Ave
Fairfax, California 94930
cc:
Senator Carole Migden
Assembly Member Joe Nation
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

1

Email Letter E-104

Response to Comment 1
See General Response 2. JDSF is not a park or reserve. The legislative mandate that created JDSF and guides its management is very clear that demonstration of sustainable and economic forest management is one of the primary purposes of JDSF. By providing research opportunities and demonstrating responsible and innovative forest management techniques JDSF influences management practices well beyond its boundaries. To support the research and demonstration mandate there has been an effort to maintain a viable outdoor laboratory by managing the forest to create diverse stand and habitat types. This diversity is needed to assess the effects of a broad range of management activities. The research conducted on JDSF will help to guide the development of improved management practices and future forest practice rules. Requests to manage JDSF for a single purpose, such as development of late seral and old-growth stand conditions, while important, will severely limit the research and demonstration potential of the forest. The diverse habitats created by a broad spectrum of management practices has allowed for flexibility and opportunity for research as the issues and concerns involved in forest management have evolved over the past 50 years. In addition, many wildlife species, including some threatened and endangered species, thrive in areas that contain a diversity of habitat types. Research and demonstration efforts conducted on JDSF include projects relating to timber production, ecological processes, restoration and wildlife. Corporate interests do not guide the management of JDSF.

Response to Comment 2
See General Response 3.

Response to Comment 3
The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. See General Response 2.

Response to Comment 4
See General Response 4, 10, 11, 12 and 14.

E-105

From: lila wilkinson [lilaanne55@yahoo.com]
Posted At: Thursday, February 09, 2006 7:30 PM
Conversation: Please DON'T log Jackson State Forest!!

Subject: Please DON'T log Jackson State Forest!!

To Whom it May Concern,
My family has a cabin on HWY 20. I grew up camping and hiking in Jackson State Forest. It is one of the most beautiful places on earth but after logging, the lush hillsides became a muddy wasteland. The naked exposed forest floor no longer was covered in sword ferns and thimble berries. Please help to perserve the beauty and wildlife that makes Jackson State Forest such a special place to visit. Pleas DON'T allow more logging in Jackson State Forest.

Sincerly,

Lila Wilkinson
1010 Mckinley Ave.
Oakland Ca. 94610

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around http://mail.yahoo.com

Email Letter E-105

Response to Comment 1

See General Response 2. JDSF was purchased in a largely cut over condition from a private seller approximately 50 years ago. It has been actively managed for the past 50 years to demonstrate maximum sustained production of high quality timber products. Past management has resulted in a landscape that is conducive to multiple-use, including enjoyment of natural beauty and other forms of recreation. The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). Many of the potential impacts of logging are temporary and do not result significant impacts to associated resource values. Mitigation measures have been developed to reduce the potential aesthetic impacts of timber operations to less than significant. This includes implementation of restrictions on the use of even-aged silvicultural practices and timber operations adjacent to special concern areas (see Section VII.2 of the DEIR). Current trends in forest management place greater emphasis on developing practices that provide increased protection to the non-timber resource values including, but not limited to, aquatic and wildlife habitat, aesthetics, and recreation. The management plan represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts (See General Response 10, 11, and 12).

A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

E-106

Kraemer, Candace

From: GLENDON BOOTHE [g_boothe@sbcglobal.net]
Posted At: Thursday, February 09, 2006 7:39 PM
Conversation: Please preserve old growth forestry
Subject: Please preserve old growth forestry

Please save our old Jackson State forest from all the ugly clear-cuts! It is a wonder to get to see the way it is, and so few forests are still this unspoiled.....

Email Letter E-106

Response to Comment 1
See E-105, Response to Comment 1. See also General Response 2 and 10.

E-108

SALMON AND STEELHEAD RECOVERY COALITION
California Council Trout Unlimited, California Trout, Inc., Coast Action Group,
Environmental Protection Information Center, Northcoast Environmental Center,
Pacific Coast Federation of Fishermen's Associations,
Salmonid Restoration Federation, Smith River Alliance

February 27, 2006

California Board of Forestry
Post Office Box 944246
Sacramento, CA 94244-2460
Attention: Y.G. Gentry, Executive Officer

Jackson Demonstration State Forest
Draft Management Plan and DEIR

Dear Mr. Gentry :

On behalf of the Salmon and Steelhead Recovery Coalition (SSRC) we provide the following comments regarding the Forest Management Plan (FMP) for Jackson Demonstration State Forest and the draft Environmental Impact Report (DEIR) regarding the Management Plan. The SSRC is a coalition of fisheries, restoration, and environmental organizations that has worked together since 1996 to promote recovery of salmonid species. The SSRC includes the Pacific Coast Federation of Fisherman's Associations, California Trout, Trout Unlimited, Salmonid Restoration Federation, Northcoast Environmental Center, Humboldt Watershed Council, Environmental Protection Information Center, Coast Action Group, and the Smith River Alliance. We are the alliance that presented the petition on July 28, 2000 to the California Fish and Game Commission (Commission) to list coho salmon north of San Francisco as an endangered species under provisions of the California Endangered Species Act (CESA).

1 Under CESA, state agencies have a duty to help recover endangered species. Fish and Game Code section 2053 says: "... [S]tate agencies should not approve projects as proposed which would ...result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

1

Section 2055 provides that: "... [I]t is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species and shall utilize their authority in furtherance of the purposes of this chapter."

Section 2061 says: ""Conserve," "conserving," and "conservation" mean to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." ...

1 To bring a species "to the point at which the measures provided pursuant to this chapter are no longer necessary" refers to the de-listing of a species, in other words, its recovery. We believe that in order to be in compliance with CESA, the FMP for Jackson must make a significant contribution to the recovery of coho in the Central California Coast ESU.

The DEIR has reproduced Goals and Objectives for the FMP. On Page 27, Goal #3 says: "Watershed and Ecological Processes: Promote and maintain the health, sustainability, ecological processes, and biological diversity of the Forest and watersheds during the conduct of all land management activities." Objective 3-2 says: "Maintain and recruit structural elements necessary for properly functioning habitats. In riparian areas, manage for late seral habitats, while allowing flexibility to conduct research on riparian protection zones. Create or naturally develop recovery habitat for listed species." We strongly support these goals and objectives. However, we do not believe the FMP has succeeded in providing for them and the DEIR has not proposed mitigations to achieve them.

Only Public Recovery Habitat in the Region

The JDSF DEIR correctly points out that the US Forest Service has almost no forest in the redwood region and that most of the region is held as private property:

> "The Forest Service has a significant land base in all major forest ecosystem types except for coast redwoods. JDSF represents the most significant amount of acreage dedicated to long-term forest research. Results from research on JDSF are the best option to improve forest practices on private lands (85% of coast redwoods is in private ownership--this high percent is also unique when compared to other forest ecosystem types." [sic]

Most of the private forestland near and adjacent to Jackson is not only in private ownership, it is owned by two large timber companies that between them control

2 almost half a million acres in the redwood region of Mendocino County. While the DEIR highlights the lack of public land in relation to the importance of JDSF's demonstration function, it fails to mention that this makes Jackson the only large

2 forest in the area where public trust resources are not competing with private property rights issues or shareholder profits. This is a significant omission. That JDSF's resource base, including its forest stands and fish stocks, are in better shape than those on the neighboring industrial timberland reflects the longer-term view that JDSF has taken and we congratulate you for that. Your intention to continue with a relatively more conservative management approach than industrial timberlands is a plus, but our review of the FMP and DEIR suggest that rather than determining 3 habitat protection based on the needs of listed and unlisted but declining species, that the approach has been to "do a little better" than standard rules. Considering that the standard rules are so poor, we do not believe this is an adequate approach for a public agency to take in relation to public land.

NMFS Guidelines

It is not only our opinion that the standard rules are not adequate to prevent harm to listed salmonids, which is in itself a much less protective standard than contributing to recovery. On June 21, 2000, the late Joseph Blum, then the Liaison to the State of California for the Southwest Region of the National Marine Fisheries Service (NMFS) executed a Declaration in support of Environmental Protection Information Center, et al, [plaintiffs] versus Andrea Tuttle et al, [Defendants]. According to the Declaration, Blum is "involved in issues pertaining to salmonid species protected under the ESA and the California Forest Practice Rules." Blum's Declaration says:

> "4. NMFS recently reviewed the California Forest Practice Rules during its reconsideration and reversal of its 1998 decision that the Northern California ESU of steelhead did not warrant listing under the ESA. (65 FR 36,074 - Northern California ESU of steelhead listed as threatened on June 7, 2000.) NMFS' review included the Board of Forestry's interim revisions to the California Forest Practice Rules which become effective July 1, 2000 (and are due to expire on December 31, 2000). NMFS concluded that the California Forest Practice Rules with the recently adopted interim changes are inadequate to protect anadromous salmonids or provide for properly functioning habitat conditions. (65 FR 36,074, 36,084-36,085.) Specifically, the California Forest Practice Rules with the interim changes lack critical elements necessary to avoid, minimize and/or mitigate adverse site-specific and cumulative watershed impacts on salmonid populations."

After discussing that NMFS was able to review less than 1% of the hundreds of Timber Harvest Plans, Blum's Declaration continues:

"6. NMFS is aware of examples where timber harvest plans which were approved by CDF as in compliance with the California Forest Practice Rules have likely resulted in the take of listed salmonids or adverse modification of their critical habitat. 99% of the timber harvest plans submitted to the CDF are never reviewed by NMFS. Considering the fact that every timber harvest plan NMFS has reviewed would likely have resulted in the take of listed salmonids or adverse modification of critical habitat without NMFS' suggested modifications, it is likely that many of the remaining 99% which NMFS has not reviewed may result in take or adverse modification of critical habitat.

"7. In my official capacity as NMFS representative, I have testified before the Board of Forestry and/or it's Interim Committee, on no less than 10 occasions and explained that the California Forest Practice Rules are inadequate to protect and conserve salmonids. I have explained that timber activities under timber harvest plans approved under the California Forest Practice Rules are resulting in the destruction of salmonid habitat and are harming listed salmonids. I have presented the Board of Forestry with guidelines for forestry that, if followed, would reduce the likelihood of harming salmonids and I have provided the Board of Forestry and CDF with approximately 100 scientific citations documenting risks to salmonids associated with timber harvest and related activities. Numerous times, before the Board of Forestry's Interim Committee and before the Board of Forestry itself, I have recommended that the Board of Forestry adopt the NMFS' Short-Term HCP Guidelines as interim rules while the Board of Forestry promulgates permanent rules that incorporate adequate salmonid protection. Further, in my official capacity, I have explained to the Board of Forestry and officials at CDF on numerous occasions that the state may be liable under the ESA for promulgating a regulatory scheme which they are fully aware results in take of listed salmonids and adverse modification of critical habitat. The only action the Board of Forestry has taken to address these issues is the adoption of the inadequate interim changes to the California Forest Practice Rules.

"Pursuant to 28 U.S.C. 1746, I declare under penalty of perjury that the following information is true and correct.
Executed this 21st day of June, 2000. in Sacramento, California.
[signed by:]
Joseph Blum"

3

It should be noted that the Interim [Threatened and Impaired Watershed] Rules referred to in the Declaration have been re-authorized by the Board of Forestry (BOF) on a year to year basis and are currently in effect.

4

3 It is in the context of the overwhelming extent of industrial timber holdings in the region combined with existing inadequate logging rules that we believe the managers at Jackson need to do much more than "a little bit better" than standard rules.

4 The DEIR fails to clearly state that timber operations adjacent to and near JDSF have caused significant adverse effects to listed species not only historically, but in recent years and until the present time. The DEIR has also failed to correctly

5 identify that implementation of the FMP will combine with past and ongoing impacts on industrial forestlands to create a cumulative negative impact on listed species including, but not limited to, listed salmonids.

Throughout the FMP and DEIR, language asserts that the riparian zones will be managed to achieve late succession forest conditions. This is a laudable goal. However, the 240 square foot conifer basal area leave standard is not adequate to guarantee a trend toward late succession conditions. Some good sized trees

6 close to the watercourse could fulfill the basal area requirement, leaving the outer part of the already-too-narrow riparian zone dependent on the 70% canopy cover standard. As written, that canopy need not consist of conifers. Without designation of conifers and hardwoods that will be allowed to grow old, die, and decompose as they would in a natural forest, and without specific requirements for conifer distribution and dense understory retention, it is highly unlikely that the riparian area will develop the complex condition that is characteristic of late succession forest.

The size of the riparian zones will also prevent development of late succession conditions. First, the size of the Class II Watercourse and Lake Protection Zones

7 (WLPZs) can vary between 50 and 100 feet and there is no information about the conditions that will trigger these varying numbers. Establishing a dark, moist, and cool zone in a 100-foot strip is not feasible. In a 50-foot strip, roughly the length of a small house trailer, achieving these conditions is even more improbable.

As the NMFS Declaration makes clear, they have provided specific guidance supported by numerous scientific references. These were presented to the Board of Forestry on December 3, 1999. They recommend the following Aquatic Protection and Management Zones (emphasis added):

8 For *both* Class I and Class II waters:

> "The outer APZ boundary will be delineated and marked on the ground equal to one site-potential tree height, 180 feet, 50 feet beyond the break in slope at the top of the inner gorge, 50 feet beyond the upper extent of any unstable area that extends down to within 180 feet of a Class I or II water or

50 feet beyond the break in slope for all slopes 50% or greater adjacent to the APZ, whichever of these distances is *greater*....

"All distances are measured horizontally from the edge of the channel migration zone (CMZ), if one exists, or from the outer edge of the bankfull channel on each side of the waters.

8 "Timber operations or other management activities *will not be conducted,* except road-related activities, as described below, within this APZ and within the adjacent bankfull channel. The following restrictions apply within APZs [partial list]:

- "Equipment exclusion zone (EEZ)
- "No salvage....
- "No burning or mechanical site preparation ....
- "If ground-based yarding will be used on slopes greater than 50% adjacent to the APZ, or if roads are within 100 feet of an APZ, the EEZ will be increased by 100 feet, measured horizontally from the outer edge of the APZ."

9 The FMP and DEIR virtually ignore Class III watercourses even though these have been repeatedly shown to be very significant sources of sediment into Class I and II watercourses. The NMFS guidance document makes the following specific recommendations:

For Class III waters:

"The outer AMZ boundary will be delineated and marked on the ground equal to 100 feet, up to the break in slope for slopes that exceed 50%, or 50 feet beyond the upper extent of any unstable area that extends down to within 100 feet of a Class III water, whichever of these three distances is *greater*....

"This AMZ may be partially entered for timber management purposes.

10 "Within all Class III water AMZs, the first 30 feet closest to the channel, or 50 feet beyond the upper extent of any unstable area that extends down to within 30 feet of a Class III water, whichever distance is greater, will be delineated and marked on the ground. Timber harvest or other management activities will not be conducted except road-related activities as described, within this inner buffer.

"Between the inner 30 feet buffer closest to the channel and the outer AMZ boundary, the following management restrictions apply:

- "The conifer basal area will not be reduced to less than 50% of the potential of a fully stocked stand.... No harvest within the AMZ will occur except concurrent with commercial thinning or single tree selection in adjacent stands and under the same timber harvest plan, immediately after which, at least 100 square feet basal area per acre will be retained in these adjacent stands.
- "Equipment exclusion zone (EEZ).
- "No Salvage....
- "No burning or mechanical site preparation....
- "If ground-based yarding will be used on slopes greater than 50% adjacent to the AMZ, or if roads are within 100 feet of an AMZ, the EEZ will be increased by 100 feet...."

10

In other words, the NMFS recommends protection measures for Class III watercourses that are more protective than what the FMP and DEIR propose for Class II. The NMFS document provides guidance on additional subjects as well.

It cannot be emphasized enough that the NMFS standards were developed specifically *for application on private land* as regulated by the California Board of Forestry, although they would apply at Jackson if they were in place as state regulations. Presumably, public land should be treated *more protectively*.

A riparian strategy that was conceived with public lands in mind is published as the Aquatic Conservation Strategy of the *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl,* adopted in April 1994 by the US Forest Service, and the Bureau of Land Management and their parent agencies. This strategy is generally more protective than the NMFS guidance document. The latter was designed only in relation to the needs of listed salmonids. The US Forest Service standard was designed as a multi-species approach for managed timberland. Its recommendations apply to the same eco-region as Jackson and are the most appropriate, comprehensive, and well-researched guidance document of its kind.

11

Without going into these standards at great length, we will nevertheless point out that for Class I streams, the riparian management zone is recommended to be at least two site potential trees heights in width, with management limited to advancement of late succession conditions. As much of the Western, Northern, and Southern Watershed Assessment Areas within JDSF are Site II, according to the California Forestry Handbook, each site potential tree height would be approximately 180 feet. Therefore the riparian management zone for Class I

streams would be a minimum of 360 feet on each side of the stream under this US Forest Service standard.

11 Why should we do less at Jackson?

Based on the well-researched recommendations of the NMFS, the US Forest Service, and the Bureau of Land Management and their parent agencies, we believe that the FMP would, at a minimum, cause significant adverse impacts to water temperature, sedimentation, large woody debris recruitment to Class II and
12 Class III streams, channel geomorphology, and riparian habitat. Additionally, based on the above-referenced federal recommendations, we believe that the FMP is highly likely to reduce the number or restrict the range of coho salmon, a listed species. The DEIR has incorrectly identified the implementation of the FMP regarding all of the above to be "less than significant" or "less than significant with mitigation." We disagree.

We support implementation of the US Forest Service Aquatic Conservation Strategy
13 as articulated in the *Standards and Guidelines,* referred to previously, as the best means for JDSF to comply with its mandate under CESA to make a significant contribution to the recovery of coho salmon.

Additional Concerns

There are additional flaws in the FMP and DEIR, including missing or incomplete
14 information and failure to identify significant adverse impacts. We will touch on only a few of them, and briefly.

It is impossible to determine from the information provided, how much late succession forest currently exists at Jackson, where it is located, and how much of that forest is likely to be eliminated by the proposed timber management plan.
15 The DEIR maps do not include a category that is a reasonable surrogate for late succession forest. Eighty to 100 years is often cited as the absolute minimum age of maturity for redwood, with individual trees that can and do survive for 2000 years. Given the emphasis that the FMP claims to place on late succession forest, these omissions are significant.

A comparison of the FMP Figure 8 "Forest Vegetation" map with the Figure 6 "Five Year Timber Harvest Projection Estimate" map leads us to conclude that much of the existing older second growth forest, that which is most likely to mature into late
16 succession forest soonest, is designated to be logged. This is not discussed in the DEIR and is a significant omission. If our conclusion is correct, given the lack of mature forests in the Mendocino County region, eliminating more than a very small number of the oldest second growth trees at Jackson would be a significant adverse impact both in and of itself and in combination with past and reasonably

foreseeable Timber Harvest Plans (THPs) on adjacent and nearby industrial
16 timberland. THPs, state permits to log, are recognized as projects under the California Environmental Quality Act.

The old growth retention policy seems to indicate that some old growth trees will be cut if they are inconvenient for planned timber operations. Old growth trees are a non-renewable resource and their elimination for the sake of convenience is a significant adverse impact that is not identified as such in the DEIR. We
17 recognize that occasionally a particular tree is such a hazard to human life as to potentially require removal. In the rare instance where this would be true, we recommend determining whether topping the tree to create a snag would eliminate the hazard instead. Only as a last resort should an old growth tree be removed. Every old growth tree should be granted a buffer from timber operations that might damage it, or better yet, aggregated with others nearby into a late succession development area.

Road rehabilitation is another concern. The preferred alternative appears to take
18 a rather slow approach to fixing the many miles of admittedly substandard roads at Jackson. The Board should make sure that adequate funding is directed to maintenance of Jackson's resources, particularly road rehabilitation.

It would have been helpful if the DEIR was explicit about staffing at Jackson. The DEIR makes many promises about how the forest is to be managed, but there is no
19 way to assess whether staffing at Jackson is adequate to implement the plan. For instance, it is our understanding that Jackson does not have a staff biologist. If this is still true, we believe it is highly likely that the goals and objectives of the FMP will not be properly implemented. Staffing needs should be discussed in the DEIR.

Conclusion

It is in the nature of reviewing a Draft Environmental Impact Report to focus on the negative. In spite of our remarks here, we wish to again recognize the managers of Jackson Demonstration State Forest for the effort that has been expended on putting together the new Forest Management Plan. It is clear that a lot of thought has gone into important aspects of the plan. The Board now has the opportunity to augment the draft EIR so mitigations are adopted that address the concerns raised by so many segments of the public. In conclusion, we urge the Board to continue your efforts by increasing your focus on demonstrating forest management that promotes the survival and recovery of species that depend on older forests, including salmonid species.

Sincerely,

Zeke Grader, Executive Director

Traci Thiele, Representative

Pacific Coast Federation of Fisherman's Associations
Council

Humboldt Watershed

Tom Weseloh, Northern California Manager
California Trout

Josh Israel, President
Salmonid Restoration Federation

Stan Griffin, Northern CA President
Trout Unlimited California

Alan Levine, Director
Coast Action Group

Larry Evans, Executive Director
Environmental Protection Information Center
Center

Tim McKay, Director
Northcoast Environmental

Larry Moss, Representative
Smith River Alliance

10

Email Letter E-108

Response to Comment 1
The commenter accurately cites the California Fish and Game Code. However, Section 2053 goes on to state that: "Furthermore, it is the policy of this state and the intent of the Legislature that reasonable and prudent alternatives shall be developed by the department, together with the project proponent and the state lead agency, while at the same time maintaining the project purpose to the greatest extent possible." The Board of Forestry and Fire Protection finds that the DEIR, RDEIR, and associated mitigation and management measures are consistent with the Fish and Game Code Sections cited by the commenter as well as the Recovery Strategy for California Coho Salmon within the Mendocino Coast Hydrologic Unit. The DEIR and RDEIR indicate that Alternatives C1 and G, respectively, will make a significant contribution to the recovery of listed salmonids. JDSF is managed to prevent take of listed species as well as to facilitate the recovery of aquatic habitat conditions to enhance the sustainability of salmonid populations.

Response to Comment 2
Although the precise language of the acknowledgement suggested by the commenter is not made, the regional context of the ownerships in which JDSF is located is amply described in Section V Environmental Setting (DEIR Page V-12-30) as well as DEIR Pages VII.6.1-37-53.

Response to Comment 3
Habitat protections provided listed and unlisted but declining species in the DFMP and ADFFMP, including additional measures or mitigations identified in the DEIR and RDEIR, are based on the best available scientific information relative to the species of concern. The protections provided by the Forest Practice Rules had no bearing on the development of habitat management measures or mitigations developed beyond defining the floor below which forest management activities and consequent effects on habitat would not go. In other words, the needs of the species, as best as they could be determined with existing information, provided the basis for the DEIR, RDEIR, and associated mitigation and management measures and not the minimums defined by the Forest Practice Rules. Many examples could be cited of how Alternative G and the ADFFMP, for example, goes well beyond the requirements of the Forest Practice Rules to provide protections for both aquatic and terrestrial species and their habitat:

- Additional management measure for large woody debris survey, recruitment, and placement;
- Management of Class I and II WLPZs for development of late seral forest characteristics;
- Management of one-third of the forest for older forest structure, late seral forest, or old-growth conditions;
- Substantial restrictions on the use of even-aged management;
- Adaptive Management and Monitoring Program.

The ADFFMP provides for three Riparian Restoration Demonstration Areas, where CAL FIRE, other state and federal agencies, and researchers will have the opportunity to test the effectiveness of various approaches to aquatic resource protection, including NMFS' recommendations.

Response to Comment 4
References to the historical and current impacts of timber harvest relative to the listing status of salmonids and their habitat requirements are frequently cited in the DEIR Environmental Setting Section V-12-17 and more specifically on DEIR Page VII.6.1-1, VII.6.1.71 and Section VIII Cumulative Effects Page VII-65-89.

Response to Comment 5
The DEIR and RDEIR conducted a thorough cumulative effects assessment and concluded that habitat conditions for listed species are expected to continue to improve under either Alternative C1 or G.

Response to Comment 6
CDF believes that the 240 sq ft/acre of basal area retained in WLPZs is more than adequate to ensure a trend toward the development of late seral conditions. It is the intent of JDSF to promote late successional conditions. Management activities that could be considered counterproductive to that objective are not applied. The commenter provides no basis for consideration of an alternative basal area figure to support their position that attainment of late successional conditions are "highly unlikely". Retention of a minimum of 240 sq. ft. /acre of basal area after a harvest entry that occurs once every 20 years will result in a forest stand that is older and larger with the associated forest structure complexities and accumulation of biomass associated with late successional conditions.

The WLPZ measures also represent minimum, programmatic standards, that are commonly adjusted based upon local conditions, but are never adjusted below the minimum standards specified in the ADFFMP (Chapter 3, Riparian, Wetland, and Floodplain Management). It is common practice on JDSF to leave Class I and II WLPZs uncut.

Response to Comment 7
The width of riparian zones will not prevent the development of desired late successional forest structural elements. Watercourse and Lake Protection Zones developed in the DEIR in addition to those management measures developed to contribute to the recovery of aquatic resources (DEIR Section 6.1.14 Pages VII.6.1-96-98) are expected to make a significant contribution to stream ecosystem processes (LWD recruitment, improvement in pool/riffle ratio etc). Attainment of the microclimate conditions described by the commenter is dependent on a variety of topographic and adjacent forest stand structure conditions. Minimum WLPZ width is determined by stream and slope class as described in the Forest practice Rules 916.5. Microclimate and stream shading effects of varying buffer width are detailed in the DEIR Pages VII.6.1-13-15.

Response to Comment 8
Comment noted. The National Marine Fisheries Service concerns related to the effectiveness of the Forest Practice Rules are addressed in the document: Resources Agency's response to NMFS, California Forest Practice Rules July 10, 1998. The information provided to the Board by the NMFS in their December 3, 1999 correspondence clearly indicates that the NMFS was still "in the process" of developing forestry standards and guidelines. The guidelines provided were prepared to address a specific timberland owner and are intended to apply to circumstances where a timberland owner was interested in obtaining a two- to five-year short-term habitat conservation plan (HCP). These guidelines would not be used to supplant minimum forest practice rules nor were they to apply to any specific THP. NMFS cover letter goes on to state: "The guidelines that will be provided . . . will be generic and presented without regard to site specific information" and that the "measures . . . may be tailored site specifically depending on the availability of information and analysis." It is later emphasized in the cover letter that "The NMFS is aware . . . that watershed analysis would be the most functional procedure to use when reviewing and approving THPs."

The measures proposed in the DEIR and the RDEIR were developed following a thorough watershed assessment that thoroughly assessed the potential impacts to aquatic resources and water quality, based on the analysis of the conditions found on JDSF and in the surrounding areas. The assessments found that the ADFFMP, based on Alternative G, given the various management measures and mitigations applied, would not result in significant adverse impact to resources. The analysis in fact indicated the potential for a number of beneficial effects, including:

- decreasing water temperatures;
- large woody debris and its associated habitat values,
- riparian forest condition, extent, and ecological function;

- protection of streambank stability;
- improved in-stream habitat conditions;
- improved access to spawning and downstream migration.

See also response to Comment 3. It should be noted that the Board recently adopted regulations to enhance the protection of coho salmon in situations where DFG has determined that take is likely to occur as a result of timber harvesting operations. The Board is currently engaged in a scientific literature review to ensure the measures provided in the Forest Practice Rules are adequate for the protection and restoration of anadromous salmonid populations.

Response to Comment 9
Headwater stream ecosystems and their relationship to sediment transport, large wood recruitment and delivery are described in DEIR Pages VII.6.1-6-10

Response to Comment 10
Comment noted. See responses to Comment 3 and 8 above. Additional protections for Class III watercourses would depend on a variety of site specific factors and would be explained in the THP or the record of review of the THP.

Response to Comment 11
The riparian aquatic conservation strategy described for public lands in the document: Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Related Species within the Range of the Northern Spotted Owl (April 1994) is an **interim** strategy to be used until a watershed analysis can be conducted and more site specific standards and guidelines developed. CDF has completed the elements of a watershed analysis for the JDSF ownership and bases its management standards and guidelines on those findings. For example, the ADFFMP and DEIR provide for late successional forest recruitment along watercourses; and the DEIR provides additional management measures for large woody debris recruitment (DEIR Page VII.6.1-96-98). The ADFFMP, based on Alternative G, goes further than the DFMP did and designates one-third of the Forest for older forest structure, late seral forest, and old-growth forest conditions.

Attachment A (Page B-13) to the Record of Decision for the Standards and Guidelines cited by the commenter above states that: “Interim widths for Riparian Reserves necessary to meet Aquatic Conservation Strategy objectives for different watersheds are established based on ecologic and geomorphic factors. These widths are designed to provide a high level of fish habitat and riparian protection until watershed and site analysis can be completed.” “The prescribed widths of Riparian Reserves apply to all watersheds until watershed analysis is completed, a site-specific analysis is conducted and described, and the rationale for final Riparian Reserve boundaries is presented through the appropriate NEPA decision-making process.”

Response to Comment 12
The DEIR and RDEIR analysis of available data and with incorporation of the Monitoring and Adaptive Management Section (DEIR Section 6.1.13 Page VII.6.1-94-96, ADFFMP Chapter 5) and Additional Management Measures to Contribute to Recovery of Aquatic Resources (Section 6.1.14 DEIR Pages VII.6.1-96-98), as well as other protective measures added by Alternative G, supports the determination of a less than significant or less than significant with mitigation determination.

Response to Comment 13
See Response to Comment 11.

Response to Comment 14
See Responses to Comments 5 and 12.

Response to Comment 15
The distribution and extent of existing late-successional forest on JDSF and location of late-successional forest development areas are described in the DEIR and associated maps (e.g., Map Figure K in the DEIR shows vegetation by habitat classes, including classes indicative of conditions meeting some definitions of late seral forest; RDEIR Map Figure 2 identifies stands by the average numbers of trees per acre greater than 30 inches in diameter). Because age is not a useful parameter to identify late-successional forest for wildlife habitat classification purposes, information such as that presented in the latter maps is a better indicator of older forest conditions. Thus, the DEIR and RDEIR focus on forest structural attributes including tree diameter and percent canopy closure when assessing wildlife habitat related issues.

The late seral development areas established under various alternatives were designated primarily due to their relationship with other forest attributes. For example, the riparian zones are so designated, due to the widely recognized value of riparian zones as habitat and corridors for many species of wildlife, as well as their value to aquatic habitat and water quality. Other late seral development areas were designated to form larger patches of late seral forest adjacent to existing old-growth forest. The Mendocino Woodlands STA is designated due to a combination of factors, including proximity to state parks and the coast, as well as the fact that it represents a large contiguous patch of even-aged young forest that has not been significantly developed. The area designated for late seral development in the Russian Gulch/Lower Big River area is intended to provide future habitat suitable for Marbled Murrelets. It is widely recognized that forest stands tend to develop characteristics of old forest as they age, including the development of unique structural elements, such as snags, down logs, cavities, large limbs, and broken tops.

The late seral development areas have been identified as areas that will be managed to achieve late seral characteristics in the future. These areas currently are comprised primarily of second-growth forest that is not yet late seral in character. Selective harvest is proposed adjacent to most of these areas, but will not preclude the development of late seral characteristics within them. Habitat connectivity has been considered in detail within the wildlife analysis. There is very little forest within JDSF that is currently classified as old forest. The second-growth forest exists in large patches that are well connected throughout the forest by riparian zones.

Response to Comment 16
The short-term harvest schedule proposes to harvest in forest stands that do not meet the definition of late seral or late successional, based upon current information. If stands of late successional forest are found within future project areas, the potential impacts to species normally associated with this type of forest will be considered as the project is planned (Title 14 CCR 919.16). Other management limitations apply as well, including provision to retain old-growth trees, stands, and aggregations (ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). Existing, older second-growth stands that will contribute to the development of designated late successional forest conditions are managed consistent with the objective of attainment of late successional conditions. As noted earlier, Alternative G and the ADFFMP designate one-third of the Forest for older forest structure, late seral forest, and old-growth forest conditions.

Response to Comment 17
Old-growth trees per the old-growth retention policy are not removed for the “sake of convenience”. An individual old-growth tree may be removed if it represents a forest worker or public safety issue or its retention would result in an equal or greater level of a planned projects environmental impact. The ecological value of individual old-growth trees is recognized and their removal is a “last resort.” The frequency of individual old-growth tree occurrence and likelihood of attaining old-growth/late successional conditions were important variables in the identification of late successional development and existing old-growth stand augmentation areas. Individual old-growth trees are typically buffered with adjacent tree retention during project planning and layout. Extensive modeling and analysis was done for the Wildlife and Wildlife Habitat sections of the DEIR and RDEIR; this work resulted in conclusions that the ADFFMP, with various management measures and mitigations

applied, would not result in significant adverse impacts to older forest values, whether looking at individual or cumulative impacts.

Response to Comment 18
Alternative C1 and C2 both include the Accelerated Road Management Plan as described in the DEIR Section 6.1.14 Additional Measures to Contribute to Recovery of Aquatic Resources DEIR Pages VII.6.1-96-97. The ARMP completes an inventory of roads needing repair in 3 years instead of 5 and requires other THP level road upgrades. Alternative G and the ADFFMP also include the Accelerated Road Management Plan approach. The Board anticipates that an increase in the Department's authorized budget level for the Demonstration State Forests, resulting from the fiscal year 2006/07 Budget Act, will provide the Department with the resources it needs to implement the roads program. For example, a second heavy equipment operator recently was added to the Forest's staff.

Response to Comment 19
Depending on the Alternative selected and budget authorizations created through state budget processes, staffing levels could decrease, remain the same, or increase in response to need. See Response to Comment 18 regarding recent increases in budget authority for the Demonstration State Forests. JDSF has added a new Senior Wildlife Biologist in the past year and has upgraded the level of its Geographic Information System Specialist position.

E-109

Kraemer, Candace

From: Patrick Emmert [pemmert@netptc.net]
Posted At: Monday, February 27, 2006 12:06 PM
Conversation: Jackson Demonstration State Forest
Subject: Jackson Demonstration State Forest

Attention George D. Gentry, Executive Officer
Attachment contains my comments on the DEIR

Thank you,
Patrick Emmert

PATRICK E. EMMERT - FORESTER
CALIFORNIA REGISTERED PROFESSIONAL FORESTER, NO. 1839

February 27, 2006

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460
board.public.comments@fire.ca.gov

Dear Mr. Gentry,

I am writing in regards to ***Jackson Demonstration State Forest (JDSF) and the solicitation for comments on its Draft Environmental Impact Report (DEIR).***

I am writing in support of Alternative C1. I believe this alternative best serves the citizens of the State of California while protecting the environment of the 50,000 Demonstration State Forest. Alternative C1 facilitates natural resource scientists to test hypotheses and conduct demonstration projects that are designed to help broaden the common knowledge of forestry and general natural resource sciences.

I possess absolute trust in the JDSF personnel charged with the management of the Demonstration Forest and the protection of the natural resources. Timber harvesting should be conducted on a sustained schedule to perpetuate the forest setting and facilitate new growth. I believe the dynamics of the natural setting must be utilized for education, learning, and stimulation, as well as to insure for retention of aesthetic gratification that is derived from nature. The original purpose of JDSF is more valid today than in the past.

I completely endorse timber harvesting for economic benefits for the citizens of California and those individuals that derive their livelihood from related employment opportunities associated with JDSF projects. I endorse the recreation opportunities provided by JDSF and believe recreation should continue to a major emphasis on the forest management.

I also believe the forest should provide greater educational projects in the future. The citizens of California do not realize the multitude of benefits that are derived from active forest management of our natural resources.

I believe Alternative C1 will provide protection to all public trust resources and urge its adoption.

Sincerely,

Patrick Emmert

Post Office Box 535 Auberry, California 93602 (559) 855-8913 Fax (559) 855-4497

Email Letter E-109

Response to Comment 1
Support of Alternative C1 and past management noted. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. Recreation and the demonstration that recreation is a compatible use of the forest remains an important management objective (see General Response 14). Integrating the recreation program with the education and demonstration program has great potential to increase public knowledge of the benefits derived from active forest management of our natural resources.

Increased emphasis on the use of JDSF as an educational tool is one of the goals of the ADFFMP. The expansion of the Forest Learning Center is expected to augment the research and demonstration program by providing a place where the public can learn about forest ecology and management. It is also expected to attract greater numbers of scientists to do important research work on the forest. See General Response 2.

E-110

Kraemer, Candace

From: Gary Brittner [brittner@sbcglobal.net]
Posted At: Tuesday, February 07, 2006 7:36 PM
Conversation: JDSF mgt plan
Subject: JDSF mgt plan

Gary Brittner, RPF 1891 - PO Box 467 - Meadow Vista, CA – 95722

February 7, 2006

Dear Board of Forestry,

I urge the Board to select Alternative C1 for the JDSF EIR and Management Plan. It's the only plan that makes sense given State law and policy. CDF has managed the forest well for decades. C-1 improves upon that dynamic model (alternative B). The Board needs to provide CDF practical policy for managing the state forests to fulfill the demonstration mission.

The demonstration value of this (and the other state forests) is invaluable in providing scientific and empirical information about forest, wildlife, and watershed methods for large and small landowners. Alternative C-1 is the most inclusive option. It provides the greatest latitude for scientists to conduct practical demonstration and research projects.

1 Alternative C-1 provides a plan that can help solve them most common and critical real world problems faced by forest landowners. Alternatives D-F are too narrow in scope and too risky to implement on a resource as important as JDSF. Private landowners and other resource managers need CDF to continue its management practices that provide real world answers to resource problems. Our state needs managed forests to perpetuate private property and public trust resources. We need to keep forests working and productive. Otherwise, landowners will convert the forests to other uses that are less environmentally-friendly and impair our quality of life.

JDSF is the largest publicly-owned working forest in the redwood region. It's the only place where large-scale research and demonstration can take place. Alternatives D-F are off course. They will shift the emphasis of management away from statutory mission and provide little practical benefit. Alternatives D-F restrict the value of JDSF research and demonstration to a tiny sliver of landowners and researchers.

2 JDSF provides great recreational opportunity and experiences as added benefit to normal operations. Emphasizing recreation is inconsistent with the law and policy. There are abundant recreation opportunities at State parks in the area. Also, recreation is incapable of replacing rural jobs and capital that would be lost if sustainable forestry is not used at JDSF. Alternative C1 provides payroll, local and state tax revenues, and local and regional stability. The same is not true for alternatives D-F.

In summary, select C-1. It's sustainable and practical. It protects wildlife and watersheds, provides recreation, and keeps forest resources and local and regional economies robust. I am a registered professional forester and have worked and recreated at JDSF. Personally and professionally, alternative C-1 makes the most sense. Other options are too narrow in scope and too risky for such an important resource.
Yours,

Gary Brittner
RPF #1891

Email Letter E-110

Response to Comment 1
See General Response 2. Support for Alternative C1 noted. The Board generally agrees with these comments. The Board recognizes the role of JDSF for research and educational purposes and the importance of flexibility in the management plan. The Board further recognizes the importance of maintaining a viable outdoor laboratory by managing the forest to create diverse stand and habitat types, including even-aged management areas. The intention is to retain the value of JDSF for research and demonstration that is relevant to a wide range of landowners and researchers.

The DEIR analysis determined that some elements of Alternatives A and D-F may be inconsistent with the current Public Resources Code, regulations, and Board policy that guides the management of JDSF. The Board has developed a management plan utilizing elements from several alternatives that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

Response to Comment 2
See General Response 14.

E-112

Kraemer, Candace

From: Danweldan@aol.com
Posted At: Tuesday, February 28, 2006 2:00 PM
Conversation: JDSF DEIS Comments
Subject: JDSF DEIS Comments

TO: George D. Gentry

Please find attached the FLC comments on the JDSF DEIS

Daniel M. Weldon
Executive Director
Forest Landowners of California
(916) 972-0273
(916) 979-7892 fax
dweldon@forestlandowners.org

Forest Landowners OF CALIFORNIA

3550 WATT AVENUE, SUITE 140
SACRAMENTO, CA 95821
(916) 972-0273
(916) 979-7892 FAX
E-mail: dweldon@forestlandowners.org

February 28, 2006

Mr. George G. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246, Sacramento, CA 94244-2460

RE: Jackson Demonstration State Forest DEIR

Dear Mr. Gentry,

The Forest Landowners of California (FLC) is submitting these comments regarding the Draft Environmental Impact Report (DEIR) for Jackson Demonstration State Forest (JDSF). The members of FLC are family forest owners from through out the state who depend on the research and demonstration projects conducted at JDSF. In fact, PRC Section 4631(d) states that JDSF shall provide for the "Demonstration of economical forest management." In the five years since the management program at JDSF was halted by legal action, the pressure on private forestlands has intensified. The bottom line is we need Jackson back on track as soon as possible and operating at peak efficiency. The extremely detailed DEIR provides in depth analysis in a structure that is both understandable and authoritative.

In reviewing the alternatives for management, FLC recommends the approval of Alternative C-1, which provides the greatest flexibility for meeting the mandate for demonstration as well as the legislative purpose of maximum sustained production of high quality forest products while giving full consideration to recreation, watershed,, wildlife, range and forage, fisheries, and aesthetic enjoyment. Option C-1 would provide the greatest benefits to the broadest range of citizens without resulting in any significant adverse environmental impacts.

The demonstration aspect of JDSF cannot be emphasized enough. As the DEIR states, "If the values of long-term forest management are not demonstrated to owners of small to mid-sized forest tracts, there is greater potential for these lands to be converted to other uses, and the economic, social and environmental impacts of expanding forest fragmentation could be magnified across the region."

FLC appreciates this opportunity to comment about the JDSF DEIR. We encourage the Board of Forestry to act swiftly to insure that JDSF returns to full management operations as soon as feasible for all concerned.

Sincerely,

Daniel M. Weldon
Executive Director

Email Letter E-112

Response to Comment 1
See General Response 2. Support of Alternative C1 and the completeness of the DEIR noted. The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to complete the EIR process and approve a management plan based on RDEIR Alternative G. The Board has developed a management plan utilizing elements from several alternatives that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. See also Response to Email Letter E-110.

The Board recognizes the problem of increased forest fragmentation and loss of productive timberland due to the economic pressures to convert the land to other uses. The Board recognizes the value of JDSF to reduce this trend, and its inherent environmental degradation, by providing demonstration of viable and sustainable forest management. The management plan will provide both a useful demonstration and valuable source of information to private timberland owners, providing an incentive to maintain their lands in timber production and other forms of active management.

E-113

Kraemer, Candace

From: dcalvert [dcalvert@mcn.org]
Posted At: Wednesday, March 01, 2006 11:25 AM
Conversation: March 1 Public Input re:Jackson Demonstration State Forest Management PLan
Subject: March 1 Public Input re:Jackson Demonstration State Forest Management PLan

March 1, 2006

Attention:
Mr. George Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 922426
Sacramento, CA 94224-2460

RE: Jackson Demonstration State Forest

I am a non-industrial timber landowner.

1 I find the ongoing controversy surrounding the management of Jackson Demonstration State Forest alarming. Some members of the public are attempting to change the original mandate yet again without offering any mitigation for the new impacts. Most of the proposed alternatives (D,E,F and A) will destroy over 50 years of work from constantly evolving forest laboratory experiments from which all parties have gained access to valuable data. I am particularly alarmed about the prohibition on clear cutting included in some of the alternatives. This harvest method needs to be included to experiment with controlling the spread of disease or experimenting with the harvest methods best suited to areas subject to severe wind conditions, to name just two threats to general forest health. Clear cuts already exist in nature due to wind fall (entire hillsides in remote areas of Alaska), volcano (St. Helens), meteor (Russia), and fire (Yellowstone).

2

3 Shifting the emphasis away from sustained yield production in JDSF means less product going to the mills. This results in more mill closures which means less competition for the products of the dwindling numbers of forest landowners. The loss of economic viability encourages more land fragmentation. While the resource land base does not appear to be shrinking on a casual perusal of the the TPZ zoning, close observation will reveal increasing numbers of parcels purchased to serve as "no cut zones" which actually serve as private preserves under advantageous property tax treatment for residential users. There are huge local impacts from the loss of good jobs that paid health benefits. The Mendocino Coast District Hospital is in severe financial distress. Interestingly, the troubles seem to have followed closely on the heels of the Fort Bragg Mill closure. Is there a connection between the disappearance of jobs with good health benefits and the hospital's woes? Similarly, local school enrollment is shrinking and there is competition between the districts for students...interdistrict transfers are becoming increasingly difficult to procure.

4 I would rank the proposed alternatives in the following order from best to worst in terms of maintaining a viable forest laboratory and the local economy:
B-- (1983 plan)
C1--This would have been my first choice had it not called for potential increase in recreational use.
C2--Not as acceptable as previous alternative.
D}These next 3 destroy the intent of the original mandate and hinder too many of the research

5/22/2006

4 opportunities.
E}
F}
A--This destroys the educational value of the forest and delivers another mortal wound to the local economy.

5 There are multiple park areas in Mendocino county for recreational use. We have only one demonstration forest. Please save it for its original mandate to serve primarily for research and demonstration purposes.

Thank you.

Karen A. Calvert
P.O. Box 70
Albion,
CA 95410-0070

Email Letter E-113

Response to Comment 1
See General Response 2. The Board recognizes the role of JDSF for research and educational purposes and the importance of flexibility in the management plan. The Board further recognizes the importance of maintaining a viable outdoor laboratory by managing the forest to create diverse stand and habitat types, including even-aged management areas.

Response to Comment 2
See General Response 10.

Response to Comment 3
A significant level of sustainable timber production will continue at JDSF. The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in section III.6.2 of the DEIR. The resumption of timber production is expected to have a positive economic impact in the region.

Response to Comment 4
Ranking of alternatives noted. The DEIR analysis determined that some elements of Alternatives A and D-F may be inconsistent with the current Public Resources Code, regulations, and Board policy that guides the management of JDSF. The Board has developed a management plan utilizing elements from several alternatives that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. Refer to General Response 2. The ADFFMP is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest. As stated above, it stresses the importance of maintaining a viable outdoor laboratory by managing the forest to create diverse stand and habitat types, including even-aged management areas. The intention is to retain the value of JDSF for research and demonstration that is relevant to a wide range of landowners and researchers.

Response to Comment 5
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. See General Response 14.

IV.4 Responses to Individual DEIR E-Mail Comments E-114 to E-124

This section presents responses to individual public comments (i.e., not form letter or form letter based) received via e-mail. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

E-114

March, 1 2006

To: The Board of Forestry and Fire Protection
Board.public.comments@fire.ca.gov

From: Teresa Sholars
Professor of Biological Sciences
Mendocino Coast Campus
College of the Redwoods
1211 Del Mar Drive
Fort Bragg, 95437

707 962 2686 voice mail
email: Teresa-Sholars@Redwoods.edu
tsholars@mcn.org

Re: Draft Environmental Impact Report
Jackson State Forest Management Plan

Members of the Board of Forestry:

This second draft Environmental Impact Report of the Jackson State Forest Management Plan is much improved from the 2002 version. I have read the botanical section and have looked at the maps that cover the vegetation description and sensitive plant species. I have a few general comments on the botanical aspects of the plan and a few specific comments:

General Comments:

In order for Jackson State Demonstration Forest to be the true forest leader it should be in forest management for timber, biological diversity and for recreation the plans needs to specify three botanical elements that it lacks:

1. A botanical inventory that is floristic in nature.

2. A monitoring plan for sensitive plant species that occur on site

3. A map that includes all current location of sensitive species that is kept up to date.

All three of these are lacking in the plan. In order to accomplish the above goals, I would suggest the following:

Botanical Floristic Inventory:

1 A general inventory needs to be started. Local colleges like the Fort Bragg Campus of College of the Redwoods can help with preliminary lists. Then as each new timber sale is created, a floristic botanical inventory of each plan can be done under each THP. This is the only adequate way to discover the presence or absence or rare protected species.

Monitoring Plans for sensitive plant species:

2 Monitoring plans should be put into place as each species is evaluated. *Astragalus agnicidus* and *Lycopodium clavatum* should top the list for important rare plant species that occur on Jackson that need a plan to insure their protection.

Maps of Vegetation Types and Rare species:

3 The vegetation maps provided by the plan are pretty useless and inaccurate. The wildlife habitat system used does not accurately describe the vegetation. Anyone familiar with the forest with any botanical background would not be able to get an accurate assessment of the vegetation from looking at the maps. It would be better to state that mapping the forest is a future project rather than using the maps provided by the plan.

4 The map with the sensitive species from the CNDDB is also not very informative. I know that current staff has better maps of rare species. These should be compiled and made a working part of the plan.

Some specific comments:

5 1. "There are several uncommon vegetation communities that occur on JDSF. Rare or sensitive vegetation types include the Mendocino pygmy forest, sphagnum bogs, other wetlands, meadows, and grassy openings page VII 6.2" Add the Bishop Pine Forest to this list.

6 2. "This listing is not exhaustive. Unfortunately new species and occurrences continue to be identified on the forest. Some species seem to be restricted to old occupancy sites such as periwinkle (*Vica major*), Arrons beard (*Hypericum calycinum)*, and *Acata .sp.* Others are spreading from nearby pastures (tansy ragwort, *Senecio jacobaea*) or homes (English holly, *Ilex aquifolium*)"**Pg 13** Do you mean *Acacia*?????

7 **3. "Species Protection:** A qualified botanist or trained staff will conduct seasonally appropriate rare plant surveys, as necessary, to assess plant occurrence in potential habitat subject to management activities, including management activities intended to reduce or control invasive exotic species, such as road-side treatments. Survey design is described below. Surveys may include suitable on-and off-site habitat that may be affected by project implementation. Survey results will be documented and provided to CDFG. Observations of rare, threatened, or endangered plants or plant communities will be recorded on field survey forms and copies provided to CDFG's California Natural Diversity Database (CNDDB). JDSF will provide for, on an as-needed basis, sensitive plant identification training for field personnel." **Page 21** It is important to emphasize that these surveys must be floristic in nature.

8 **4. "Habitat Management Practices:** Limited removal of species in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly. Prior to habitat development projects, rare plant surveys will be conducted according to accepted survey guidelines (see previous section) to address sensitive plant resources. A qualified botanist will assess the appropriateness of removal of any sensitive plant species in relationship to fostering habitat for the growth of the butterfly's host species, Harlequin lotus, (*Lotus formosissimus)*. Effectiveness monitoring will be conducted for any habitat

management practice involving removal of plant species in the pygmy forest to assess the response of the forest to habitat alteration. " pg 22 This section is exceptionally scary to an ecologists. We have no data that would lead us to believe that we should remove rare plants in a rare plant community in order to promote the possible food plant for an endangered butterfly. Including this idea in the plan with out extensive background supportive data is unwise to say the least.

9

5. "Survey designs will be **based on the concepts** contained in the CDFG Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (CDFG, 2000). Surveys conducted as part of THP development will follow the practices commonly accepted by CDF and CDFG for THP review. Surveys for other types of projects will recognize the specific features of those projects. [For example, road surface maintenance and roadside brushing are ongoing activities that create repeated periodic disturbances, pre-commercial thinning typically occurs a few years following the more substantial disturbance of a commercial harvest, and shaded fuel break construction targets ground cover vegetation". **Pg 23** The survey protocols should be those designed by Fish and Game (floristic in nature) not based on their concepts.

10

6. "An extensive inventory of the botanical resources of JDSF has not been conducted. JDSF maintains a map of known rare plant occurrences and has compiled available supporting documents. Inventory is planned to occur on a project-by-project basis through surveys patterned after currently accepted protocol. Potential impacts to botanical resources will be addressed at the project implementation level through pre-survey scoping in consultation with DFG, survey, and development of measures that avoid or mitigate impacts to sensitive plant species." **pg 25** Current accepted protocol should include floristic surveys; if not then the surveys can not accurately assess an area for rare plant distribution. If JDSF has a map of known rare plant occurrences why not include it.?

11

7. "Pygmy forest and pygmy-type vegetation on private lands are subject to Mendocino County land use planning and are designated as Environmentally Sensitive Habitat Areas. These areas are subject to more rigorous environmental review and restriction than most other areas (Mendocino Co. Plan Sect 20.532.060 and 20.496045). ".**pg 35** Unfortunately this is true only in the coastal zone which covers only a small fraction of the pygmy forest distribution.

12

8. Appendix : Invasive exotics:
***Cotoneaster spp.* –cotoneaster** *Cotoneaster pannosa* and *C. franchetii* are similar and frequently confused with each other, and some plants invading wildlands are not readily assignable to a particular species. Add *Cotoneaster lactea* as the most common species.

13

9. On the map for Special concerns add mushroom corners and all adjacent state park land. It is important to maintain buffers for these important regions.

Email Letter E-114

Response to Comment 1
The DEIR notes that; "An extensive inventory of the botanical resources of JDSF has not been conducted. JDSF maintains a map of known rare plant occurrences and has compiled available supporting documents. Inventory is planned to occur on a project-by-project basis through surveys...." (DEIR Page VII.6.2-24).

At this time JDSF has a draft quality floristic list that has been supplemented by surveys in THP areas and the Bob Woods Meadow. JDSF staff have benefited from plant community lists shared by College of the Redwoods and local DFG staff. The change in the survey requirements (see response 7 following) insures that THPs will have a floristic element per DFG 2000 survey protocol guidelines. Although other survey techniques detect targeted species, conducting floristic surveys can help improve understanding of botanical resources.

Response to Comment 2
The DEIR/RDEIR provides for monitoring of rare plants. Monitoring rare plants for threats of invasive species was included in Chapter 3 of the Administrative Draft Final Forest Management Plan Final Management Plan (ADFFMP). The ADFFMP includes a Monitoring and Adaptive management section (Chapter 5), which includes plant resources. Informal monitoring of *Lycopodium clavatum* occurrences takes place. JDSF has developed monitoring and road management measures at the major *Astragalus agnicidus* occurrence in consultation with the Department of Fish and Game. The Management Plan has focused the Research and Demonstration Goal to include forest ecosystem process and forest protection measures. This focus could include rare plants.

Response to Comment 3
The maps within the DEIR reflect CWHR (California Wildlife Habitat Rating) typing, which provides utility for WHR habitat modeling purposes. A vegetation typing exists that differentiates between Bishop pine and Bolander pine/pygmy cypress stands and includes more detail that the CWHR map. This vegetation information includes some overstory/second story species information. A display of other forms of vegetation typing, such as Holland or Keeler-Wolf or CNDDB, is not feasible at this time, since the field data have not been developed. There is potential for analysis of future projects to incorporate both existing and new information that is in a format of value for botanical assessment.

Response to Comment 4
The DEIR includes the level of information required for analysis. Information exists that can be displayed in other formats that have utility in analysis of individual projects.

Response to Comment 5
Bishop pine will be added.

Response to Comment 6
This correction will be made.

Response to Comment 7
The second paragraph under the title "Surveys:" on DEIR page VII.6.2-23 will be replaced by:

> For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000). This will result in floristic surveys for the effected areas. On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.

Response to Comment 8
The referenced section will be modified to state:

> Habitat Management Practices: The concept of conducting control burns in the pygmy forest originated some years ago as an idea to benefit the Lotis blue butterfly and a host species coast hosackia (*Lotus formosissimus)*. Currently it is understood that other herbaceous members of the pea family may be hosts for the butterfly and that host plant habitat is not limited to pygmy forest. The concept of manipulating the rare pygmy forest for the possible benefit of the Lotis blue butterfly is not supported at this time. Local Botanists have supported the concept of carefully reintroducing fire into pygmy forest areas on JDSF. CAL FIRE recognizes that any proposal would be; research focused on improving understanding of the pygmy forest, limited in scope, based on sound ecological and botanical knowledge, supported by experts in the field, undergo appropriate CEQA analysis, and include appropriate survey, study, and monitoring.

The following will be deleted:

> Limited removal of species in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly. Prior to habitat development projects, rare plant surveys will be conducted according to accepted survey guidelines (see previous section) to address sensitive plant resources. A qualified botanist will assess the appropriateness of removal of any sensitive plant species in relationship to fostering habitat for the growth of the butterfly's host species, Harlequin lotus, (*Lotus formosissimus)*. Effectiveness monitoring will be conducted for any habitat management practice involving removal of plant species in the pygmy forest to assess the response of the forest to habitat alteration.

The wildlife section will incorporate changes that reflect the other potential hosts and habitat for Lotis blue butterfly.

Response to Comment 9
See response to Comment 7.

Response to Comment 10
See response to Comments 4 and 7.

Response to Comment 11
The text will be changed to reflect this fact.

Response to Comment 12
This information will be added.

Response to Comment 13
The Mushroom Corners Management Area is mapped in the RDEIR Figure 5 as well as in the Botany section of the DEIR and in the RDEIR (Map Figure 1). DEIR Map Figure D (Special Concern Areas) includes the State Park Special Treatment Areas. The boundaries of the state parks also are depicted.

E-115

Kraemer, Candace

From: Noble Elisa [enoble@CFBF.com]
Posted At: Wednesday, March 01, 2006 4:01 PM
Conversation: Submitted Comments re: JDSF
Subject: Submitted Comments re: JDSF

Please find the California Farm Bureau's comments attached.

Thank you.

Elisa Noble
Director, National Affairs & Research
Livestock, Public Lands, & Natural Resources
California Farm Bureau Federation
2300 River Plaza Dr.
Sacramento, CA 95833
(916) 561-5610
Fax: (916) 561-5693
enoble@cfbf.com

5/22/2006

CALIFORNIA FARM BUREAU FEDERATION
NATIONAL AFFAIRS & RESEARCH DIVISION
2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 · PHONE (916) 561-5610 · FAX (916) 561-5693

March 1, 2006

George D. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244
Email: board.public.comments@fire.ca.gov

Re: Jackson Demonstration State Forest Draft EIR and Proposed Management Plan

The California Farm Bureau Federation (CFBF) is the largest general farm organization in our state representing more than 85,000 family members, including many foresters. Our organization's members include industrial and non-industrial timber landowners, who will be impacted by your upcoming decision regarding the Jackson Demonstration State Forest (JDSF). Members on the North Coast depend on timber sales offered in the JDSF to help sustain their lumber milling operations. In addition, all forest landowners and professional forest resource managers benefit from the research and technical information derived from the demonstration projects conducted on the JDSF. 1

The original intent, and continuing principal purpose, of the JDSF is the demonstration of sustainable and economic timber production, through regular periodic timber sales, in consideration of other forest values and in compliance with all applicable rules and regulations. 2 Timber production is to be the primary use on the JDSF. Research conducted on the JDSF is world- renowned, and very important for the science and application of forestry practices. For example, the JDSF houses a permanent plot system that provides data for growth simulations to help foresters better manage the land and timber. Research projects on the Casper Creek watershed are used for education in forestry schools throughout the country. Research is conducted to improve erosion control, habitat management, harvesting techniques, and watershed restoration. In order for this valuable research to continue, the forest must be managed in a way that promotes diversity in stand structure, which can only be achieved by continued harvesting. 3

Due to litigation from CEQA-based legal challenges, only minimal management has been conducted on the JDSF since 2003. There has been minimal road maintenance, no stream restoration, no timber stand improvement, no research conducted, and limited recreational opportunities. This has created a significant loss in infrastructure, including unemployment among the local workforce, and resulting economic losses to the local and state governments and communities. 4

California Farm Bureau strongly encourages CDF to manage the JDSF for research in various natural sciences of the forested landscape; demonstration of existing and new methods of sustainable timberland management; educational efforts, tours, publications and demonstrations; maintenance and enhancement of wildlife and fisheries habitats; and public recreations in their proper order of priority. We encourage CDF to adopt a management plan which includes an annual timber harvest set close to growth per year and conservation practices that meet or exceed 5

the requirements of the Forest Practice Rules (FPRs). The plan should include protection of listed species and recruitment of recovery habitat for listed species, a demonstration program, and the maintenance of existing recreational facilities. It is certainly appropriate to harvest under the FPRs in order to fund research and development, management and forest improvement projects. In addition, we would offer that recreation does not need to exist in conflict with timber harvesting. These uses can co-exist, and recreation could even get some of its funding from a portion of timber sales receipts.

b. In summary, California Farm Bureau strongly encourages the Board to adopt a management plan emphasizing logging activities in the JDSF. We believe the multiple intended uses of the JDSF can all be successfully fulfilled.

Respectfully Submitted,

Elisa Noble

Elisa Noble
Director
National Affairs and Research

Email Letter E-115

Response to Comment 1
The large small and non-industrial landowner base that benefit from research and demonstration on JDSF is noted. The Forest plans to continue serving this client base through applied research and demonstration, mandated in legislation.

Response to Comment 2
The Board agrees with the commenter the primary purpose of the State forest program is to conduct innovative demonstrations, experiments, and education in forest management (Board Policy 0351.2).

The major goal established for JDSF in the Management Plan is in fact to improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes and performance of forest protection measures.

The role of JDSF in testing a range of forest management techniques is specifically addressed in the Management Plan, including the designation of three areas for testing approaches to riparian restoration demonstration.

Response to Comment 3
Comment noted. A cornerstone of the Management Plan is in fact a statement of the desired future conditions on the Forest. These are summarized in Table 1 in the Management Plan, and lay out the respective acreages of different forest structures to be accomplished and maintained over time.

Response to Comment 4
The Board concurs that JDSF is a significant influence on the local economy. The Board is committed to getting the Forest back to a productive condition in order to continue its tradition of making a significant contribution to the local economy.

Response to Comment 5
While the Board has not chosen a management direction that will harvest at levels close to growth on the Forest, the Management Plan provides the various elements described in the comment, and is likely to be acceptable to all the competing public interests involved in the management of JDSF.

It is the Board's intention that the information and education role of JDSF and the entire state forest system be enhanced. Several provisions of the management plan are intended to meet this need, including greater availability of research and demonstration materials, expanded data banking, and an increase in local involvement in state forest planning and operations.

The management plan meets or exceeds the requirements of the State forest practice rules. It also provides for recruitment of restoration of older forest structure conditions, and recruitment and recovery habitat for listed species.

Response to Comment 6
While the Management Plan does not emphasize timber management as much as it could within the confines of legislation, Board policy and the principles of sustainability, the Board believes this Management Plan is the best compromise between the different public interest groups with a stake in the management of the Forest, and is the alternative that has the greatest potential to be accepted and resolve years of stalemate and litigation. This Management Plan will result in an average harvest level of 20-25 million board feet (MMBF) per year. In no case will the annual harvest be greater than 35MMBF per year. Annual growth on the Forest is about 65 MMBF per year.

E-116

Kraemer, Candace

From: Mary Aigner [mary@kzyx.org]
Posted At: Wednesday, March 01, 2006 5:05 PM
Conversation: Jackson State Forest EIR
Subject: Jackson State Forest EIR

March 1, 2006

California Board of Forestry and Fire Protection

PO Box 944246

Sacramento, CA 94244

Attention: Executive Officer Y.G. Gentry

Support draft EIR Alternative E

Dear Executive Officer Gentry:

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the Jackson Demonstration State Forest management plan. I live near Jackson Forest and have followed the tremendous controversy that management there has caused. It would be terrific if the Board could adopt a plan that allows for management the public can support.

I have been very concerned about how little we are doing as a society to prevent global warming. I was encouraged that Governor Schwarzenegger seems to share my concerns on this. Then I noticed your discussion of this in the EIR. Jackson Forest is a wonderful public asset that can readily be used to sequester carbon. Here there is no national forest and woodland parks and preserves are not large, so Jackson is the state's best opportunity to make a real contribution to offset greenhouse gas emissions. Your DEIR notes on Page VII.16-2 that:

> *"The current protocols require that an organization's (CDF's in this case) entire emissions and sequestration be calculated. Given the size of the Department and its heavy equipment and facilities (aircraft, engines, dozers, trucks, stations, camps, etc.), emissions are likely to substantially offset any sequestration credits. Current CDF emissions from equipment operations and facilities management are estimated to be 30,000 tons/yr. Also, the amount of carbon that can be registered is a function of the difference between the proposed management and the baseline. According to the protocols, the baseline for timber management is defined by the minimums in the Forest Practice Rules."*

CDF is probably one of the few agencies within state government that has such an obvious way to offset its greenhouse gas emissions with carbon sequestration. While the EIR outlines the policy, it does not evaluate the effects of the various alternatives on the Governor's greenhouse gas reduction program. This is certainly a fundamental environmental impact that should be analyzed.

5/22/2006

The preferred alternative, C1, and the similar C2, do not provide for the level of old forest habitat protection that would allow carbon storage to be maintained. Unfortunately, the EIR fails to adequately address the habitat and carbon sequestration opportunity loss that will occur under C1 and C2. Identification of existing older forest stands is vague to non-existent. It is impossible to determine with any precision how much of the proposed logging, both short and long-term, will remove or diminish the old forest stands that are crucial for making a significant contribution to carbon sequestration.

The areas proposed for "late seral development" are the only stands where one can be assured that habitat will be protected and developed and carbon will be stored. These "late seral development" areas are a relatively small proportion of the landscape. Under Alternatives C1 and C2, these are too small and isolated to allow any reasonable expectation they will have a significant positive impact on carbon storage. The EIR fails to consider the effect of the loss of the carbon sequestration opportunity.

By contrast, both Alternatives E and F provide larger areas of old forest beneficial for carbon storage. Alternative E is definitely superior from the carbon sequestration point of view.

I urge the Board to adopt Alternative E, maintain more old forest, and take this unprecedented opportunity to make a significant contribution to Governor Schwarzenegger's campaign to address global warming. Thank you.

Sincerely,

Mary Aigner

Email Letter E-116

Response to Comment

The commitment to set harvest levels well below growth will ensure that increased carbon storage will occur over time on JDSF. Although it is based on simplified assumptions, and significant uncertainties exist in regards to the carbon storage of wood products, projected inventories and below ground biomass, DEIR Table VII.16.1 and RDEIR Table III.19 serve to rank the various alternatives in regards to carbon sequestration over the 100-year planning period. The commenter correctly identifies Alternative E as having the greatest potential for carbon sequestration under these simplified assumptions, although it is important to note that all of the alternatives will have a net positive effect. The ADFFMP calls for a reduction in timber harvest to a level that is close to alternative F, which will lead to increased inventories, and therefore carbon storage, in relation to C1 and C2.

Increased inventories are not the only means of storing carbon. Wood products can also serve to store carbon for many decades. As stands age, the growth, and hence the rate of carbon sequestration, declines. Therefore, harvesting timber to allow a faster growing stand and storing the harvested carbon in the form of wood products may provide the greatest potential carbon storage. As stated above there remains considerable uncertainty relating to the carbon storage of in the form of wood products and below ground biomass.

Another issue relates to market forces. The coastal redwood/Douglas-fir forest is one of the world's most productive forest types. If we meet the demand for timber products by simply shifting harvesting to other less productive forest types the net effect may be to reduce overall rate of carbon sequestration.

The management of forests must also be concerned with the effects of climate change on the overall health of a forest. In general, maintaining diverse stand structures on the landscape will likely allow the greatest flexibility for management and for the forest itself in the face of uncertain climate shifts.

JDSF is well suited to do the research needed to fill the gaps in our understanding of these complex issues. JDSF could be utilized to demonstrate how various management strategies may serve to enhance carbon sequestration while remaining economically viable. The goal of the demonstration forests is to test a variety of management strategies and develop economically viable options for surrounding landowners. In this manner, JDSF can extend the possible benefits of various carbon management strategies to land beyond its borders.

While the carbon sequestration issue is very important, managing the forest with maximizing carbon storage as the primary goal would significantly limit the research and demonstration value for other aspects of forest management (see General Response 2).

See also the response to RDEIR comment letter GM-33 (2007 Individual comments, mailed).

E-117

From: Steve Horner [s_horner@cox.net]
Posted At: Wednesday, March 01, 2006 2:39 PM
Conversation: Comment for JDSF Management Plan Draft EIR
Posted To: Round 3
Subject: Comment for JDSF Management Plan Draft EIR

To: Board of Forestry and Fire Protection

Re: Comment for the Jackson State Demonstration Forest Management Plan Draft Environmental Impact Report

On behalf of Barnum Timber Company, a longtime steward of approximately 40,000 acres of timberland in Humboldt, Mendocino and Trinity Counties, I submit the following comments on the JDSF Management Plan Draft EIR. I want to make sure the Board of Forestry understands and addresses the environmental and economic impacts—both positive and negative—of maintaining moderate to higher levels of harvest on JDSF, along with the research opportunities to study intensive forestry.

1

The Jackson State Forest contains a substantial amount of currently merchantable timber that is not only important for generating revenue for the State, but also the entire local timber economy. I must note that I consider the "local timber economy" affected by JDSF includes Humboldt County. The presence of this merchantable timber is a testimony to the good stewardship of JDSF and its sustainable forestry policies that go back many decades. The local timber industry economy and certainly the State depend upon this merchantable timber for jobs and revenue.

According to a recent study of Humboldt County's forest industry, 374 million board feet of timber was harvested in the county in 2002. I estimate that JDSF's potential annual harvest under Alternative C1 represents a significant percentage of that 2002 countywide harvest. This potential harvest volume may not seem like a lot to some, but I'll explain why this amount has inordinate importance to Humboldt County forest landowners and the long-term health of the entire local economy.

2

The majority of the of the original privately owned forest area of Humboldt and Mendocino County was first harvested within a decade or two of the end of World War II. Because timber values were so low and forest restocking was not a widely available practice, replanting of trees for future harvesting was not accomplished. This fact has led to most of Humboldt County's commercial private forest lands today being at an approximate age of 50-years old, suppressed and inadequately stocked with commercial conifer species.

Most of Humboldt County's private forests that may be managed for timber production are just shy of maturity, by approximately 10-years. Ten years from now, however, many of these forests will be mature and many landowners may wish to harvest timber. Local timberland owners have invested much money to improve stocking and hasten growth of their forests in expectation of its eventual harvest.

JDSF's forests were originally harvested before World War II, and the forests contained sprouting redwood. Because of the timing of the original harvest and good forest stewardship practices, today JDSF has mature, well-stocked forests currently available for harvest.

These conditions represent a dilemma for both landowners and the local timber economy: Landowners with trees rely on mills to which they can sell their logs to in about a decade and recoup their investment; the local timber economy will be struggling for the next decade until most local forests mature and are available for economically viable harvest.

Thus the fate of other local timber owners and the local economy relies upon JDSF's immediate ability to conduct a reasonable annual harvest of mature trees over the next decade and provide logs to local mills. There simply is a low likelihood of our local private timberlands replacing during the next decade

the lost harvest volume from JDSF if a low- or no-harvest alternative is adopted.

If a low- or no-harvest alternative is adopted, I predict that the loss of harvest will stress the local timber industry and threaten existence of the few sawmills that remain in existence. I do not believe that the local timber market can compensate for such a significant shortfall in log production that would result from near cessation of JDSF's harvest. This would jeopardize the ability of local sawmills to remain in existence until adjacent Humboldt & Mendocino County forests mature and can provide similar log supplies. If more local sawmills are dismantled before other Humboldt & Mendocino County forests mature, landowners, having few or no markets for their logs, will be significantly harmed economically and it will cause these landowners to pursue other options for their lands to recoup their investments that do not involve preservation for timber purposes. This would result in unintended environmental harm to local private timberlands through loss of open space, subdivision of large land bases and urbanization.

2 Also, if Humboldt County's annual harvest level drops by the amount that could be provided by JDSF through moderate to high—yet sustainable—harvest levels, a collapse of the industry infrastructure—loggers, suppliers, processing facilities—could result. This situation would economically harm all forest landowners in Humboldt County and ultimately the environment if non-forest uses result. This is a clear and present danger that will result if a low- or no-harvest alternative is adopted.

Based upon my preceding comments, I request that the Board of Forestry acknowledge the negative economic impact on the local Humboldt County economy and local timberland owners should a low- or no-harvest alternative be adopted. This analysis should span at least the next decade.

The discussion above points out that the low- or no-harvest alternatives have serious negative economic implications to timberland owners and also the local economy, which could in turn result in unintended negative environmental impacts on the region's private timberlands. An approximate dollar value of the impact to the local timber economy needs to be considered by the Board of Forestry in order to weigh it against the potential positive environmental impacts on JDSF that would result from a low- to no-harvest alternative in JDSF over next decade. This is not to say that environmental degradation is acceptable in exchange for preventing negative economic consequences that might result from adopting a low-harvest level alternative, but provides a relative measure for the burden that the Board of Forestry should endure should you decide to adopt a low- to no-harvest alternative.

I want to make sure that the Board of Forestry is sensitive to the economic impact to private timber landowners and the Humboldt County economy that would result from the adoption of low- to no-harvest alternatives, and consider the unintended negative environmental impacts that could result to private lands in the region should such an alternative be adopted.

3 Additionally, please recognize the benefit to continued study on JDSF of intensive forestry. The findings from carefully controlled study can identify positive and negative impacts to the environment from intensive forestry practices, results of which can be used to support or inhibit similar practices on the private timberlands of the region. What happens on JDSF is magnified by its application (or prevention of its application) on private lands.

Steve Horner
General Manager
Barnum Timber Company
1610 Highland Ave.
P.O. Box 1365
Eureka, CA 95502

Email Letter E-117

Mr. Horner makes three main points about the broader economic impacts of different management regimes for JDSF that apply to the next decade.

Response to Comment 1
The first point is that even though Jackson Demonstration State Forest (JDSF) is located in Mendocino County, the logs will go to the winning bidder and may be processed in mills in Humboldt or Sonoma counties. Since most of the direct employment as well as the indirect employment and economic activity will be tied to the location of the mill rather than the harvest location, this is quite important. Since it is impossible to predict the eventual location of the mill where the redwood or Douglas-fir logs will be processed, it would be appropriate to consider the location of the economic impact as being somewhere within the three county region (Mendocino, Humboldt, and Sonoma) and closely associated with the communities around the mills. Sections III.5 and III. 6 of the DEIR discuss timber supply and economic issues for the North Coast redwood region, including Del Norte, Humboldt, and Mendocino Counties. Some data also are provided for Sonoma County.

The information on the economic and employment effects of timber harvest on JDSF, discussed in section III.5, III.6, and VII.6.3 of the DEIR and section III.6.4 of the RDEIR can be utilized to help understand the economic effects whether they occur in the county of harvest (e.g., timber yield taxes received by Mendocino County) or in the county where processes occurs (e.g., employment effects of processing logs into lumber). Table III.13 in the DEIR examines employment and revenue effects of various timber harvest levels. This table was developed using information from Mendocino and Humboldt Counties.

Response to Comment 2
The second point focuses on the short and medium term implications of the harvests from JDSF in terms of maintaining a number mills that will be in business when the slower maturing timber stands of the non-industrial forestland owners in the region become financially viable for harvesting. One of the principal purposes of JDSF is to demonstrate to non-industrial owners the actual benefits of good timber management. The state was able to invest more resources decades ago to reduce competition from non-commercial hardwoods such as tanoak. The Forest Inventory and Analysis (FIA) data for the North Coast region is referred to in the EIR and clearly shows the much greater stocking of the less valuable hardwoods on non-industrial ownerships. JDSF harvests in the upcoming decade will demonstrate a range of approaches that can be viewed by non-industrial owners who will be making their harvesting decisions a decade or more after similar stands harvested on JDSF.

In addition the demonstration value, the JDSF harvests will also be important for allowing a larger number of mills to stay in business during a period when available inventories for harvest may be lower than they will be in the following decade. The proposed Administrative Draft Final Management Plan sets an expectation that the annual average harvest level of will be in the range of 20-25 million board feet (MMBF) per year during the first 10 years of Plan implementation, but harvest is permitted to go as high as 35 MMBF. The expected range represents 71-89% of the annual average harvest (28 MMBF) on JDSF during the last 10 years of full operation (1991-2000) at JDSF prior to court injunctions halting timber harvests. The maximum level of 35 MMBF, which is unlikely to be achieved given the range of controls contained in the proposed Administrative Draft Final Management Plan. This level of expected harvest does not constitute a “no-harvest” or “low-harvest” management approach. This harvest level will make a significant contribution to the log supply in the North Coast region. Total 2006 timber harvest in Del Norte, Humboldt, Mendocino, and Sonoma Counties was estimated at 475 MMBF (State Board of Equalization). The Management Plan’s anticipated average annual harvest of 20-25 MBF is equivalent to 4.2 to 5.4% of this total.

Response to Comment 3
The final point emphasizes the importance of the intensive forestry research plots within the mix of harvest and management strategies that are demonstrated on JDSF. Some, but not all, non-industrial landowners will prefer to pursue an intensive approach to forest management on their properties.

Maintaining a broad range of forest management approaches on JDSF will allow landowners, regulators, and other interested parties to compare different approaches across a whole range of variables. The Administrative Draft Final Management Plan being considered by the Board of Forestry and Fire Protection places its primary emphasis on research and demonstration and provides for the conduct of intensive forest management, including all forms of even-aged management, although evenaged management is limited to 2,700 acres per decade. The Administrative Draft Final Management Plan specifically allocates areas available for intensive forms of management and identifies long-term and short-term acreage totals.

E-119

From: Linda Perkins [lperkins@mcn.org]
Posted At: Wednesday, March 01, 2006 4:06 PM
Conversation: Jackson State dEIR Comment

Subject: Jackson State dEIR Comment

JDSF comment ARWPA.doc

JDSF DEIR Albion comment.doc

Dear Mr. Gentry:

The attached comments are submitted to the record of the draft EIR for Jackson Demonstration State Forest. Also attached are Albion River comments made in 2002.

Thank you.
Linda Perkins

1

E-119A

Albion River Watershed Protection Association/
Friends of Salmon Creek
~PO Box 661, Albion CA 95410~
Tel: 707-937-0903

February 27, 2006

California Board of Forestry
Post Office Box 944246
Sacramento CA 94244
Attention: Y.G. Gentry, Executive Officer

Dear Mr. Gentry:

On behalf of the Albion River Watershed Protection Association/Friends of Salmon Creek, I provide the following comments regarding the draft Environmental Impact Report (dEIR) and the Draft Forest Management Plan for Jackson Demonstration State Forest.

1 As a member of the Citizens Advisory Committee (CAC) appointed by former CDF director, Richard Wilson, to advise on management of the Jackson Forest, I participated in a process that included representation from a diverse range of interests. Most of the representatives were local residents. We worked well together, often by consensus, the exception being that the CDF personnel present often disagreed with the majority of the group. It is certainly not surprising that the result of our work, finalized in December1998 and shelved for years, but finally receiving recognition – as Alternative D of the dEIR – is still not the preferred alternative for CDF. It does continue to have strong local support – once again from a diverse group that includes a number of foresters, mill owners and loggers, the Mendocino County Board of Supervisors and the Fort Bragg City Council.

2 What has happened while the CAC recommendations sat on the shelf is that people – among them the legislators of the state of California -- have moved on to a broader, more sophisticated and environmentally sensitive look at the context of Jackson State. More people have looked around and seen that our forestlands are threatened by far more than declining inventories and degraded wildlife habitat. [See Figure V.1.] Much of our commercial forestland has become so depleted that it is no longer economically viable to operate as timberlands. Instead these lands are being converted to other uses, disappearing under grapevines and houses. Rather than declining inventories and degraded habitat, we are witnessing a complete loss of inventory and total depletion of high quality wildlife habitat on these converted lands.

The dEIR acknowledges these pressures [V.1, pp 3 and following] and concludes,

> "Under these conditions , it is important for the state to maintain a Demonstration Forest Program that can help timberland owners maintain economically viable timber production operations." [page 4]

3 Yet when I turned to Sections VII.11 (Land Use), VII.3 (Agriculture), VII.6.3 (Timber) of the dEIR, I could find no information on how the alternatives compared in meeting this important function of the state forest, "...helping timberland owners maintain economically viable timber production operations."

4 In fact, Jackson State, to date and as evidenced by their own data, would seem to be remarkably ineffective in making this sort of demonstration:

Under Section VIII (Cumulative Effects), I found this statement,

"Where planning watersheds had substantial portions of both JDSF and other ownership, the harvest activity was typically more extensive on the non-JDSF portions during the period of time examined, [past 19 years] due to variable stand conditions, stand management history and management philosophy: Parlin Creek, 69% of JDSF acres harvested/100% of non-JDSF acres harvested; Berry Gulch, 24%/82%; James Creek, 0%/106%; Kass Creek, 92%111%; Lower North Fork Big River, 3%/75%; Two Log Creek, 4%, 88%; Upper North Fork Big River, 0%/93%; Caspar Creek, 41% 66%. Only the Hare Creek planning watershed had the reverse relationship, 77%26%....entire cumulative effects assessment area, 32%/71%.

5 We know that harvest entry level has a cumulative effect on the health of aquatic species and systems, particularly listed salmonids. (Higgins comments, 2006)

This "level of disturbance" issue was addressed by the Science Review Panel in their "Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat" that was prepared for the Resources Agency of California and the National Marine Fisheries Service and issued in June of 1999

On page two of the executive summary of this document the panel states, "Pending completion of watershed analyses, the SRP recommends the Board of Forestry consider whether a harvest limitation based on percent of watershed area is warranted. This percentage would function as a red flag rather than as a moratorium. Predictably, the environmental community advocated a maximum harvest of 10% to 15% of watershed
6 area per decade, whereas timber industry constituencies offered a maximum of 70% to 85 % per decade. The SRP believes a more likely value would range from 30% to 50% per decade, but will depend on numerous factors including geology, harvest prescriptions, past disturbance, etc. The SRP recommends that a blue-ribbon science panel be commissioned in 1999 to consider the need for harvest limitations."

7 How do the Alternatives compare in addressing the issue of demonstrating to forestland owners the importance of conserving forestlands sufficiently to maintain economically viable operations so that forestlands can remain intact and continue to provide wildlife and water quality values for Mendocino County and the region? How will failure to
8 achieve this demonstration affect environmental conditions on Jackson itself? This must be Jackson's most basic demonstration mandate if we are to continue to maintain a
9 forested landscape in Mendocino County.

10 Yet, it would seem, that the preferred alternative continues to demonstrate forest practices – clearcutting, large-scale commercial logging, cutting of the oldest second-growth

10 stands, inadequate stream protection, and herbicide use – all of which practices have contributed and will continue to contribute to a demonstration of continued and accelerated loss of habitat and loss of value of land for timber production – or, at minimum, to delay their recovery.

11 We urge you to consider an alternative that addresses this issue. We believe that the most likely alternative to do so is Alternative F, which provides a balance of values that will enhance both timberland productivity and wildlife habitat enhancement.

In addition to our own comments we subscribe to those comments submitted by the Sierra Club.

Sincerely,

Linda Perkins
ARWPA/FOSC

Email Letter E-119A

Response to Comment 1
Support for Alternative D is noted. During and after the period of time in which the Citizens Advisory Committee met, a number of the recommendations made by the committee were implemented by the Department, in whole or in part. Alternative G and the Administrative Draft Final Forest Management Plan (ADFFMP) incorporate a number of the elements of Alternative D. They also incorporate many of the recommendations of the Mendocino Working Group, a local consensus group formed to address concerns about JDSF management.

Response to Comment 2
The analysis performed for the EIR addresses a broad range of potential impacts to forest lands, in addition to inventory and habitat concerns. Concerns about development and conversion to non-forest uses are specifically recognized. The economic value of timberlands for other uses, both commercial and residential, may be considerably higher than exclusive use for sustainable timber production in many cases, depending upon local factors and landowner objectives. The DEIR/RDEIR also recognizes that forest ecology and management information developed and demonstrated on JDSF can help to inform landowners about economically and environmentally sustainable ways of keeping their land as working forest.

The Board agrees that forest conversion results in a reduction in lands available for timber production, and depending upon the to which it is converted, can result in alteration of habitat and habitat value. The State Forest system can play a valuable role in demonstrating the multiple benefits of continuous timber production and wildlife habitat to private landowners.

Response to Comment 3
The primary purpose of alternatives in an EIR is to examine the different manner in which the alternatives may or may not affect the environment, not to examine different modes or focuses of program delivery. However, demonstration program goals are discussed in the DEIR\RDEIR and the ADFFMP.

The demonstration program for JDSF is guided by Board policy, which is generally described in DEIR Section II. The goals established for research and demonstration can be found in the RDEIR (Appendix 1), and general management planning for research and demonstration is discussed in ADFFMP Chapter 4 (Research and Demonstration). Further, the kind of demonstration that could occur under the various alternatives is in part implicit in the general themes of the alternatives.

With the exception of Alternative A, with its inherent lack of funding, each alternative considered offers an opportunity for research and demonstration of potential value to private timberland owners. Alternatives C1 and C2 offer a broader range of management practices than are available in Alternatives D, E, and F, while sharing in most of the potential management activities that are available with these other alternatives. Alternative G, of the ADFFMP, contains a mix of features from Alternatives C1 through F. The Board believes that the ADFFMP, based on Alternative G, would provide the potential for a broader range of research and demonstration projects, which is expected to benefit a broader range of landowners.

It would be speculative to attempt to determine a level of impact associated with relative demonstration opportunity among the alternatives considered in the EIR, or the extent to which the demonstrations may ultimately affect the behavior of landowners. However, the statutes governing management of the Demonstration State Forests direct that the Forest be managed to provide forest management information for private landowners (Public Resources Code § 4631 et seq.).

Response to Comment 4
A relationship between state forest demonstration value and the current condition of adjacent private lands cannot be reasonably made. The extent to which landowners utilize or benefit from the broad

array of demonstration projects is expected to be highly variable and individualized over space and time. In fact, many landowners have visited JDSF, have reviewed printed JDSF reports, and have attended seminars and field trips that have included management-related demonstration project results from JDSF. The extent to which this reflected in the condition of timberland is speculative.

Response to Comment 5
The Board has concluded that a significant impact upon aquatic resources is not expected to occur. Please see DEIR Sections VII.6.1, VII.10, and VIII.8.7 and RDEIR Sections III.6.2, III.10, IV.3 and IV.6 for the assessment of potential impacts to aquatic systems and species.

Response to Comment 6
The Review Panel report includes a recommendation that the Board consider a limitation upon harvest at the watershed level. They recognized the importance of watershed analysis in helping to determine the expected level of impact. The DEIR provides a substantial level of watershed analysis. Please see DEIR Sections VII.6.1, VII.10, and VIII.8.7 and RDEIR Sections III.6.2, III.10, IV.3 and IV.6 for an assessment of watershed conditions and expected impacts.

Response to Comment 7
Each of the alternatives that were considered, with the exception of Alternative A, is expected to demonstrate the importance of conserving forestlands so that forestlands can remain intact and continue to provide wildlife and water quality values for Mendocino County and the Region. However, the economic viability associated with each alternative can be expected to vary, depending upon the management objectives of private landowners and the degree to which their management emulates the alternative that is adopted. Landowners vary considerably in both their ability and intent to retain their lands intact. The Board believes that alternatives that offer a broad range of management demonstration will ultimately benefit a broader range of landowners.

Response to Comment 8
The Board believes that future JDSF management will help achieve this objective, by demonstrating to forest landowners management methods that can lead to economically viable operations so that forestlands can remain intact and continue to provide wildlife and water quality values for Mendocino County and the region.

Answering the question of how the failure of JDSF research and demonstration in positively influencing private landowner behavior would affect environmental conditions on JDFS itself is highly speculative. Prior to 2006, most of the lands adjacent to and sharing watersheds with JDSF were owned by the industrial landowners Mendocino Redwood Company and Hawthorne Timber Company. As documented in the DEIR, both of these landowners have been talking steps to improve the environmental conditions on their lands. Thus, the likelihood of these landowners suddenly shifting to less protective forms of forest management because of a “failure” of JDSF demonstration programs seems remote and highly speculative. CEQA does not require speculation.

Response to Comment 9
Demonstrating to forestland owners the importance of conserving forestlands sufficiently to maintain economically viable operations is embodied in the legislation and Board policies for management of the state forests (see DEIR Appendix 5) and in the Goals and Objectives for JDSF (RDEIR, Appendix 1 or ADFFMP, Chapter 1).

Response to Comment 10
The ADFFMP places significant limits on the utilization of even-aged management, including clearcutting in particular. The expected average annual harvest level is 20-25 million board feet (MMBF), well below the estimated Long-Term Sustained Yield of 56 MMBF/acre. The ADFFMP designates one-third of the Forest for late seral forest and older forest characteristics. A high level of protection is provided for streams, well beyond the standard practices of the Forest Practice Rules. Additional limitations on the usage or herbicides are put in place, as compared to Alternative C1.

The analysis in the DEIR and RDEIR indicated that management of JDSF under Alternative C1 or Alternative G (the ADFFMP), taking into consideration all management provisions and mitigations, would not be expected to result in significant individual or cumulative adverse impacts related to habitat (aquatic or terrestrial) or the value of the land for timber production. In fact, a number of beneficial affects that could contribute to recovery are identified. Please see DEIR Sections VII.6 and VIII for an analysis of potential environmental effects associated with each alternative considered.

Response to Comment 11

The Board believes that the DEIR and RDEIR have addressed these issues. The eight alternatives examined consider and assess a range of values, including timberland productivity and habitat for fish and wildlife. Each provides a unique mix of management proposals relative to productivity and habitat. Timberland productivity and wildlife habitat enhancement are more complex issues than suggested by the commenter. Please see responses 9 and 10 above.

Fax:707-576-2608 Apr 10 '06 8:06 P.16
653-8957

Albion River Watershed Protection Association/
Friends of Salmon Creek
PO Box 661, Albion CA 95410

E-119B

July 17, 2002

Chris Rowney, Program Manager
Demonstration State Forest
California Department of Forestry
Post Office Box 944246
Sacramento California 94244-2460

RE: JACKSON DEMONSTRATION STATE FOREST
DRAFT FOREST MANAGEMENT PLAN (FMP)
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)

Dear Mr. Rowney:

Thank you for the opportunity to comment on the Forest Management Plan (FMP) for Jackson Demonstration State Forest and the Draft Environmental Impart Report (DEIR) regarding the Management Plan.

O1 We write as a group with a strong interest in the management of the forest. One of the particular interests of our group arises from the fact that several of our members served on the seventeen-member Jackson Forest advisory committee appointed in mid-1997 by former California Department of Forestry Director Richard Wilson. The committee represented a wide range of interests and included foresters, saw mill owners, small landowners who manage their own forests, biologists and environmentalists. The committee's report- issued in December of 1998- received no response from CDF. Subsequent timber harvest plans on the forest made no reference to the committee's work and evidenced no changed practices reflective of the committee's recommendations. The first official acknowledgement of its work has been that its recommendations have been presented in summary in the DEIR as "Alternative D (All-Age Emphasis)."

O2 The committee's work addressed, among other matters, several issues that had been and continue to be, of great concern to the general public. These issues are the use of herbicides, the use of even-aged silviculture prescriptions, especially clearcutting, the cutting of old growth, inadequate standards for road building and maintenance, and the inadequate protection of streams. The committee's recommendations regarding these issues were, in brief, that the Department of Forestry place a moratorium on the use of herbicides, use only single-tree selection methods, stop cutting old growth trees (even isolated trees), develop a plan for the forest's roads, and provide stream protections based on the best available science, i.e., the US Forest Service "FEMAT" standards.

The FMP and the DEIR, in spite of acknowledging the environmental superiority of Alternative D to the preferred alternative, has for the most part failed to incorporate even these moderate standards of forest management and wildlife protection into its proposals. This cavalier treatment of the work of a group of citizens selected by its government to
03 advise on lands that belong, in the first instance, to those citizens, severely undermines the credibility of the entire DEIR and calls into question the validity of the CEQA process. Will comments from the general public be given any greater weight than the comments of those who were *charged* with advising?

Thus, I would first like to incorporate a set of comments that were not written by myself but which I believe reflect a view held by a broad spectrum of the public as to how their forest should be managed, and which certainly reflect the intent of the advisory committee, and which our group adopts as its own.

04 "Given how badly the timber industry has decimated the region's forests, it would be appropriate to manage Jackson as a demonstration of various ways to restore lands to old growth conditions.

05 **All old growth trees should be protected unless they pose a serious threat to human life.** All old growth trees should have a no-logging buffer. Where there are many scattered old growth trees, they should be aggregated into a special concern area that is managed for late succession development. Old growth trees are a non-renewable resource.

06 **The marbled murrelets known to be nesting at Russian Gulch State Park adjacent to Jackson must receive strong protection** because they are listed under both the state and federal Endangered Species Acts (ESAs). Both branches of the headwaters of Russian Gulch must be set aside in a no-logging zone.

07 **The recommendations of the federal Recovery Plan for marbled murrelets should be implemented:** Along with careful protection for known murrelets, suitable nesting habitat should be protected where it exists and large tracts should be developed. Doing this is well within Jackson's demonstration mandate. Jackson encompasses approximately 30% of the Critical Habitat designated in California for marbled murrelets. CDF has a duty to conserve listed species under the California ESA.

08 **The 80-110 year old second growth should not be logged.** The Forest Management Plan proposes to log most of the oldest second growth stands currently growing. The timber industry has eliminated most old second-growth redwood from their holdings. Jackson is a public forest that must give as much consideration to recreation and aesthetics as it does to logging. Any sort of logging in high use public areas should be eliminated.

09 **Clearcutting, even with "variable retention," should be eliminated.** The public is not likely to see much difference between clearcutting, which is supposed to not happen under the new FMP, and "variable retention" cuts, which are clearcuts with a few clumps of trees retained. The timber industry is demonstrating clearcutting in a massive way and

Jackson already has huge tracts of clearcut land that can accommodate any experimental needs that may arise.

10 **Poor logging practices should be eliminated.** Jackson has a very significant invasive plant problem. Pampas grass and other similar pest plant invasions are directly proportional to the amount of forest canopy that is removed during logging. Even-aged logging, particularly clearcuts (by any name), are highly likely to cause additional infestations of exotic plant species.

11 **Herbicide use should be avoided**. Herbicide use should be eliminated by avoiding timber operations that result in invasive plant problems. Existing invasive infestations should be controlled using non-chemical means.

12 **Stream protection should be increased.** The proposed stream buffers are not as protective as the recommendations of the National Marine Fisheries Service and the US Forest Service for this region. The US Forest Service Standards and Guidelines are most appropriate for implementation at Jackson because they were designed for protection of many species, not only fish.

13 **Jackson Forest has the potential to be a beautiful, successful, and well-regarded regional resource.** The Management Plan update provides CDF with the opportunity to seriously consider and respond to long-standing public concerns about the forest's management. I would like the forest to be a place of peace."

14 Secondly, I would like to point out the inadequacy of the DEIR in addressing the recovery of the marbled murrelet- an important consideration to many as noted above- by its failure to fully disclose information needed to assess impacts in the western area of the forest, the area closest to the known nesting murrelets in Russian Gulch State Park.

15 A large block (1225 acres) of the western portion of Jackson Forest in the north fork of Caspar Creek was designated by the Board of Forestry in1991 as "experimental forest land". As such, timber operations on this area do not require a timber harvest plan. The proposals for the future of this block are not disclosed in the DEIR nor is it made clear that they will be disclosed in any future document for public review and comment.

It is pointed out on page 19 of the DEIR that the DEIR is not intended to supercede the negative declaration used to establish the 1225-acre experimental forest designation. The DEIR must discuss, however, how activities on the "experimental forest land" might combine with past projects and with future plans proposed for other areas in the FMP to significantly adversely cumulatively impact the marbled murrelet and other species that might be dependent on habitat in the north fork of Caspar Creek. This must include consideration of fish, including the federally listed coho salmon and steelhead trout known to be present in Caspar Creek, and other aquatic species that are potentially present. One cannot declare an almost two-square-mile section of watershed within Jackson Forest exempt from environmental review simply because it does not fall under the purview of the California Forest Practice Rules for timber harvesting.

16 Our group would like to suggest that a Jackson Forest Citizen's Advisory Committee be convened once again, that it again be composed of local people, representative of a cross section of interests, and that it be charged with discovering how the best philosophical, sociological and naturalist thought could be brought to bear in the management of this forest such that future generations be given the widest spectrum of options for its use.

Thank you for your consideration of these comments.

Sincerely,

Linda Perkins

ARWPA/FOSC

Email Letter E-119B

Response to Comment 1
Please see response to Comment 1 to Albion River Watershed Association letter dated February 27, 2006 (Email Letter E-119A).

Response to Comment 2
Please see individual responses below. At the time that the Citizen's Advisory Committee (CAC) met, there was no road management plan. Subsequent to the CAC meetings, a road management plan was prepared and made a part of the DFMP (Appendix VI), and is in Appendix IV in the ADFFMP. The road management plan includes appropriate standards for road building and maintenance.

In response to public concerns expressed in the late 1990s, including those of the CAC, the Department severely restricted the use of herbicides on JDSF. This self-imposed use restriction extended for a period greater than three years, during which time alternatives to the use of herbicides were considered (Marc Jameson, personal communication). The FEMAT (Federal Ecosystem Management Assessment Team) recommendations for watercourse protection are a set of interim standards for federal lands that were intended to guide stream protection until local watershed analysis was performed. Whether or not FEMAT standards represent "best available science" is a characterization that is still debated among professionals. The DEIR and RDEIR provide an initial level of watershed analysis. The analysis in the DEIR resulted in the incorporation of additional protection measures into Alternatives C1 and G. The stream protection standards recommended by the CAC do not mimic the FEMAT standards, although some similar principles were applied.

Response to Comment 3
The CAC was a committee appointed by CDF Director Richard Wilson to give advice to the Department. The committee had no oversight responsibilities or authority. The CAC was not appointed as part of a CEQA-related "project". The Department appreciates the efforts of the CAC membership. A number of the recommendations made by the CAC are reflected in past and present management of JDSF, and are incorporated in whole or in part in the ADFFMP.

Response to Comment 4
Management of JDSF to restore old-growth conditions is clearly not in conformance with the enabling legislation and Board policies affecting state forests. Under the proposed ADFFMP, one-third of JDSF will be managed to develop late seral and older forest conditions, and to conduct research and demonstration on the development of these forest conditions. These conditions are the first steps in the long-term process of at least several hundred years that would be required to transition young-growth forests to old-growth forests. Given that the ADFFMP is expected to have a life of only 5-10 years (or perhaps even shorter, depending upon the recommendations of the proposed new JDSF advisory committee) and has a planning horizon of only 100 years, the ADFFMP will provide ample demonstration of ways to start moving young-growth forests toward old-growth conditions.

The condition of private lands within the assessment area has been evaluated. Please see Section V (Environmental Setting) and the various biological and watershed assessments within the EIR (Section VII and VIII).

Response to Comment 5
While the comment expressed concern for the protection of individual old-growth trees, no specific environmental concern is expressed. Old trees are a renewable resource that takes many years to produce. Most of the scattered individual old trees outside of identified groves are formerly suppressed and bypassed individuals from the former old forest, or highly defective and of limited merchantability. Most exhibit effects of management related to historic logging or subsequent fire. Those old trees that possess unique structural elements will be retained, along with all old trees greater than 48 inches in diameter. The ADFFMP proposes to recruit old trees over time, primarily in the areas designated for development of late seral forest and older forest conditions (one-third of the Forest in the ADFFMP).

Response to Comment 6
JDSF is managed in compliance with all applicable state and federal laws. Due to the legal status of the marbled murrelet, it is unlawful to "take" the species. All known occupied habitat will be protected, and individual projects in proximity to this habitat will be evaluated for potential to impact the species. Survey will be conducted in potential habitat to determine occupancy by the species. Any management proposal for the forks of Russian Gulch upstream of the state park will be planned and implemented to avoid take of the species. This area will be among those considered for potential future designation as a habitat recruitment area for the murrelet, following careful study and consideration in consultation with the appropriate state and federal agencies (See EIR Section VII.6.6-52).

Alternative G and the ADFFMP specifically provide for protection and enhancement of potential murrelet habitat in the vicinity of Russian Gulch State Park. This area of 1,549 acres will be managed for the development of late seral forest conditions that will provide potential murrelet habitat.

Response to Comment 7
Critical habitat designations for marbled murrelet are currently in flux. The US Fish and Wildlife Service had examined a number of different critical habitat configurations for the JDSF area; however they have not yet made a final decision. The response to Comment 5 addresses part of the ADFFMP's considerations of murrelet habitat protection and recovery. The ADFFMP also incorporates an Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat (see DEIR Page VII.6.6-30). Further, the ADFFMP provides that Class I and II WLPZs be managed for the development of late seral forest conditions, including large, old trees with suitable for murrelet nesting habitat. The Board believes that the proposed ADFFMP would contribute to the conservation and recovery of the marbled murrelet.

Response to Comment 8
A significant area of the Forest is occupied by second-growth forest with a component of trees greater than 80 years of age. Some of this forest is even-aged, while some has been partially or selectively harvested in the past. The ADFFMP proposes a wide range of potential management actions in these stands, similarly to young stands throughout the Forest. These management actions primarily include uneven-aged management, but also include even-aged management, watercourse protection zone management, campground and trail buffer, late seral development, and implementation of various research objectives. Young even-aged stands do not reach optimum productivity on most sites until they exceed 100 years of age. The Board's policies encourage management of stands to achieve maximum productivity, and as a member of the CAC, Ms. Perkins supported a recommendation that JDSF utilize single tree and small group selection to demonstrate various rotation ages between 50 and 150 years, as well as the orderly conversion of even-aged forest into an all-aged forest (Report of the Jackson Demonstration State Forest Citizen's Advisory Committee, December 1998). The Department proposes to continue the development of young forest stands with a significant component of trees in excess of 100 years of age. Further, the ADFFMP designates one-third of the Forest for the development of late seral forest and older forest structure conditions.

There has been no evidence submitted to suggest that "the industry has eliminated most old second-growth redwood from their holdings", though the Board believes that a significant component of second-growth forest has been regenerated within the region. The Board also recognizes that older stands of trees that have achieved higher levels of production tend to be harvested before younger, less productive stands. Please see DEIR Section VII.6.6 for an estimate of forest habitat conditions present on private lands within the assessment area.

Response to Comment 9
While some members of the public, especially those unfamiliar with forest management, may not differentiate between the various forms of even-aged management, a considerable level of variability exists. The variable retention system is now fairly common in the region, due to a desire to balance production with an improvement of post-harvest habitat conditions and a desire to accelerate habitat

development after harvest is complete. Many forms of even-aged management, including variable retention, offer a significant degree of aesthetic improvement over clearcutting, especially when viewed at a distance. Although private landowners have been implementing even-aged management, often with clearcutting, it is beneficial to continue the practices within the demonstration forest in order to create variable conditions available for research and demonstration. Much more can be learned about the costs and benefits associated with even-aged management, both environmentally and economically. Experience has shown that private lands cannot be relied on to provide stable, long-term opportunities for research and demonstration.

The ADFFMP places restrictions on the amount of even-aged management, including clearcutting in particular, that can be conducted on the Forest.

Response to Comment 10
The Board recognizes that management activities are capable of affecting site occupancy by invasive species, and forest canopy can contribute to this relationship. Some invasive weeds in this region are shade tolerant. Soil disturbance is recognized as a contributor to infestations as a result of providing an attractive seed bed and lack of competing native species. Thus, invasive weeds are most often associated directly with activities that create and maintain bare soil surfaces, such as roads and skid trails. Infestations in clearcuts can be minimized by understanding the ecological conditions and using a proactive IWM approach to prevent establishment of invasive weeds. The extent of potential spread of invasives has been considered, and will be prevented by a number of management actions, as part of an integrated weed management approach. Please see ADDFMP Chapter 3 (Invasive Weed Species) and DEIR Sections VII.6.2 (Botanical Resources) and VII.6.4 (Forest Protection) and RDEIR page II-10 for a discussion of management actions proposed for the control of invasive species. The DEIR, page VII6.2-20, provides for consideration of invasives during project development; “The impacts of invasive exotics and the potential for spread will be considered during the development of individual projects.”

Response to Comment 11
See response 10 above. Although some level of control of invasive species can be achieved without the use of herbicides, it is anticipated to some herbicide use will be needed, especially for significant infestations or infestations by new and potentially aggressive invasive species that cannot be effectively and economically controlled without the selective use of herbicides. Efforts will be made to keep the level of herbicide use to a minimum, while evaluating the potential for other means to control existing and new populations. Many management options are available or will be sought to reduce the potential for invasive spread.

Alternative G and the ADFFMP place some additional limitations on the use of herbicides, as compared to Alternative C1. See Chapter 3 of the ADFFMP for details. Neither the DEIR nor the RDEIR identified the potential for significant adverse impacts related to herbicide use for either Alternative C1 or Alternative G.

Response to Comment 12
While the Board agrees that the proposed measures for protection of streams do not provide protection equivalent to that of various recommendations made by the National Marine Fisheries Service (NMFS) and other federal agencies, the proposed protection measures provide for continued recovery and will prevent significant cumulative effects to fish and other species, whether aquatic or terrestrial. Please see DEIR Section VII.6.1 (Aquatic Resources) and VII.6.6 (Wildlife). We also note that both the NMFS and FEMAT guidelines place an emphasis on watershed analysis in determining the level of protection needed for streams. The analysis contained in the DEIR and RDEIR provide an initial level of watershed analysis for JDSF and the eight alternatives examined.

Response to Comment 13
The Board agrees with this statement. The Board is the lead agency for certification of the EIR and approval of the management plan.

Response to Comment 14
The EIR fully considers the recovery of the marbled murrelet. Please see DEIR Section VII.6.6-52 for a detailed discussion of the species, proposed management measures, and environmental assessment. See also the above responses to Comments 6 and 7.

Response to Comment 15
Management of the North Fork of Caspar Creek is subject to the provisions of CEQA, the management plan, DEIR and RDEIR, as is the remainder of the State Forest. This area is exempt from the timber harvest planning process, but is not exempt from the assessment of environmental impacts. No timber harvesting is currently planned for the North Fork, so there were no specific harvesting plans to include in the DEIR/RDEIR analysis. The general programmatic analysis in the DEIR and RDEIR was applied to the North Fork. Any individual projects will be subject to environmental analysis.

Response to Comment 16
An advisory committee has been formed for the state forest system as a whole (the Demonstration State Forest Advisory Group). The ADFFMP, based on Alternative G, contains provisions regarding the establishment of a new JDSF advisory body. This is not an environmental issue.

E-120

From: Dan Jacobson [DJACOBSON@ENVIRONMENTCALIFORNIA.ORG]
Posted At: Wednesday, March 01, 2006 1:19 PM
Conversation: comments
Subject: comments

Dear Sir, my comments are in this email and attached,
Thank you for your consideration of this issue,

March 1, 2006

California Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244
Attention: Executive Officer Y.G. Gentry

Support draft EIR Alternatives E & F

Dear Executive Officer Gentry:

Thank you for the opportunity to comment on the draft Environmental Impact Report (EIR) for the Jackson Demonstration State Forest management plan. Environment California (formerly CALPIRG) is a statewide, citizen-based environmental advocacy organization. Our professional staff combines independent research, practical ideas and tough-minded advocacy to overcome the opposition of powerful interests and win real results for California's environment. Environment California draws on 30 years of success in tackling our state's top environmental problems.

1 Jackson Demonstration State Forest is a critical public resource for native wildlife and plants in the redwood ecosystem. In the central part of the coast redwood range, where there is no national forest with redwoods and woodland parks and preserves are not large, Jackson is the state's best opportunity to provide for the recovery of threatened and endangered species such as the marbled murrelet and the Humboldt marten.

2 The preferred alternative, C1, and the similar C2, are steps in the right direction from the 1983-era management plan. However, these alternatives do not provide for the level of old forest habitat protection and development that would allow regionally rare species to rebound. Unfortunately, the draft EIR fails to adequately address the habitat loss that will occur under C1 and C2. Identification of

existing older forest stands is vague to non-existent. Not being properly located and characterized, it is impossible to determine with any precision how much of the proposed logging, both short and long-term, will remove or diminish the old forest stands that are crucial for regionally rare wildlife and plants.

The areas proposed for "late seral development" are the only stands where one can be assured that habitat will be protected and developed. These "late seral development" areas are a relatively small proportion of the landscape, particularly in the eastern two-thirds of the forest. Although we recognize
3 that allowing Watercourse and Lake Protection Zones to develop late seral characteristics will benefit fish, some wildlife and some plants, species dependent on an upland environment will have to rely on the small late seral areas proposed. Under Alternatives C1 and C2, these are too small and isolated to allow any reasonable expectation they will have a significant positive impact on regionally rare wildlife and plant species. These small areas are widely separated with no effective linkages proposed. The draft EIR fails to consider the effect of fragmentation on the proposed late seral development areas.

By contrast, both Alternatives E and F provide larger areas of upland habitat that would be beneficial for
4 regionally rare plant and wildlife species and function as larger blocks of carbon storage. Although Alternative F is not as expansive in this regard, it does provide for corridors that will maximize the effectiveness of protected areas. These linkages are essential for many wildlife and plant species.

We urge the Board to provide more protected and effective habitat for plants and wildlife than is
5 currently proposed when deciding how to manage Jackson Forest. Thank you for your efforts on behalf of the environment.

Sincerely,

Dan Jacobson
Legislative Director

Dan Jacobson
Legislative Director
Environment California
1107 9th street, suite 601
Sacramento, CA. 95814
916-446-8062

Email Letter 120

Response to Comment 1
The Board concurs that JDSF is an important resource and can contribute to the recovery of threatened and endangered species. However, JDSF is a relatively small part of the entire redwood region and the range of listed species, so can be expected to make a contribution to eventual recovery. Please see DEIR Section VII.6 for the assessment of potential impacts to wildlife.

Response to Comment 2
Please see the assessment in DEIR Section VII.6. The comment provides no evidence or support for the statements that are made. The DEIR considers habitat alteration that will occur as the result of management of the state forest, and the potential for adverse impacts associated with forest management. The existing stands of old-growth forest have been identified and will be preserved. Young forest stands are characterized in habitat classifications of value in the assessment of potential for impacts to wildlife species. The ADFFMP proposes to increase the amount of late seral and older forest structure within JDSF over time (to include one-third of the Forest), not to reduce it.

Response to Comment 3
The comment is too general in nature to enable a reasoned response by the Board. The management plan, as modified by the Board as Alternative G, provides for development of late seral and older forest structure within approximately one-third of the Forest area, and most of this area is well connected within JDSF and connected to adjoining forests on private lands, which also contribute to habitat for listed and unlisted species. Both of these habitat conditions, as well as the remainder of the forest, provide varied habitats of potential value to both listed and unlisted species. For example, the northern spotted owl nests, roosts, and forages within managed stands of young forest within JDSF, which contributes to the viability of the species within the assessment area and the region. The proposal to vastly increase the amount of late seral forest habitat over time represents a positive cumulative effect for listed species.

Response to Comment 4
The Board agrees that Alternatives E and F would potentially provide a greater area of late seral habitat in the future, which would potentially increase the amount of habitat for some species over time. The Board has determined that Alternative G will not result in significant environmental effects to wildlife, and that Alternative G provides a net benefit in terms of carbon storage, due to an expected increase in forest inventory over time. See also the responses to RDEIR comment letter GM-33.

Response to Comment 5
Comment noted. Alternative G will increase the amount of late seral and older forest structure available to plants and animals, as compared to Alternative C1

E-121

From: Michele Dias [micheled@cwo.com]
Posted At: Monday, February 27, 2006 11:23 AM
Conversation: JDSF DEIR Comments

Subject: JDSF DEIR Comments

CFA Comments on DEIR 02.27.06....

Attached are the California Forestry Association's comments on the Jackson Demonstration State Forest Draft EIR. Please respond with confirmation that you have received.

Thank you,

Michele Dias

1

E-121

California Forestry Association
1215 K Street, Suite 1830
Sacramento, CA 95814
(916) 444-6592 fax (916) 444-0170
www.foresthealth.org cfa@foresthealth.org

February 27, 2006

George D. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O., Box 944246
Sacramento, California 94244-2460
Email: board.public.comments@fire.ca.gov

Re: Draft Environmental Impact Report for the Jackson Demonstration State Forest Proposed Management Plan

Dear Mr. Gentry,

The California Forestry Association ("CFA") submits the following comments regarding the *Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan* ("Draft EIR" and "Management Plan" or "Plan"). CFA is a non-profit trade association representing forest landowners, professional resource managers, and producers of wood products and biomass energy throughout California. They manage their lands, not only to provide a sustainable timber supply for the manufacture of wood products that Californians and citizens throughout the world rely on, but also to ensure that the public trust resources on those lands are adequately protected for future generations. 1

Many of our members are dependent, in part, on timber sales offered on the Jackson Demonstration State Forest ("JDSF") to help sustain their lumber milling operations along the North Coast. Other members derive a portion of their revenues as licensed timber operators who are responsible for conducting harvesting operations on the JDSF. Moreover, all forest landowners and professional forest resource managers benefit from the research and technical information derived from the demonstration projects conducted on the JDSF. 2

After extensive review of the Draft EIR, we conclude that the activities proposed in the Management Plan are consistent with the statutory mandate set forth in the enabling legislation establishing the Demonstration Forest[1], the subsequent codification in the Public Resources Code ("PRC")[2], and the direction and policies from the Board of Forestry ("BOF")[3]. Moreover, we believe that the Draft EIR fully complies with the California Environmental Quality Act ("CEQA"), ensuring environmental protection of this unique natural resource. CFA therefore fully supports the proposed Management Plan and the supporting Draft EIR and recommends Alternative B. 3 4

[1] *See* PRC § 4631.
[2] *See* PRC § 4631.5.
[3] *See* Draft EIR, App. 5, *Statutes, Regulation & policies Governing State Forests.*

I. BACKGROUND

JDSF provides an opportunity to demonstrate sustainable forest management techniques on nearly 50,000 acres of forest and watershed lands, as well as the opportunity to explore the potential for long-term sustained yield at the forest level, offering the public and private sectors an opportunity to view the potential level and balance of production and protection that can be realized from a large forested ownership when provided with the proper incentive.

5

Due to litigation, only minimal management has been conducted on JDSF since 2003. There are currently no timber operations occurring on the forest. Because the Management Plan is a project subject to CEQA, as defined by statute and the CEQA Guidelines[4], the legal challenges that resulted in cessation of all research and demonstration in the JDSF were CEQA-based. As a result, the Court[5] has retained jurisdiction in the matter until the Board has fully complied with CEQA, therefore, CFA will focus its comments on the statutory authority guiding the management of JDSF and the 2005 Draft EIR's compliance with CEQA requirements.

6

II. MANAGEMENT OF THE JACKSON FOREST AS PROVIDED IN THE LAW

The management of the Jackson Demonstration State Forest has been an area of controversy for many years. The California Legislature ("Legislature") established the state forest system for the specific purpose of retaining the forest land "in timber production for research and demonstration purposes" and charged the California Department of Forestry and Fire Protection ("CDF") as the manager of that system, "to achieve maximum sustained production of high-quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries and aesthetic enjoyment."[6]

7

Demonstration forests play an important role in testing the efficacy of forest management techniques, and it is the policy of the state to acquire areas for the purpose of demonstration of economic forest management.[7] California's Public Resources Code ("PRC") defines "management" to mean "the handling of forest crop and forest soil so as to achieve maximum sustained production of high-quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment."[8]

8

In addition to the statutory mandate for demonstration forests, Board Policy 0351.2 states, in part, "[t]imber production **will be the primary use** on the Jackson State Forest . . ." and "[r]ecreation is recognized as a **secondary** but compatible land use . ." Board Policy 0351.4 also directs CDF to conduct regular periodic timber sales on the JDSF.

CDF is authorized to manage California's state forests, including JDSF, "in accordance with plans approved by the Board,"[9] , and "acting in accordance with policies adopted by the Board."[10] The Board has also promulgated a regulation that commands: "The **harvesting of forest products from**

---

[4] PRC §§ 21000 et seq.; 14 CCR §§ 15000 et seq.
[5] Superior Court of California, Mendocino County
[6] PRC §§ 4631, 4631.5, 4639 and 4645.
[7] PRC § 4631.
[8] PRC § 4639.
[9] PRC § 4645.
[10] PRC § 4646.

state forests and management of state forests shall follow management plans developed for each forest . . ."[11]

8 It is clear from the enabling legislation, Board policies, and timber harvesting regulations that the principal purposes of JDSF is the demonstration of sustainable and economic timber production, through regular periodic timber sales, in consideration of other forest values and in compliance with all applicable rules and regulations. The essential theme of **"maximum sustained production of high-quality forest products"**[12] is the primary driver of management at JDSF. This can be accomplished without eliminating, recreation, fisheries, aesthetics, and other non-timber related values, which while important, are not the mandated priority of JDSF.

Unfortunately, CDF has drafted an update to the current JDSF Management Plan that elevates wildlife, watersheds, and ecosystem processes to a level of importance equivalent to the timber management and the research, demonstration and education programs.[13] Given the legal mandates discussed above, this is an improper prioritization of uses for JDSF.

9 Therefore, CFA strongly encourages CDF to adhere to statutory mandates by managing JDSF for research in various natural sciences of the forested landscape; demonstration of existing and new methods of sustainable timberland management; educational efforts, tours, publications and demonstrations; maintenance and enhancement of wildlife and fisheries habitats; and public recreations **in their proper order of priority**.

Despite recommendations by those who would prefer to see the purpose of JDSF changed to focus primarily, or even solely, on habitat or recreation, such a decision would be inconsistent with the mandate to demonstrate sustainable timber management as called for in the enabling legislation. In order to remain consistent with this mandate, the Management Plan must be developed in that manner. Therefore, Alternatives C1, C2, D, E, and F should not be adopted and certified.

10 For the reasons set forth above, CFA strongly encourages the adoption and certification of Alternative B which includes an annual timber harvest set close to growth per year and conservation practices that meet or exceed the requirements of the FPRs. This alternative includes protection of listed species and recruitment of recovery habitat for listed species, includes a demonstration program, and the maintenance of existing recreational facilities while adhering to the legislative intent and mandate found in statute for JDSF. A vibrant forest industry needs a regional view and perspective, similar to what current forestland owners and managers encounter that Alternative B can provide. JDSF was not intended to be a "cash cow," however, it is perfectly appropriate to harvest under the FPRs in order to fund research and development, management and forest improvement projects. Alternative B will provide more funding than the other alternatives and therefore, more research will be available to demonstrate that balance is possible.

III. CEQA

11 Separate from the Management Plan, prepared by CDF, is the environmental analysis found in the draft and final Environmental Impact Reports ("EIR") prepared and certified by the Board. These

[11] 14 CCR § 1510.

[12] PRC § 4651.

[13] *See* Draft EIR, section VI Alternatives, p. VI-10; Table VI-1.

documents stand apart from the project, here the JDSF Management Plan. Therefore, the following discussion will focus on the Draft EIR's compliance with CEQA without reviewing the draft JDSF Management Plan itself.

One of the primary purposes of CEQA[14] is to inform the public in such a way that it can intelligently weigh the environmental consequences of a project and have an appropriate voice in the formulation of the ultimate decision.[15] To achieve these purposes, the Legislature has required that every EIR include a discussion and analysis of a number of required topics and that this discussion be set forth in a separate section or appropriately indexed.

The standards for determining the adequacy of an EIR are stated in the CEQA Guidelines:[16]

> An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

11

In addition, the Guidelines state:[17]

> CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the IR is sufficient as an informational document.

In other words, in evaluating the efficacy of an EIR, the reader must ask, does the Draft EIR: provide a sufficient degree of analysis to provide decision-makers with information on which to base their decisions in the light of what is reasonably feasible; summarize the main points of disagreement among the experts; and is the information provided adequate, complete and a good faith effort at full disclosure?

In an effort to assist in answering these questions, the CEQA Guidelines provide specifically what must be contained in a draft EIR. Key sections are discussed in detail below:

Project Description

The description of the project shall contain specific information **but should not supply extensive detail** beyond that needed for evaluation and review of the environmental impact. The information required includes: the precise location and boundaries of the proposed project, shown on a detailed map including the location of the project on a regional map; a statement of the objectives sought by the proposed project to assist the lead agency in developing a reasonable range of alternatives and in

12

[14] Public Resources Code §§ 21000 et seq.
[15] EPIC v. County of El Dorado (1982) 131 Cal.App.3d 350, 354.
[16] 14 CCR § 15151.
[17] 14 CCR § 15003(i)

preparing findings or a statement of overriding considerations, if necessary; and finally, a statement of objectives should include the underlying purpose of the project.[18]

Here, the purpose and objectives[19] are clearly detailed as well as the project goals. Included in this discussion is a *Summary of Potential Actions Resulting from Implementation of the JDSF Management Plan,* including both on-site actions and off-site actions. These purposes, objectives and goals are discussed, properly, within the boundaries of the enabling statute, legislative intent, Board Policy, and Department planning.[20]

12

The precise location and boundaries of the project is provided, including regional maps, and a statement of the objectives is provided for each of the nine goals. The number of objectives ranges from as few as three to as many as seven. In addition, potential actions are discussed relative to each of the goals both on-site and off-site. Economic, social, and community effects are properly detailed because of the dependence on timber harvesting by the local community. This analysis included harvesting trends, neighborhood compatibility, and the social and demographic characteristics of Mendocino County. The amount of detail is sufficient to provide assistance in developing a reasonable range of alternatives and in the preparation of findings.

Environmental Setting

An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the environmental analysis is commenced, from both a local and regional perspective, constituting the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary for an understanding of the significant effects of the proposed project and its alternatives.[21]

Knowledge of the regional setting is critical and special emphasis should be placed on resources that are rare or unique to that region and would be affected by the project. The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed, and it must permit the significant effects of the project to be considered in the full environmental context. The EIR shall discuss any inconsistencies between the proposed project and applicable general and regional plans, such as water quality control plans.

13

In this instance, the Draft EIR discusses the Management Plan in the regional setting of the redwood region, surrounding watersheds and private forestlands. These forest ownerships and the management trends associated with them are discussed in detail as are other regional land use. Discussion of climate, topography and geology, vegetation, wildlife and aquatic resources are detailed. Included are tables describing areas in landslides and other forms of mass wasting for several river basins and watersheds as well as sediment production for the cumulative watershed effects assessment area. These tables and the accompanying discussion are important as they establish the baseline condition of the region and are an important consideration of the regional water quality control plans. Finally, this section addresses the wildlife species dependent on the

[18] 14 CCR 15124 et seq.

[19] *See* Draft EIR, p. 1-2 - 1-4; 11-6;

[20] *See* Draft EIR, Section III, *Project Information,* pp. III-1 to III-56.

[21] 14 CCR 15125 et seq.

13 forested within and adjacent to JDSF, and the geographic suitability of JDSF to contribute to habitat stability.[22]

Consideration and Discussion of Environmental Impacts

All phases of the project must be considered when evaluating its impact on the environment, including planning, acquisition, development and operation.[23] Specifically, in assessing the impact of a proposed project on the environment, the lead agency should normally **limit its examination** to changes in the existing physical conditions in the effected area, as they exist at the time the notice of preparation is published or at the time the environmental analysis is commenced. Direct and indirect **significant** effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. Environmental impacts should include relevant specifics of the area, the resources involved, physical changes, and alterations to ecological systems. They should also describe any significant impacts, including those that can be mitigated, but not reduced to a level of insignificance.

Here, the Draft EIR addresses the concerns raised through the public scoping and written comment process. For example, a resource specific analysis is included, in-depth, for aesthetics of the JDSF, aquatic resources, timber resources and forest protection, wildlife, geology and soils, recreation, heritage resources, and the harvesting of old-growth forest and its effects on wildlife habitat. 14 Additional analysis was included, to a lesser extent for agricultural and mineral resources, air quality, biological resources, botanical resources, wetlands, hazardous materials, noise, land use planning, and climate change and carbon sequestration.[24]

The Draft EIR clearly identifies both the direct and indirect impacts of possible significant effects of the projects, both in the short-term and long-terms. And while there are potentially "significant environmental effects" associated with implementation of the proposed project, the Draft EIR proposes mitigation measures to avoid or substantially lessen those potential impacts.

CEQA requires that, in addition to a discussion of impacts related to a project, mitigation measures may be proposed to minimize significant effects. In general, an EIR shall describe feasible measures that could minimize significant adverse impacts. The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons that the lead agency determines could reasonably be expected to reduce adverse impacts. Mitigation measures are not required for effects not found to be significant.

Mitigation measures must be consistent with all applicable constitutional requirements, including, first, a nexus between the mitigation measure and a legitimate governmental interest. (*Nollan*) and the mitigation measure must be roughly proportional to the impacts of the project. (*Dolan*).

---

[22] *See* Draft EIR, Section V, *Environmental Setting*, pp. V.1-28.

[23] 14 CCR 15126 et seq.

[24] *See* Draft EIR, Section VII, *Resource Specific Analysis*, pp. VII.1-1 to VII.16-5.

Moreover, site-specific analysis and mitigation will be developed at the project level typically through the Timber Harvest Plan (THP) preparation and review process, as discussed in cumulative impacts section below.

14

The Draft EIR clearly lays out each of the impacts of the proposed project (listed above) and then identifies the mitigation, monitoring, cumulative impact and alternative related to each. The more significant the impact, the more detailed the analysis. There can be no doubt that decision-makers, or the public in general, will have a clear picture of the existing physical environment and any/all potential impact and the related mitigation measure of this project.[25]

Discussion of Cumulative Impacts

An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are **significant** when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects."[26]

Cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in their together with other projects causing related impacts. An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

15

Here, the Draft EIR is programmatic, considering a series of potential future projects that are geographically similar, carried out under the same authority, and having roughly the same environmental effects which can be mitigated in similar ways.[27] For timber harvesting conducted under the Management Plan, the Draft EIR recognizes that additional analysis of cumulative impacts will be routine as part of the THPs that will be prepared and that will be tiered to this EIR.[28]

In addition to the thorough environmental analysis accomplished in the Draft EIR, additional and duplicative environmental review is provided the state forest in several ways. This duplication occurs when a contract is awarded in the JDSF because THPs are the functional equivalent of an EIR, providing complete environmental review including cumulative impacts. In addition, adjacent landowners who perform logging operations/activities must also perform cumulative effects analysis at the project level of the entire planning watershed that includes a 10-year look back and a 10-year look ahead at projects completed and projects anticipated, which includes JDSF.

IV. CONCLUSION

The adequacy of the JDSF Management Plan Draft EIR depends upon compliance with the

16

Guidelines section 15151 and 15003(i). Because it provides a sufficient degree of analysis to provide decision-makers with information on which to base their decisions in the light of what is reasonable feasible, summarizes the main points of disagreement among the experts, and provides

---

[25] *Id.*

[26] 14 CCR 15065.

[27] 14 CCR 15355.

[28] *See* Draft EIR, Section VII, *Resource Specific Analysis*, Ch. 3 *Timber Resources*, pp. VII.6.3-1 to VII.6.3-50.

the information adequately, completely and with a good faith effort at full disclosure, it meets CEQA requirements

16 CFA believes that the Board has followed the very clear legislative directives with regard to CEQA, and produced a Draft EIR that more than adequately discusses the environmental setting in the area surrounding the JDSF and the cumulative impacts the implementation of the Management Plan would have in combination with other activities in the area. The Board has carefully followed the clear CEQA guidelines and conducted an environmental review that deserves certification and supports a management plan emphasizing logging activities in JDSF.

17 However, CFA strongly encourages the Board to adopt Alternative B in order to also meet the clear legislative directive for "maximum sustained production of high-quality forest products" and your own policy that requires that "timber production will be the primary use on the Jackson State Forest . . ."

Sincerely,

Michele Dias

Michele Dias
VP, Environmental and Legal Affairs

Email Letter E-121

Response to Comments 1-3
Comments noted.

Response to Comment 4
Comment noted. The proposed Administrative Draft Final Forest Management Plan (ADFFMP) is based on minor modifications to Alternative G, which was circulated as a part of the 2007 Recirculated Draft Environmental Impact Report (RDEIR).

Response to Comment 5
The Board recognizes the importance of the research and demonstration role of Jackson Demonstration State Forest (JDSF). The Board and the Department of Forestry and Fire Protection (CAL FIRE) have both expressed an interest in JDSF being the flagship of a world-class research and demonstration forest system. The top goal detailed in the Administrative Draft Final Forest Management Plan is Research and Demonstration (ADFFMP, Chapter 1):

> Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.

Response to Comment 6
Comment noted.

Response to Comment 7
Comment noted.

Response to Comment 8
The potential role for JDSF in testing the efficacy of forest management techniques is specifically addressed in the ADFFMP, including the designation of three areas for testing approaches to riparian restoration demonstration (see Map Figure 5).

The statutes and Board policies for the management of the Demonstration State Forests and JDSF in particular are discussed and reproduced in the 2005 DEIR (see, e.g., Section II and Appendix 5). The Board carefully reviewed these mandates in its consideration of management direction for JDSF and finds that the ADFFMP is consistent with them.

Research and demonstration on forest management, including timber harvesting, are clearly established as having a preeminent role relative to recreation. The harvesting of forest products is to be based on the Administrative Draft Final Forest Management Plan. The achievement of maximum sustained production of high quality timber products is addressed below in the response to comment 9.

Board Policy 0351.2 provides that:

> The primary purpose of the State forest program is to conduct innovative demonstrations, experiments, and education in forest management. All State forests land uses should serve this purpose in some way.

The major goal established for the Forest in the Administrative Draft Final Forest Management Plan is:

> **Goal #1 - RESEARCH AND DEMONSTRATION:** Improve the amount and quality of information concerning economic forest and timber management, forest

> ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.

Goals #2-4 more specifically describe how a balance is to be achieved among (#2) Forest Restoration, (#3) Watershed and Ecosystem Processes, and (#4) Timber Management. Recreation, which is addressed under Goal #5, clearly plays a secondary role to other forest management objectives. Maximum sustained production of high quality timber production is addressed under the response to Comment 9.

Response to Comment 9
See response to Comment 8. Public Resources Code (PRC) § 4639 defines "management" of JDSF as:

> ... the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

The Board has substantial discretion in determining the consideration to be given to the listed nontimber values while implementing the direction for maximum sustained production of high quality forest products.

The statutes and Board policies for the management of the Demonstration State Forests and JDSF in particular are discussed and reproduced in the 2005 DEIR (see, e.g., Section II and Appendix 5). The Board carefully reviewed these mandates in its consideration of management direction for JDSF and finds that the Administrative Draft Final Forest Management Plan is consistent with them. See also the response to Comment 8.

Response to Comment 10
While the Board has not chosen the specific management direction of Alternative B, the Administrative Draft Final Forest Management Plan proposed by the Board provides the various elements described in the comment. While the Board anticipates that this Plan will result in a lower level of harvest than would Alternative B [an expected 20-25 million board feet (MMBF) per year for the Administrative Draft Final Forest Management Plan, but in no case greater than 35MMBF/year, as compared to 35.6 MMBF/year for Alternative B], the Board notes that this level of harvest will provide substantial revenues for management of JDSF, including research and demonstration.

Response to Comment 11-16
Comments noted.

Response to Comment 17
Comment noted. Please also see response to Comments 8 and 9.

E-123

From: Walter Epp [for7gen@idiom.com]
Posted At: Wednesday, March 01, 2006 1:32 AM
Conversation: Jackson State Forest draft EIR comments

Subject: Jackson State Forest draft EIR comments

Jackson State Forest draft EIR comments
for Board of Forestry and Fire Protection

1 The time is long overdue to end the era in which one special interest has had disproportionate sway over the use of Jackson State Forest and old-growth forests.

The logging industry provides less than 1% of California jobs.
[http://www.calmis.cahwnet.gov/file/occproj/cal$tb6.htm]
2 A Forest Service analysis found that recreation, hunting, and fishing in national forests contribute 37 times more income to the nation's economy than logging, and create 31 times more jobs.
[Explanatory Notes for the 1997 US Forest Service Budget;
http://www.findarticles.com/cf_dls/m1525/5_85/64426309/print.jhtml]
In northern California communities adjacent to the National Forests, more than 20 jobs in other sectors of the economy have been gained for every timber job lost.
[Primer on California's National Forests - Western Ancient Forest Campaign]

3 If there were to be an even-handed fair compromise that would be to split things down the middle, namely 50% for logging and 50% for old-growth.
Something like 96% of California's original old-growth Redwood forest has already been chopped down. In other words, we are in a state of extreme un-even-handed unfair uncompromising imbalance. In this circumstance, cutting a single additional old-growth tree is a one-sided sell-out.
All of Jackson Forest must be managed for restoration as one small part of a comprehensive plan to move the pendulum from the radical extremist position of 96% to the middle compromise position of 50% of the original old-growth forest cover in this bioregion.

4 In just 50 years of its life, a tree contributes services worth $196,250 but is only worth $590 as lumber.
[http://www.forestcouncil.org/press/worth.php
http://www.science.duq.edu/esm/Course_Material/ESM551/Notes/Forests/Ch.%20Sustaining%20Eco.%20Notes.HTML]

5 When is the state of California going to wake up to the fact that chopping down forests is killing the goose that lays golden eggs?
The DEIR fails to adequately make the corresponding calculations specific to Jackson Forest, much less address the implications.

6 Fungi from old growth forests are able to neutralize VX and sarin, some of the most potent known chemical weapons. Thus we need to grow more old-growth forests for national defense. [http://www.fungi.com/mycotech/mycova.html
http://www.salon.com/tech/feature/2002/11/25/mushrooms/print.html]
The DEIR fails to adequately take this into account, with national security given a higher ranking than logging as a use of the forest.

7 Old-growth fungi are also able to remediate soil contaminated with toxic petrochemicals, a wide-spread problem that has been costly and difficult to solve till now.

Extracts from fungi of old growth forests have been found to be effective against tuberculosis, pneumonia, E. coli, and cancer.
[MycoMedicinals by Paul Stamets]

8 The DEIR fails to adequately factor in these opportunities for research and creation of new money-making job-producing businesses.

9 The Mendocino County Coastal Conservation Plan shows Jackson State Forest in the center of the plan's "High Priority Conservation Areas."

10 When is the Department of Forestry going to stop living in the consumption-oriented mindset of the 1800s, and start working on the conservation and sustainability goals of the future?

11 Humboldt Watersheds Independent Science Panel Final Report on Sediment Impairment and Effects, commissioned by and presented to the North Coast Regional Water Quality Control Board in Jaunary 2003, using empirical scientific methods, determined that maintenance of water quality requires significant reductions in logging levels.

When is the state of California going to wake up to the fact that water is more essential to quality of life than wood?

12 The soil of the Eel River watershed has been found to hold more water than the reservoir of the Grand Coulee Dam. Trees hold the soil together.

According to former head of the US Department of Forestry Mike Dombeck, "Water quality should be the primary measure of managing forests and all public land. Scientists increasingly recognize that our system of preserving biodiversity is inadequate, and public lands stand as the last best sanctuaries for many plant and animal species." [SF Chronicle 1 Jan 2004]

13 Salmon have sustained thousands of generations as a staple of the diet.
When the oil runs out, which is going to happen in a short time in human history and a fleeting instant of evolutionary history, the underpinnings of the current economic system will be invalidated and thus also economic calculations predicated on it, and industrial agriculture and industrial fisheries will fade as both are quite energy-intensive, so Salmon will return to a position of high value in the new economic order.
Major changes to the economic system will happen long before the oil is close to physically running out, and these changes could already be beginning.
See the book The Party's Over: oil, war, and the fate of industrial societies by Richard Heinberg and websites such as http://www.hubbertpeak.com and http://www.postcarbon.org .
For part of 2003, half of US nitrogen fertilizer production was shut down due to shortages of natural gas. Fertilizer imports have jumped by 43%.
In a few years we could be vulnerable to having our food supply cut off if foreigners decide to withhold fertilizer.
[http://www.agriculture.com/ag/story.jhtml?
storyid=/templatedata/ag/story/data/1130343281366.xml
http://www.fromthewilderness.com/free/ww3/060903_natural_gas.html
http://www.energypulse.net/centers/article/article_display.cfm?a_id=365] Thus Salmon may be important for our food security, which is a vastly higher priority than price or availability of wood.
The DEIR fails to adequately factor in these considerations.

14 Salmon are harmed or killed if temperatures rise too high. Thus they need plenty of shade.
With global warming, there will be a need for more cooling than there was in the pre-logging era when most of the forest was old-growth.
The DEIR fails to adequately adress this.

15 Pesticides may be a significant factor in the decline of Salmon.
For details see Diminishing Returns: Salmon Decline and Pesticides, a review of the scientific literature on how supposedly sublethal concentrations of pesticides can alter the basic biology of fish in subtle ways that decrease their chances for reproduction and survival, available at http://www.pesticide.org/SalReportNewsRelease.html, which also has another tidbit on glyphosate: a standard trick pesticide makers pull is to say that their chemical breaks down quickly but neglect to say that the breakdown products last longer and are as toxic or more toxic than the parent chemical.
Some herbicides inhibit normal migration of salmonids to and/or from the sea, resulting in disruption of the life cycle.
Effects of "sublethal" levels of pesticides include lethargy, muscle spasms, loss of orientation, loss of stamina, and immune system disruption, which aren't likely to cause death in fish living in sterile spoon-fed laboratory conditions but will cause deaths in wild fish who need to find food, avoid predators, and handle diseases and competitors and periods of reduced food availability. In other words, most LC50 laboratory death rate data does not apply to the real world.

16 Atrazine can result in extinction of a frog population without ever killing a single

individual, by disrupting their endocrine systems so they fail to reproduce. It can do this at 100 parts per trillion, 50 million times lower than the rat LD50. This information only came to light 38 years after the registration date.
[Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses, Tyrone Hayes etal, Proceedings of the National Academy of Sciences April 16, 2002 v99 i8 p5476(5)] If the science of glyphosate proceeds on the same trajectory as that for atrazine, a bombshell about its toxicity requiring revision of danger levels into the parts per trillion range will not come to light until the year 2009.

Use of herbicides and all other toxics must cease immediatly at Jackson Forest.

17 Salmon require big logs in the streams to form proper habitat. This means logging must be reduced - if all the trees are committed to logging there won't be any large woody debris for Salmon.

18 Logging and road-building cause sedimentation and can cause landslides, damaging Salmon habitat and possibly suffocating eggs and fry.

Salmon are pivotal to the health of the ecosystem in the long run, closing a great loop by bringing nutrients from the sea, without which the land's vitality might steadily decline as the rains wash nutrients downstream.
The wealth of the land may be due to the work of Salmon. In other words, loggers may ultimately owe their jobs to Salmon. For example, measurements by Dr. Tom Reimchen of the University of Victoria demonstrate that up to half of the nitrogen in riparian trees came
19 from the sea via Salmon [http://www.davidsuzuki.org/files/Newsletter_Nov99.pdf].
"Pacific Salmon and Wildlife," a report by a collaboration coordinated by the Washington Department of Fish and Wildlife and Department of Natural Resources, builds on 500 scientific studies and decades of research to document the vital role Salmon play in the overall health of ecosystems, including the more than
137 species of wildlife that depend for their survival on Salmon. By any rational objective measure, Salmon have more rights to the land than corporations or people, since Salmon have invested a million years of their life blood to build the land into what it is, while most corporations are just pilfering it. If we consider the rights to benefits should be proportional to the amount invested, and consider the number of years an approximation to the investment, then given that loggers have been in this area hardly more than 100 years, the DEIR should give the interests of Salmon 1,000,000 / 100 = 10,000 times more weight than the interests of loggers.

20 Jackson Forest should be used for ecological research, not just research on logging methods.

Soil ecology is a frontier that science is hardly beginning to understand.
21 A good source on the subject is the book The Hidden Forest: biography of an ecosystem, by Jon Luoma, which describes the results of research at Andrews Experimental Forest and the Long-Term Ecological Research Program (US Forest Service, http://www.fsl.orst.edu/lterhome.html).
Here are some excerpts.

Virtually everybody believed rotting logs were trash - wood fiber that had gone to waste. In retrospect, it's incredible that we could have been that stupid.
The tree that's green and standing up is the one they should have called 'dead'. The tree
22 down on the ground is the one that's _really_ alive.
Only about 5% of a live tree might be living cells, but as much as 20% of the weight of a rotting log can be living tissue.
Termite guts are filled with nitrogen-fixing bacteria.

Logs play an especially significant role when the forest must rebound from disturbances. We came to believe that logs were the focus of recovery in the forest. Old-growth forests
23 are resilient in ways that younger forests are not.
Logs are supersponges. They can accumulate enormous volumes of water and can retain it even after an intense fire at the peak of a summer drought.
In one acre they measured 219 tons of down logs plus 47 tons of standing snags.

A lot of people have assumed that there's always enough nutrients in the deep layers of
24 the soil to take care of trees forever. But now we're coming around to the general conclusion that the vast percentage of nutrients that exist in the forest ecosystem are in

fact recycled - that the roots that go down deeply are mainly going down to tap water sources. But it's the soils at the top, those that are almost entirely biological in origin, that contain most of the nutrients used by the system.

Researchers determined that virtually all of the nutrients that entered the forest remained bound up in the ecosystem, continually recycled and retained by living plants and
25 animals. After the researchers had one of the valleys clear-cut, nutrients promptly began to surge out of the stream that drained the valley: nitrate loss alone increased sixtyfold.

Logs in the stream played far more important ecological roles than anyone previously imagined. In a stream where woody debris has been neatly cleared away, banks and bottoms tend to be uniform and well graded. Log-choked waters offer far more complex structure
26 with pools and riffles. Currents are slowed dramatically, dropping their sediments to the stream floor and dissipating their energy, thus reducing their ability to erode stream banks. Logs slow down the flow of nutrients so they can be consumed by small invertebrates that form the animal base of stream food-webs.

In the moist soils of old-growth forests, Andrews entomologists discovered an astonishing diversity that now appears to rival that of tropical ecosystems.
27 Andrews researchers counted some 3500 species of arthropods in the forest soil but believe that is less than half of the estimated 8,000 species that inhabit Andrews, most of them in the soil. In contrast, they have counted a grand total of 143 species of mammals, birds, reptiles, and amphibians at the site.

Insect communities of the forest are so finely tuned to their environment that they serve
28 as a sort of precision barometer: a knowledgeable entomologist might, simply by analyzing the species of tiny organisms in a handful of soil, describe in astonishing detail the ecosystem above.

29 There are "keystone bugs" in the soil so critical to survival of the forest ecosystem that if they vanish the ecosystem might collapse.

Mycologists believe that mycorrhizal fungi effectively connect trees with as much as 1,000 times more soil area than the roots themselves.
A single gram of forest soil may contain several miles of fungal hyphae.
As they pump water and mineral nutrients to the roots, the fungi form a sort of protective
30 armor against disease bacteria around the roots, and sometimes actually innoculate the soil with antibiotics that kill disease bacteria.
Some trees can thrive on acidic mine slag heaps if they have enough fungi-mediated defenses against the acids in the soil.
Mycorrhizal fungi are keys to how a damaged ecosystem heals.

40% of photosynthate made by leaves of trees does not feed the plant at all but rather
31 seeps out of the roots to feed mycorrhizal fungi and the rest of the ecosystem surrounding the roots.

Some mycorrhizal fungi can dissolve stones and pump the minerals into the ecosystem. Their density plummets after a clearcut, and the missing mineralization of rock and freeing nutrients in humic matter may explain why some replanted forests are unable to thrive.
32 A forty-acre site was leveled by loggers in 1968. It has been replanted with new seedlings four times, but most of the new seedlings died each time they were planted. 3 years after replanting some seedlings the usual way and some seedlings innoculated with soil from healthy forest, only the inoculated ones had survived.

Root zone fungi and bacteria exude glues (polysaccharides) that bind soil particles
33 together, resulting in better retention and movement of air and water. Mycorrhizal fungi break down nitrogen into forms that can be used by plants, and chelate iron which is needed by trees. Mats of fungi in the soil store nutrients that otherwise would be likely to dissolve and leach away. Mycorrhizal fungi provide a bridge connecting trees, allowing shaded ones to borrow photosynthate from overstory trees, even of different species.

34 In Japan and Europe some forests are in profound decline. The problems have been blamed on pollution, but Trappe wonders if it is more because these soils have not had their input of woody debris, and associated development of the right fungal balance.
Policies and plans for Jackson Forest must make sure this does not happen.

4

According to Paul Stamets, leading authority on fungi, "Of the estimated 6,000,000 species of fungi in the world, we have catalogued only about 50,000. The genetic diversity of fungi is vast by design, and apparently crucial for life to continue. Throughout the
35 lifespan of a Douglas fir, nearly 200 species of mycorrhizal mushrooms can be joined in this most holy of alliances. The interrelationships of these species with other organisms in the forest are just beginning to be understood. What we do know is that fungal complexity is the common denominator of a healthy forest. The loss of nearly 50 percent of the mycorrhizal mushroom species in Europe in recent decades forebodes impending ecological collapse."

I'm used to thinking that the purpose of soil is to feed plants, but who knows, maybe as
36 far as Nature is concerned the soil is where it's at, and plants are appendages whose purpose is to feed the soil.

The DEIR fails to adequately adress the opportunities for soil-related and other ecological research.

Failure to protect the health and integrity of the ecosystems on which the productivity of
37 natural resources depend will result in lower productivity in the future and thus constitutes the imposition of higher taxes on future generations, which is taxation without representation.

Redwoods can live as long as 70 generations of people. People will be affected by loss of old growth forest for this amount of time, possibly much longer if damage is done, such as loss of topsoil. This is the minimum time frame for thinking about these issues. If for round numbers we figure a constant population, 20 years per generation, and 70 years per
38 lifetime, then the total number of people living in that time is 20 times the number living now. Thus if we are to have democracy for all - one person one vote - then all people today combined have at most 5% (1/20th) of the vote, while future generations have at least 95% (19/20ths). This would also apply to calculating economic benefits. If endangered species such as Salmon are lost, then the timeframe of consequences changes to a million years and the proportion of the vote for the current generation becomes microscopic.

The DEIR fails to adequately adress these kinds of multi-generational considerations. The
39 time is past overdue to stop consuming the inheritance of future generations and start maturing toward sustainability through restoration and recreation. Old-growth forests and Jackson State Forest are good places to start.

Now is the time to get the Department of Forestry out of the control of logging interests
40 in general, and change the plans for Jackson State Forest from consumption to restoration, recreation, and sustainability in particular.

Walter Epp for7gen@idiom.com
281 Jayne #71, Oakland, CA 94610

Email Letter E-123

Response to Comment 1
The Forest will be managed for a broad range of purposes and benefits. It has been managed in accordance with statutes, Board policy, and Board-approved management plans.

Response to Comment 2
The Board has conducted a thorough analysis of economic affects associated with the management of JDSF (DEIR Section III.5). JDSF is available for public recreation, including hunting. The Board recognizes that recreational activities produce economic benefits. A direct comparison of recreation and timber sector jobs between national forests and JDSF cannot be made, due to the extremely variable levels of production and recreation within the national forest system across the country. For example, many large national forests have virtually no high-value timber production potential, yet are utilized extensively for recreational purposes.

Response to Comment 3
The current distribution of old-growth relates largely to the historic practice of removing old forest for economic purposes. The ADFFMP will preserve the existing groves of old-growth forest remaining within JDSF, and will provide for development of late seral forest and older forest structure on approximately one-third of the Forest area, a significant increase over current conditions. The Board believes that over two hundred thousand acres of young forest in various parks and reserves throughout the redwood region may eventually develop late seral and older forest conditions.

Response to Comment 4
This statement presents a very broad characterization that does not relate to conditions within JDSF. The forest will be managed on a sustainable basis, and it is expected that the forest volume will increase over time. The value of "services" produced by a tree in monetary terms is largely speculative in nature, and not readily quantifiable as suggested by the commenter. Trees to be harvested will provide a stream of ecosystem services up until the time of their harvest.

Response to Comment 5
It is not the Board's intent to maximize any specific value associated with the Forest. The Board has adopted a management plan that fulfills the intent of legislation and Board policy for the state forest. The forest will be sustainably managed. See General Response 15.

Response to Comment 6
This comment does not present an environmental concern that the EIR may address. The comment is speculative. The ADFFMP will not reduce the amount of old growth forest present on JDSF.

Response to Comment 7
Comment noted. Significant impacts associated with soil contamination by toxic chemicals are not expected to occur. Please see the analysis in Section VII.8.2. The Board notes that young forests support a vast population of fungi.

Response to Comment 8
Comment noted. The Forest is available for research in this area. A significant area of the Forest will be managed to develop late seral and older forest conditions available for research and demonstration.

Response to Comment 9
Comment noted. The management of JDSF represents a forest conservation approach.

Response to Comment 10
The comment is unclear. Conservation and sustainability are important components of the ADFFMP.

Response to Comment 11
The management of JDSF is not expected to produce significant impacts to water quality. The management of JDSF will comply with the regulatory standards set by the Regional Water Quality Control Board. Logging levels and water quality are not directly related. However, logging is capable of impacting water quality if not appropriately assessed and mitigated. Significant impacts to water quality are not expected to occur. Please see DEIR Section VII.10. The Board considers both clean water and wood products to be valuable resources provided by forests.

Response to Comment 12
Comment noted. The Board is aware of the benefits associated with trees and their root systems. The Board agrees that water quality is an important indicator of potential impacts associated with land management. The DEIR analysis indicated that the ADFFMP will contribute to water quality improvements, for example, reduced sediment levels and lower stream temperatures.

Response to Comment 13
The management plan will not significantly affect the world-wide supply of oil or fertilizer. The Board recognizes the importance of salmon as a food source. The analysis in the DEIR shows that the management plan will provide for maintenance and recovery of aquatic habitat, which is expected in provide for an increase in the salmon population.

Response to Comment 14
The management plan is intended to provide for an increase in canopy that provides shade for streams, thus maintaining cool water to benefit the fishery. If at some future date, long-term ambient air temperature were observed to rise in relationship to a global phenomenon, the Board may reconsider the management plan and make adjustments in order to prevent significant impacts. The current stream shade levels within JDSF are high, and are expected to remain high due to the provisions for canopy retention and forest growth and development. The department will examine and propose to the Board for their consideration strategies that will address specific potential climatic impacts as these become scientifically verifiable. The department can do this at any time or as a part of the Board's five-year cycle of management plan review.

Response to Comment 15
DEIR Appendix 13 lists the aquatic toxicity of the herbicides proposed for use. Water monitoring of forestry use has constantly shown little water contamination by the herbicides proposed for use (Wofford et al, 2003, Schuette, 1998, Ganapathy 1997, Neary & Mitchel 1996). The issue of listed salmonids and herbicides has received substantial attention as a result of the lawsuit regarding endangered salmonids - Washington Toxics Coalition v. EPA. The following findings resulted; Four of the five herbicides proposed for use by JDSF were reviewed. Imazapyr and Sulfometuron methyl were found to have "not-likely-to-adversely-affect the salmon and steelhead or their habitat". Tryclopyr TEA (amine form) was fond to have "no direct or indirect adverse effects" on ESUs (Evolutionary Significant Units) relevant to JDSF. For Glyphosate: "the use of glyphosate at label limits may affect the species of concern, but is unlikely to adversely affect" for the Coho ESU relevant to JDSF. Note that uses that would approach the label limit of 5lb ai/acre are not anticipated at JDSF. Forestry use Triclopyr BBE (ester form) was found to "May Affect, not likely to adversely affect" for some ESUs relevant to JDSF. There are additional buffering measures in effect for Triclopyr BBE near salmon supporting waters. The type of analysis undertaken for the lawsuit would include not just mortality but adverse effects as well.

The DEIR and RDEIR provide programmatic direction for vegetation management. At JDSF individual projects will vary in the potential to deliver herbicides to water; requiring site specific measures such as increasing buffer width or changing surfactants to reduce this risk. This document does not preclude site-specific projects from future CEQA analysis. The future quantity or timing of herbicide use is speculative at this point in time. Site-specific mitigation is developed to prevent significant impacts.

Regarding breakdown products of Glyphosate, this subject was addressed specifically in the response to DEIR comment letter E-28. Please see that section for an in-depth response.

Regarding the comment on unnamed pesticides on salmon migrations, pesticides are a large classification of compounds, the comment provides no basis to assume this refers to the limited list of herbicides proposed for use at JDSF.

The LD-50 dose is a standardized measure of concentration that will cause mortality in a specific number of fish under specific conditions. This number's value is not for predicting exact field mortality, but providing an understanding of the relative toxicity of compounds.

Response to Comment 16
Atrizine was not listed among the herbicides that would be considered for use at JDSF. Atrizine's mode of action is different than Glyphosate. The potential for estrogenic effects from Glyphosate have been extensively studied and to date, no effects have been identified. See E-28 response 87 for detailed discussion. The comment letter provides no factual basis for ceasing the use of herbicides at JDSF.

Response to Comment 17
The comment is not supported. The watercourse and lake protection zones within JDSF will be managed to develop late seral forest conditions, and with the implementation of a management measure for large woody debris survey, recruitment, and placement, thus increasing the availability of large trees and large logs over time (ADFFMP, Chapter 3, Riparian, Wetland, and Floodplain Management).

Response to Comment 18
The Board is aware of the potential impacts of logging and road building to salmon habitat and salmon reproduction. Significant impacts are not expected to occur. Please see DEIR Section VII.6.1 for the assessment of potential impacts to aquatic resources.

Response to Comment 19
As demonstrated in the DEIR and RDEIR, the management plan is expected to contribute to the continued recovery of aquatic habitat, contributing to the health of the salmonid population.

Response to Comment 20
The Board agrees with this comment. The management plan makes provision for research on a broad range of subjects, including forest ecology.

Response to Comment 21
Comment noted. The Board is familiar with current soils research.

Response to Comment 22
Comments noted. The management plan incorporates provisions to increase snags and down logs throughout the Forest (ADFFMP, Chapter 3, Fish, Wildlife, and Plants, and Appendix IX).

Response to Comment 23
Comments noted.

Response to Comment 24
Comments noted. The Board is aware of the soil nutrient cycle, and the current state of knowledge concerning the soil nutrient cycle. A significant level of research in this subject area has been conducted within JDSF.

Response to Comment 25
See response 24. Nutrient loss will be prevented by leaving green vegetative matter on site following logging operations by, promptly regenerating harvested areas, preventing overland water flow and

erosion, avoiding broadcast burning of slash as has accompanied most research projects in this area of study, and by increasing the forest volume over time.

Response to Comment 26
Comments noted. The Board is aware of the value of woody debris in streams. Please see DEIR Section VII.6.1.

Response to Comment 27
Comments noted. The ADFFMP will not decrease the existing old growth forest on JDSF.

Response to Comment 28
The relationship is generalized in the comment. The Board is aware that living organisms can serve as indicators of ecosystem health.

Response to Comment 29
Comments noted. The Board cannot speculate as to the specific nature of the comment and its relationship to the EIR or management plan. Insufficient detail on the stated "keystone bugs" is provided.

Response to Comment 30
The Board is aware of the function and value of mycorrhizal fungi. The management of JDSF is expected to maintain a viable population of fungi throughout the Forest by maintaining forest cover by a broad range of tree and understory plant species, and by maintaining the soil and vegetative soil cover resource.

Response to Comment 31
Comments noted. The comment represents a generalized characterization of a highly variable natural phenomenon. Implementation of the management plan will maintain ecological function within the Forest.

Response to Comment 32
Most natural settings don't lack for mycorrhizae. They tend to be absent in disturbed soils like construction sites, heavily compacted logging sites, or sterilized nursery soils. Mycorrhizae offer an alternative to heavy fertilizer and pesticide use in areas like forest nurseries, but artificial inoculation should not be necessary in logged sites on JDSF.

Research and practical application has demonstrated that the redwood forest readily regenerates following clearcutting when appropriately conducted, and that the soil nutrient levels remain high after logging and regeneration, and rebuilds to precut levels prior to the end of the rotation. Please see DEIR Sections VII.7, 10.4, and Section VIII.

Response to Comment 33
Comments on the ecological function of forest noted.

Response to Comment 34
Comment noted. Soils receive nutrients from vegetative material, rainfall, and other sources. The ADFFMP has standards for recruitment and retention of large woody debris.

Response to Comment 35
The commenter is correct that less is known about forest fungi populations than flowering plants or mammals. This is due to the fact that many species are not visible on an annual basis, and perhaps not over a number of years. Others are extremely small and difficult to find or identify, while others are not well distributed. JDSF is a study destination for prominent mycologists from California colleges and universities, and the body of knowledge concerning fungi is increasing. The management plan recognizes a fungi study area named "Mushroom Corners", and will consult with mycologists regarding management of the area (ADFFMP, Appendix IX).

Response to Comment 36
The ADFFMP recognizes and promotes a broad range of research, and does nothing to preclude the conduct of this research, which is encouraged by the Board. The ADFFMP Chapter 4 lists forest ecology, biological process and below ground carbon cycles as State Forest Identified Research Priorities. This type of research will provide opportunities to explore soil dynamics.

Response to Comment 37
The Board believes that the ADFFMP will provide for protection of the health and integrity of the forest ecosystem. The many analyses conducted as part of the DEIR and RDEIR did not indicate that the health and integrity of the ecosystem would be impaired to any significant degree, and a number of beneficial effects were identified.

Response to Comment 38
The EIR appropriately considers cumulative impacts. It is not the intent of CEQA to produce speculation on potential impacts over a period of thousands of years. The ADFFMP is expected to be in effect for the next 10 to 15 years, and the EIR provides an assessment as prescribed by law, covering a reasonable period of time and reasonably foreseeable probably future projects.

Response to Comment 39
See response to comment 38 and General Response 15.

Response to Comment 40
Comments noted. The Department of Forestry is granted authority by the legislature to manage the state forests. The management of JDSF is not in the control of logging interests, and includes a broad management mandate providing for restoration, recreation, and sustainability, including sustainable production of high quality timber products. The Board of Forestry and Fire Protection provides ongoing oversight to ensure that JDSF is management in accordance with statutes and policies to serve the broad public interest.

References

Bush, PB., D.G. Neary, and C.K. McMahon. 2000. Fire and pesticides: a review of air quality considerations. Pages 132- 136 *in* W. Keith Moser and Cynthia E Moser (eds.). Fire and forest ecology: innovative silviculture and vegetation management. Tall Timbers Fire Ecology Conference Proceedings, No. 21. Tall Timbers Research Station, Tallahassee, FL.

Ganapathy, Carissa. 1997. ENVIRONMENTAL FATE OF TRICLOPYR**,**
Environmental Monitoring & Pest Management Branch, Department of Pesticide Regulation, Sacramento, CA.(January 2, 1997)

Neary, Daniel , Jerry Michael. 1996. Herbicides - Protecting long-term sustainability and water quality in forest ecosystems. New Zealand Journal of Forestry Science, Vol. 26 pp.241-264

Schuette, Jeff. 1998. ENVIRONMENTAL FATE OF GLYPHOSATE**,**
Environmental Monitoring & Pest Management, Department of Pesticide Regulation. Sacramento, CA. (Revised November 1998)

Wofford, Pamela, Kean Goh, DeeAn Jones, Heather Casjens, Hsiao Feng,Jean Hsu, Duc Tran, John Medina, and Jane White. 2003. Forest Herbicide Residues in Surface Water and Plants in the Tribal Territory of the Lower Klamath River Watershed of California.
California Environmental Protection Agency, Environmental Monitoring Branch, Department of Pesticide Regulation Sacramento, CA. EH02-05

I strongly oppose the proposed management plan for Jackson State Forest

E-124

Kraemer, Candace

From: Jon Spitz [jonspitz@xprs.net]
Posted At: Wednesday, March 01, 2006 9:23 AM
Conversation: Jackson Forest EIR
Subject: Jackson Forest EIR

February 28, 2006

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

board.public.comments@fire.ca.gov

Re: Proposed EIR for the Jackson State Demonstration Forest

1 Mr. Gentry,

The proposed EIR for management of the Jackson State Forest is a complete sham. Within its 1,500 pages it rules as unfeasible the most reasonable Alternative E which mandates an emphasis on habitat restoration while it considers it feasible for the public to comment on a document that is virtually
2 unreadable over the internet and costs over $200 per hard copy. This is the EIR process gone berserk.

Furthermore, the Board of Forestry's preferred Alternative C represents a catastrophic misuse of public lands. Clearcutting and herbicide use in commercial forestry is exactly what the Jackson State Demonstration Forest should be demonstrating against. How many more acres of redwood forests must
3 be destroyed before the BOF learns this lesson? It couldn't be more clear cut that Alternative C is simply a funding mechanism for the BOF under the arcane rules that allow you to keep the proceeds from these logging methods that have already proven to be so disastrous.

How many trees were destroyed to produce this pathetically inadequate document? It is this kind of waste that must be curbed if the BOF is to be taken seriously about how to manage this States forested habitats.

Sincerely,

Jon Spitz, Board of Directors
Willits Environmental Center
316 South Main St.
Willits, CA 95490

Email Letter E-124

Response to Comment 1
Please see General Response 5.

Response to Comment 2
The comment calls for speculation and a reasoned response is not possible, given the level of detail provided by the commenter. The use of clearcutting and herbicides has been thoroughly considered, and significant impacts are not expected to occur. Further, the ADFFMP places additional limits on clearcutting and the use of herbicides. Statutes limit the use of JDSF timber revenues to support of the Demonstration State Forests. All funding allocations are made through the legislative budget process.

Response to Comment 3
The EIR is thorough and has been prepared in compliance with applicable laws and procedures. A relatively small number of copies of the DEIR were printed; use of electronic formats was encouraged. Free CD copies of the DEIR were available upon request.

IV.5 Individual DEIR Mailed Comments P-1 to P-75

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Mailed comment submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

P-1

JOHN P. ANDERSEN
REGISTERED PROFESSIONAL FORESTER #2503
327 PARK STREET, FORT BRAGG, CA 95437, 707-962-2820
JOHNANDERSEN@ MENDOCO.COM

Novmber 8, 2005

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Re: JDSF Administrative Draft Environmental Impact Report (ADEIR)

Dear Mr. Gentry,

After reviewing the ADEIR, it is painfully obvious that CDF and JDSF have considered every possible alternative, management implication, and potential impact of the future management of JDSF with the recent release of the ADEIR. It is clear the staff at JDSF have done a superior job of managing this forest and plan on doing nothing less in the future. Please consider the ADEIR complete and adequate. Thank you for your time in this matter.

Best Regards,

John Andersen
RPF #2503

RECEIVED BY
NOV 10 2005
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-1

Response to Comment
Comment noted.

P-2

December 10, 2005.

George Gentry
Secretary
State Board of Forestry

Dear George,

I sure want to get my digs in for the record on the Jackson State Forest matter. I hope that this letter might particularly be brought to the attention of your timber industry oriented members of the board.

In 1952 I drove the Coast Route #1 past the active Company sawmill at the ocean edge in Casper Cove. The mill shut down that winter. In 1972 I had the contract with the State for the cruise of the State Forest segment that went to the Union Lumber Company in trade for the Mendocino town headlands. A deep promise was made by all three parties (Private and the two State agencies) that this relinquishment was a one time affair and never again. So far in 32 years it has held up. Is that promise a matter of record? It should be.

A failure I made years ago in those early 1950s was not to get some Notarized Testimony from the personal contacts I had with the San Francisco Casper Lumber Company Attorney, Bill Doyle, and the Fort Bragg - Casper properties caretaker Harry Wakefield about what transpired when the Company sold their main holdings to the State for $2.50/acre, the promise of the name 'Jackson', and a program to establish a demonstration timber growing Forest for the Redwood Region. I enjoyed working with 'run-out-of-job' Casper Company Bull-Buck Von Gabbert when we had lots and lots of days work together for two to five years later. But I didn't try to get such records and so there.

As to Jackson State Forest, I have thought that Gene Sindel or Emory Escola might have left some personal notes that could be researched which would indicate intent of the time of the State transfer in the late 1940s.

It seems to me now and from my personal evidence I have had in files now thrown out that the practical sole purpose of the family in practically gifting the property to the State was a striving to find good Redwood young growth management for maximum utilization of lumber while respecting the multiple use features of the Redwood Region of California.

Page 2, State Board of Forestry

This current push to preservation is by, it seems, just everyone including

the big owners spinning off outlying holdings (local examples being the Del Norte Mill Creek holdings, Barnum in the upper reaches of Redwood Creek),

the Parks and wildlife people and organizations with emotional pitches to their vast majority of contribution fund givers from all over the nation,

2 the what I call "Hold People" , both government and private and particularly elected politicians who go the way of the wind, and who can't figure out that life is a continuing ever changing Darwinian concept and 'endangered species' is a ploy for time,

the allied efforts of Fort Bragg locals to stop logging completely for what I see as purely NIMBY reasons,

the emphasis of the University Resource Department with its view of the whole ecosystem as equal and timber production for payroll and other society benefits as not having a dominant place as it has had in the past.

Even the Thanksgiving Day newspaper article with a preservationist slanted view in the Chronicle about the use of our National Forests is so biased. Such words need refuting.

3 My observation now is to wonder at Bernie Agrons' opinion, one time expressed to me. "if it is growing, there will be a market for it." If we don't plan for such a market and establish the right zoning and established public policy for such a market in land use planning, where will our growing trees go? The preservations gleefully say to "Old Age".

4 In resource management are we finally over the period of the past expansion of North America with a philosophy of need for local population growth and community economic benefits? Most reasons for people to have different view points are valid but others such as the premise of the shortage of Spotted Owls I feel can be a dishonest emotional ploy to the gullible public.

5 I don't think that anyone in our active days was much concerned that such an effort as now needed might be necessary to stand up for our Industrial Forestry beliefs. A present service oriented economy is not sufficient excuse to forget the growth of trees.

Page 3, State Board of Forestry

Just in my limited year 2005 traveling throughout California from San Diego to Prairie Creek and from along Coast to the Mother Lode, I see wood house after wood house being built. Recently, I had a grand personal tour of Brown's Opening up out of Long Barn near Sonora and saw one of the prettiest 1,000 acres working forests I have ever noted. I think Jackson State is equally thrilling.

6 If we can manage California in our own backyards, why go to Indonesia and Canada, Siberia or the Amazon to do our log procurements? I think it is evil to reach to depletion of foreign cut-without-care Forests to sustain the need for lumber in the United States or locally in California.

7 This message has got beyond solely Jackson State Forest problems but the whole situation of directions is troubling to me. I have a long held opinion of Industrial timber management being a society benefit to our current population. Mulford, Baker, Fritz, Oscar Evans, Swift Berry, and other mentors of my past were each inspiring and taught me my values.

8 Could a new committee with a dedicated narrow interest in viewpoints such as mine be respected in State Board testimony about California's timberland management? I can think of a number of similarly interested people. I think the SAF, ACF, and the Licensed Forester organization have too broad viewpoints. In 1972 the few members of the California ACF pushed hard, gave a fee to Francis Raymond and almost singularly got our Forestry License Bill though. A bigger push by a broader coalition got the new 1972 Forest Practice Act enacted. Now we need some forthright policy establishment, maybe with 100 year projections, square with growing timber needs.

What can I do now as an old non-mobile guy with fifty four years of local observation, and five working years elsewhere in California, but with only a few years left? Say and I will try.

Bob MacDougall

Bob MacDougall
105 Barbara Street
Ukiah CA 95482
<rtmkvm@pacific.net

Copy: Forest Tilley - member JSF Committee; Present management of Jackson State Forest; Berkeley Dean Paul Ludden; Mike Janis of Mendocino Woodlands Company

Mailed Letter P-2

Response to Comment 1
The legislation that provided for establishment of the State Forest makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of forest management (see General Response 2).

Response to Comment 2
The Board recognizes that there are many people and organizations that support a more preservation-oriented approach to forest management. The Board supports a balanced, multiple use concept and maximum sustained production of high quality timber products.

Response to Comment 3
See response 2 (above).

Response to Comment 4
Comment noted.

Response to Comment 5
A significant level of sustained timber production will occur at JDSF. The Board supports efforts to grow and utilize trees and timber products.

Response to Comment 6
Comment noted. Continued production from the forests of California is encouraged by the Board.

Response to Comment 7
Comment noted. The Board agrees with this comment.

Response to Comment 8
Comment noted. Both JDSF and owners of other large, timbered properties that propose to harvest forest products, are required to establish a long term sustained yield, projected over a 100-year time period.

P-3

ACL ASSOCIATED CALIFORNIA LOGGERS

555 CAPITOL MALL, SUITE 745 • SACRAMENTO, CALIFORNIA 95814 • (916) 441-7940 • FAX 441-7942 • www.calog.com

OFFICERS
President
Jaime Wagenfuhr
Vice President
Myles Anderson
Secretary-Treasurer
Bunky Leach
Executive Director
Ed Ehlers

BOARD OF DIRECTORS
Nita Browning
Les Day
James Headrick II
Tim Holt
Stan Leach
Ed B. Lewis
Ed Lewis Jr.
Laura MacGregor
Jack Medici
Jim Miller
Stanwood Murphy
Tim Renner
Phil Shuster
Pete Thill

DIRECTORS EMERITUS
Hale Charlton
Jim McCollum
Merle Okerstrom
Lowell Robinson
Glenn Schirmann

RECEIVED
JAN 20 2006
BOARD OF FORESTRY

January 19, 2006

Board Of Forestry And Fire Protection
P.O. Box 944246
Sacramento, CA 94224-2460

Members Of The Board:

Our association of contract loggers and log truckers has a long-standing interest in Jackson Demonstration State Forest. The multitude of timber stand conditions that have been created by the Forest's management have made it a valuable research base that helps us advance the quality of our workmanship. The timber sale program of the forest is, of course, an important economic support ingredient for Mendocino County's logging and sawmill infrastructure. Its economic impact is felt well beyond its home county.

1 We think the continuation and evolution of past management as proposed by Alternative B is the appropriate path to follow.

"The Jackson State Demonstration forest was acquired nearly 60 years ago to serve as a research, education, and demonstration facility for sustainable forest management practices. Along with the forestry mission, it also provides a landscape for environmental and biological research and recreation. Since 1947, the Jackson State Demonstration Forest has been managed by the Department of Forestry under four different management plans approved by the Board of Forestry with each new plan reflecting the development of new progressive management concepts and new resource protections. The forest also provides considerable revenues that benefit all Californians by funding the Urban Forestry Program, State Nurseries, California Forest Improvement Program, Forest Pest Management, and Watershed Assessment."

This statement by Governor Schwarzenegger is from his veto message concerning SB 1648. He notes further that multiple use of assets is always preferred where the mission and purpose are not compromised. We think Alternative B offers the best opportunity for multiple use balance as an evolution from prior management plans.

2 We are concerned that the management of the Jackson Demonstration State Forest under the other alternatives allocates too large an acreage to late seral stand development at the expense of other stand types. One of the major assets

of the Forest is its multitude of forest types that provide a setting for almost any type of research that's needed. More acreage is appropriate to a category that permits active management research rather than the more passive natural process investigations. Many of those investigations can be carried out on State Park lands in the vicinity. Retaining Jackson Forest's diversity for more dynamic research projects as well as a reasonable volume of commodity production acreage is important to research and economic success. Certainly, research in the manipulation of stream protection zones is an important area of research that should not be limited by late seral objectives or constraints.

3 We think Alternative B with its updated mitigation measures is a more desirable management system and urge the Board to adopt it.

4 We also think that those lands that are ultimately identified for late seral and other "reserved" areas may need manipulation to survive and prosper. Practical access needs to be available and recognition of this need and supporting provisions should be included in the management plan and the EIR document.

5 In summary, we think Alternative B offers the best mix of areas and techniques for protecting and expanding the multitude of stand types and their availability for research purposes. It needs to be strengthened by providing policy support for practical access to permit the manipulation of "reserved" areas to help assure they survive and prosper. While the staff of the Forest has had some difficulty in describing the advances and benefits they have created, an inspection of the Forest indicates their management and the plans that have guided them have created very satisfactory results. Continuation of existing management practices should continue producing desired results.

6 Alternative B also has the advantage of permitting the moving of the annual cut on the Forest to a volume that is closer to the growth rate. This has the advantage of creating an economic climate in which the infrastructure that is necessary to bring success to the Forest can continue to be available. It will also permit the achievement of the goals of the other programs mentioned above by the Governor in his veto message on SB 1648.

Respectfully,

Ed Ehlers, Executive Director
For The Association

Mailed Letter P-3

Response to Comment 1
The stated preference for Alternative B is noted.

Response to Comment 2
The allocation of stand types at JDSF is based upon consideration of the enabling legislation, Board policy, and existing regulation. The planned allocation of forest area to late-seral forest protection and development does not preclude the development of a vast array of stand conditions that are suitable and available for demonstration of timber production and other forms of active management research. Alternative G and the ADFFMP stress the importance of structural diversity on the Forest to support a wide range of research and demonstration.

As currently planned, a significant level of timber production will occur within the Forest on an annual basis. The designation of riparian zones as late-seral development areas does not preclude timber production and other forms of research, though the designation may limit the range of research that is possible.

Response to Comment 3
Please see response 1 (above).

Response to Comment 4
The management plan includes provision to actively manage areas designated for late seral development. The Board recognizes the role that active management can play in acceleration of these forest structures and characteristics. The designation of these areas does not preclude maintenance or creation of access for management purposes.

Response to Comment 5
Comments noted. The Board concurs that the Forest has been well managed in most respects. Most of the forested area of JDSF, including reserves, stream zones, and areas designated for late-seral forest development, remain available for management that will help create, maintain, or enhance the values for which those areas were designated.

Response to Comment 6
Comment noted. The Board does not control the operating budget for the Forest. However, the Board supports the concept that the Forest be self sufficient, and develop sufficient funding to enable full implementation of the ADFFMP. Many of the programs mentioned in the Governor's veto message are now supported primarily by the General Fund.

P-4

DARCIE MAHONEY, Licensed Forester
30995 Greenwood Road • Elk, CA 95432 • 707-877-1455

20 January 2006

George Gentry
Executive Officer
Board of Forestry
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. YG Gentry:

I have a brief recommendation to give regarding the EIR for Jackson State Forest.

While "Alternative D" is not perfect, it represents the views of a broad base of concerned and active citizens of the area and should be considered seriously

I believe Alternative D is the best compromise of local opinions and provides the best opportunity to resume management operations on JDSF.

Sincerely,

Darcie Mahoney

Darcie Mahoney
Licensed Forester #2397

RECEIVED BY
JAN 23 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-4

Response to Comment
Comments and preference for Alternative D noted.

P-5

Monday morning Dec 12

Remailed after a X-mas in San Dia 12/28/05
Remailed 1/25/05

Dear Young George.

I often congratulated you for your present job.

I sent my letter by E-mail last and evening due with a personal hand copy. I can't help but think that in some of my points, I am echoing "old George" but I think, in total, my letter is far out for the times. But it is as I think

I recognize that you "Young George" can take no position but I do hope that my message may receive due notice and particularly by the Industry oriented members of the Board.

Thank you

Bob MacDonald

RECEIVED BY
JAN 26 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-5

Response to Comment
Comments noted.

P-6

CALIFORNIA LICENSED FORESTERS ASSOCIATION

P.O. Box 1516 · Pioneer, CA 95666
phone · 209.293.7323 fax · 209.293.7544
email · clfa@volcano.net web · www.clfa.org

January 28, 2006

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Reference: Comments on Jackson Demonstration State Forest DEIR

Dear Mr. Gentry,

CLFA has reviewed the Draft Environmental Impact Report (DEIR) for Jackson Demonstration State Forest (JDSF). We are submitting these written comments to be considered by the Board as it moves toward a final EIR.

1 CLFA supports the just restoration of forest management at JDSF, including the critical components of research and demonstration. Courts can rule for and against on issues of law, but they are not capable of assuming day-to-day responsibility for the burdens and complexities of forest land management. Stewardship, if it is to exist, rests with on-the-ground professional resource managers executing decisions based upon sound planning and clear management direction.

2 **We believe that the preferred Alternative C1 represents a quantum leap in both management sophistication and environmental protection as compared to its 1983 predecessor.** We support C1 because we believe that it is a skilled compromise on contentious environmental issues, while remaining responsive to legislative intent for JDSF to be a working, *demonstration* state forest.

World Turning

In the 5 years since the management program at JDSF was first halted by legal action, factors undermining the competitiveness and sustainability of California forestry have continued to intensify. These include increased costs for state regulatory permits, continued mill closings and employment losses in the forestry sector, and accelerating pressure on private timberlands to be converted to non-forestry uses.

Since 2001, forest management in both California and the United States has faced new structural challenges. One trend is for forest products companies to divest themselves of their holdings. An article in the *Journal of Forestry* (12/04[1]) stated, "Most forest products companies now have real estate development divisions and are actively marketing properties." Although the article documents the situation in the US South, the

[1] "The Speculative Shadow Over Timberland Values in the US South." Wear, David N. and Newman, David H., *Journal of Forestry*, December 2004.

trend is nationwide. Values for undeveloped forestland have rapidly appreciated. The price increases have frequently not been driven by traditional timber considerations but by competing land uses such as subdivision and development.

Indeed, the focus of many environmentalists has shifted in recognition of the emerging threat to open space and sustainable forestry. In May 2005, the *California Forest Futures*[2] conference in Sacramento brought together diverse stakeholders to discuss the situation in the Golden State. One impetus for the meeting may have been CLFA's *California Forestry 2050*[3] white paper.

3 CLFA believes that growing pressures on the economic, ecological and social viability of California forestry comprise the best arguments as to why JDSF must be revived to meet the natural resource management challenges of our rapidly changing world.

4 Given the intensifying market pressures facing California forest landowners, the value of a dedicated public asset such as JDSF to conduct research, demonstrate a range of resource management approaches and to provide regional economic stability is greater than ever. Due to downsizing, restructuring and other competitive pressures, many entities that control private forestland today are not in a position to conduct forestry research. New and non-traditional owners may, in fact, have little knowledge of silvicultural prescriptions and their utility in achieving a variety of forest management objectives. This is where the renewed and ongoing work of JDSF can play a crucial role in helping to nurture long-term forest stewardship, especially in the redwood region.

Broken Promises of Rural Prosperity

CLFA recognizes that there are those who earnestly believe that sustainable forestry is not a worthwhile objective and that the best use of public policy with regard to forestry is to suppress it. CLFA respectfully disagrees. We believe that this view is shortsighted and fails to recognize the ecological and social benefits of encouraging forest landowners – large and small – to retain their lands as working forest greenbelts instead of converting them to rural subdivisions, non-forest commodity production, or other uses.

5 Forestry professionals argue not for the end of science but for the perpetual beginning of new understandings based upon vigorous and ongoing inquiry. We believe that JDSF's unique public assets *specifically acquired and set aside as a "working" demonstration forest* offer present and future Californians greater benefits under Alternative C1 than any of the others under consideration.

Although Alternative C1 offers comprehensive protection (if not improvements) for non-commodity resources and values such as threatened and endangered fish and wildlife, soils and aesthetics, we're also concerned with non-intrinsic aspects of sustainable forestry – social and economic factors. The DEIR includes important

[2] Website. http://forestry.berkeley.edu/forestfuture.
[3] *California Forestry 2050: What do we want our forests to look like, and how do we get there?* California Licensed Foresters Association. 2003. Posted under http://www.clfa.org/whats_new.htm.

discussions on Economic, Social and Community Effects[4] as well as JDSF: Social and Economic Setting – Mendocino County[5].

The DEIS reports on the decline of the timber industry regionally, and in Mendocino County. It also documents a decline in visits to redwood state parks, and states:

> *From an economic perspective, the major implication is that visitation and tourism related employment for redwood forests will continue to be an important aspect of our redwood forests but will not be an economic growth sector for areas not close to the San Francisco Bay Area*[6]. (Emphasis added)

6 The analysis supports what many professional foresters observe in the redwood region. Forest-sector jobs pay better and provide more community benefits.

One of the consistent claims by advocates for more redwood parks (including converting JDSF into more of a park status) is that recreation jobs will replace forestry jobs. The DEIS suggests this line of reasoning is more wishful than right[7]. Recreation jobs pay only 62% of what timber jobs pay. The DEIS goes on to state:

> *...at the regional level, a continued decline in the timber-based economy will not be offset by growth in economic activity associated with redwood parks or in other section of the tourism industry*[8].
>
> *Del Norte County is illustrative of the economic difficulties of a forested county that has gone through the transition from an old growth timber economy to a recreation economy in the absence of a significant young growth timber economy. Although it has some of the most impressive redwood parks in the world, its labor force has actually declined since 1997, and it still has the highest unemployment rate in the region*[9].

7 Foresters believe that a false dichotomy is set up when sustainable forestry is pitted against parks, as in pleas to "save" a forest such as JDSF by removing management. Managing a forest for commercial timber does not preclude opportunities to steward non-commodity, intrinsic resources on the same piece of ground. If this were

---

[4] *Environmental Impact Report for the Draft Jackson Demonstration Forest Management Plan* (JDSF DEIR), prepared by CDF for the California State Board of Forestry. December 2005. Part III, Section 5, pp. III 25-48.

[5] JDSF DEIR, Part III, Section 6, pp. III 48-56.

[6] JDSF DEIR, Page III-37.

[7] JDSF DEIR, see Table III.13, "Employment and Revenue Effects of Various Timber Harvest Levels", Page III-55. Also see Table III 7, "Employment and Mean Annual Wage for Selection Occupations, North Coast, 2003 for data supporting the statement (Page III-41): "...each tourism type job pays only about 62% of the annual wages of a timber industry job."

[8] JDSF DEIS, Page III-48. The paragraph continues, "Most of the tourism and recreation economic activity of the North Coast region is tied to overnight visitors who concentrate their activities along the coastline or on the Highway 101 corridor. Day use visitors to forests, both public and private, are a significant part of the quality of life of local residents and visitors but generate few new jobs or fees in the region."

[9] JDSF DEIS, Page III-45.

so, why would JDSF, today after decades of timber harvest, have salmon-bearing waters and habitat for threatened species? Is this not sustainable?

8 We would also argue that with regard to recreation, the tradeoff between forestry/no forestry is also not a zero-sum game. We're not arguing against parks, but for JDSF. Recreation can, and does, coexist with resource management in the redwoods and all over the world. In a sense, sustainable forestry is about "saving" resources while at the same time deriving material benefits from them. Given its complexities, it can never be perfected. But its alternative, as documented in the DEIS, can produce a more bitter harvest.

9 **History and Purpose of JDSF**

Jackson Demonstration State Forest has deep roots in California forestry. In the 1940's, forward-thinking foresters such as UC Berkeley Professor Emmanuel Fritz championed the need for state leadership in helping forest landowners meet the challenge of the times: making a painful transition from old growth timber extraction to the sustained practice of forestry. Legislation authorized state acquisition of cutover lands to be used for research and demonstration purposes in close cooperation with the private sector.

JDSF is the largest and most productive of our system of state forests. (Working state forests such as JDSF are not to be confused with State Parks, which are lands set aside for preservation purposes.)

Since the 1950s, JDSF has been managed by the California Department of Forestry and Fire Protection (CDF). Demonstration forestry, including commercial timber harvest and a wide array of scientific studies, began in the 1960s and continued until the court-ordered freeze began in 2001. Currently, JDSF has a standing timber inventory of more than 2 billion board feet, with annual growth of approximately 65 million board feet[10]. Supporting rich biodiversity including threatened terrestrial and aquatic species, providing aesthetic beauty and respite, employment and forest products, JDSF is a public asset that many are extremely proud of. Ironically, its success has been too apparent, as the visible fruits of its legacy of sustainable forestry are coveted by some who believe that custodial status would be a better use for the land.

A "People's Forest" for 21st Century Challenges

Professor Fritz and his contemporaries in 1945 were spurred by concern about adequate regeneration and stocking control in cutover forests. These challenges have largely been met, in no small measure because of the contributions of JDSF.

CLFA argues, however, that today forestry – and California's quality of life – face an entirely new set of challenges. Rather than a lack of productivity of forestlands, we face their actual loss. **The question before us is, "Should California have a timber industry, or not?"** Foresters believe that most people of good will answer this question with a clear "YES!"

10 Of course there is disagreement about the particulars, which is where JDSF comes in. Its unique role as a demonstration forest means that scientists can seek answers to questions that are difficult to answer outside of a dedicated living laboratory. Today's questions are different than yesterday's, as tomorrow's will be different than today's. A

[10] JDSF DEIR, Page III-8.

constant is that JDSF is a place where answers can be found – if it is allowed to survive and given freedom to pursue. The alternative, as spelled out in the DEIR, is disturbing:

> *The demonstration mandate of the state forests includes demonstration of the long-term physical and financial viability of managing young forests. If the values of long-term forest management are not demonstrated to owners of small to mid-sized forest tracts, there is greater potential for these lands to be converted to other uses, and the economic, social and environmental impacts of expanding forest fragmentation could be magnified across the region*[1].

Ecology teaches us that everything is related. If small and medium sized parcels drop out of forest management in California, can the remaining large landowners be far behind? What will happen to those lands?

Conclusion

CLFA appreciates the opportunity to comment upon the JDSF DEIS. We've taken the opportunity to not just support Alternative C1, but to argue for a way of life and why its survival and future success is in the long-term interests of California.

Sustainable forestry may be counter-intuitive to some, in that it embraces social and economic considerations along with the ecological. We recognize that it is easier, sometimes, to bypass conservation to meet ideological demands for preservation. But JDSF is not a park, and shouldn't become one. Parks answer many profound questions, but are silent on others.

Sincerely yours,

Eric A. Schallon, RPF # 2642
President

Cc: Mr. Stan Dixon, Chairman, and Members, California State Board of Forestry.
Mr. J. David Colfax, Chair, and Members, Mendocino Board of Supervisors.
CLFA Board of Directors.
Ms. Hazel Jackson, CLFA Executive Director.
Mr. William Keye, CLFA Government Affairs Specialist.

The California Licensed Foresters Association, with approximately 750 members, represents the common interests of California Registered Professional Foresters. The Association provides opportunities for continuing education and public outreach to its membership, which includes diverse professionals affiliated with government agencies, private timber companies, consultants and the academic community. Governed by an elected Board of Directors, CLFA was established in 1980 – seven years after the passage of the landmark California Professional Foresters Law.

[1] JDSF DEIR, Page III-27.

Mailed Letter P-6

Response to Comment 1
Comment noted. It is also the intent of the Board to return the management of JDSF to active status.

Response to Comment 2
Support for Alternative C1 noted. The Board agrees that Alternative C1, as well as other alternatives represent a significant advancement in forest management when compared to the 1983 plan. Over 20 years have passed, and our understanding of forest management and forest stewardship has changed. Alternative G and the ADFFMP build on Alternative C1.

Response to Comment 3
The Board agrees with this statement. It is the Board's intention that the management of JDSF serve to inform the Board, public, and forest landowners.

Response to Comment 4
Comment noted. The Board fully supports continued research and demonstration that serves to inform and educate timberland owners. The Board directed the development of Alternative G to increase the management emphasis on research and demonstration.

Response to Comment 5
Comment noted. The management plan will continue the tradition of a working forest landscape that serves to demonstrate viable and sustainable forest management.

Response to Comment 6
Comment noted. The Board recognizes that Alternative C1 has potential to create and maintain a higher number of forest-sector jobs than alternatives that provide for a lower level of sustainable timber production (please also see General Response 14).

Response to Comment 7
The Board agrees with this statement.

Response to Comment 8
The Board generally agrees with this statement.

Response to Comment 9
The Board generally agrees with the statements made in this section of the letter.

Response to Comment 10
The Board agrees with this statement.

P-7

Mendocino County Farm Bureau

Affiliated with the California Farm Bureau Federation and the American Farm Bureau Federation
Tyler Nelson, President
Carre J. Brown, Executive Administrator

RECEIVED BY
JAN 30 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

January 25, 2006

George D Gentry
Executive Officer
Board of Forestry and Fire protection
P.O.Box 944246
Sacramento, Ca 94244-2460

RE: Jackson Demonstration State Forest Draft EIR and Management Plan

Dear Mr.Gentry,

The Mendocino County Farm Bureau (MCFB) is a voluntary agricultural organization representing 1600 family and business memberships in Mendocino County. Our organization has a membership base made up of industrial and non-industrial timber landowners. A significant portion of those members will be affected by your upcoming decision regarding Jackson Demonstration State Forest (JDSF). The MCFB is pleased to see the Draft EIR and Management plan finally released. We strongly support the past management of JDSF. Through professional management this forest has been transformed from cutover timberland in 1947 to the premier second growth forest we see today.

1

As in any agricultural pursuit, flexibility, best available science and a wide array of available tools are all necessary for the best results. Current management has been guided by the 1983 management plan and the results speak for themselves. **We support alternative B and believe that it provides the flexibility and proven track record to guide the management of JDSF into the future.**

2

For the past few years, due to the lawsuit, there has been no management of any significance on the state forest. There has been minimal road maintenance, no stream restoration, no timber stand improvement, no research, and limited recreational opportunities. There has been a significant loss of infrastructure, while state and local government have lost millions of dollars in revenue. The impacts to state and local government, JDSF, and the local workforce due to this shut down have been significant. The Mendocino County Farm Bureau strongly feels it is time to get JDSF back into production.

JDSF is the largest forest in the state forest system, Public Resources Code (PRC) 4631-5658 provides authority for the administration and operation of this forest. The state

303-C Talmage Road • Ukiah, California 95482-6417 • (707) 462-6664 • Fax: (707) 462-6681

forest system is managed for research and demonstration of sustainable timber harvesting. In the absence of new legislation, not harvesting on the forest is no alternative.

3

Much consternation is generated when the term even-aged management comes up. This silvicultural treatment includes seed tree, shelterwood, two-age, variable retention, and clearcutting. Even-aged management is limited to an average of less than two tenths of one percent of the land base per year, not a significant issue. Clearcutting is only used for research purpose and areas with regeneration problems.

4

Herbicide use on JDSF is very limited and a very contentious issue. Forest managers need to study the impacts of these applications and monitor the results. Demonstration projects on JDSF have the potential to find alternative effective ways to deal with such things as invasive exotic plants, a serious issue in the redwood region.

5

There are over 95,000 acres of old growth redwoods preserved in the redwood region. On JDSF there is a little less than 500 acres and the Farm Bureau agrees these areas should receive protection. With the recent acquisition of the 7,300 acre Big River parcel and it's addition to the Mendocino Headlands State Park, combined with the numerous other park holdings in the immediate vicinity it is our view that the remainder of JDSF must stay in timber production.

Forest research on JDSF is world renowned. The state forest has been providing information on sustainable forestry for almost fifty years. JDSF is home for a permanent plot system that was initiated in 1958 that generates the majority of the date for growth simulations used by managers up and down the north coast. The Casper Creek watershed projects are studied in every forestry school in the United States. The research programs contribute to improved forest practices on JDSF and many private land holdings. Such things as improved erosion control, habitat management, harvesting techniques, and

6

watershed restoration are demonstrated on the forest. In order for this type of research to continue the forest needs diversity in stand structure only obtained by continued harvesting. JDSF needs to remain a laboratory for research and demonstration of innovative techniques for private landowners.

7

The question that ultimately needs to be answered is the EIR adequate? The courts have not looked for perfection in this document. They look for adequacy, completeness and a good faith effort at full disclosure. This document gives a decision maker the necessary information on all reasonable environmental consequences to adequately and intelligently make a decision. Furthermore, this is a Programmatic EIR and is tiered to a Timber Harvest Plan which is the functional equivalent of the CEQA process. Specific issues such as streamside protection, buffer zones, silvicultural prescriptions and project level concerns are addressed at this juncture. Through this process the public has still another opportunity to address any outstanding concerns.

8

The Mendocino County Farm Bureau strongly feels alternative B is the alternative that give managers the flexibility needed to properly manage JDSF. We

also feel the Board of Forestry needs to do all in its power to insure the forest is back in production as soon as possible.

Please distribute copies of this letter to the current members of the board.

Sincerely,

G. Tyler Nelson, President
Mendocino County Farm Bureau

C/C
Mendocino County Board of Supervisors
California Farm Bureau Federation
Mr. Doug Mosebar, President
Mr. George Gomes, Administrator
Ms. Noelle Cremers, Director of Natural Resources
County Farm Bureaus
California Forestry Association

Mailed Letter P-7

Response to Comment 1
Support for Alternative B is noted.

Response to Comment 2
The Board recognizes the fact that the loss of revenue in recent years has precluded some management activities. In particular, an absence of significant revenue has reduced the level of road maintenance and improvement, as well as other aspects of forest management, such as timber stand improvement, stream restoration, research, and recreation. However, some level of management associated with these activities has occurred.

The Board also recognizes that there has been a loss of tax revenue and jobs associated with the absence of timber production. The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to certify the DEIR and approve a management plan.

Response to Comment 3
Comment noted. Alternative G and the ADFFMP place limitations on the amount of clearcutting and other evenaged management permitted, while still allowing these silvicultural methods to be used to support research and other specified forest management needs, such as forest health.

Response to Comment 4
The Board agrees with this statement. Finding effective ways to deal with issues such as invasive exotic plants would be beneficial.

Response to Comment 5
Comment noted.

Response to Comment 6
The proposed management plan provides for diversity in stand structure, which is necessary for maintenance of a viable research and demonstration forest.

Response to Comment 7
Comment noted.

Response to Comment 8
Support for Alternative B noted.

P-8

Jan. 25, 2006
Ukiah Ca

George,

Would appreciate it if each board member could get a copy of this correspondence and attachment.

thanks
Bill Smith

RECEIVED BY
JAN 30 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

California State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Calif. 94244 - 2460

January 21, 2006
Ukiah, Calif.

Dear Board Members:

I have been a forester since first working for the U.S. Forest Service as a summer fire fighter at sixteen years of age in 1946. Also I have a B.S. degree in forest management and have, with my family, owned a tree farm in Mendocino county since 1983.

1 I believe that the E.I.R. and proposed alternative C-1 for the management of Jackson Demonstration State Forest is the best alternative available. With the ever growing, mostly urban, population here in California, compromise is the name of the game. Though this management plan alternative does not maximize economic returns to the state nor the county it should satisfy the normal economic concerns of the average citizen.

As a representative of a past purchaser of J.DS.F timber sales, I have been a spectator to the efforts of the J.D.S.F. staff to find ways to better harvest the forest resources with results that were more environmentally acceptable and way ahead of the current practices.

2 They have led the way to better forestry here on the north coast. Hopefully they will be able to continue to be able to do so under the new proposed management plan. Though they will have successes and some failures this is the place to have them so that your board can fabricate more effective rules for the private sector forest owner.

Mendocino County has gone from hundreds of mills at one time to four at the present time. Originally they were pretty much family owned affairs which later became corporate operations. Now the remaining mills are again family operations. As an example of the concern for the forest even by the early family owners I am enclosing a couple pages from a copy of an index of some old Union Lumber Company files. I salvaged the files from company records several years ago, indexed them, and gave them to the Willits Museum's archival collection. They show that even way back in the 1920,s the family mill and forest owners recognized the need for forest management to perpetuate a viable forest. This has not changed. Much of the current stands of fir and redwood on Jackson Forest are the results of early Caspar Lumber Co. plantings.

3 The current mill operations in this area need a stable resource source such as J.D.S.F. has provided in the past. The county government needs the yield tax revenue and the local economy needs the jobs that the harvesting of this forest resource will provide while still providing recreational opportunities and environmental protection. This can be done at a reasonable level with plan C.1.

As a forest land owner I need to be able to better contend with the forest practice and other state regulations in order to make my tree farm a viable economic entity and provide wood for those that depend on our forests. Though I have selectively harvested this property in 1957 and 1983 and it now needs thinning. I cannot economically do this. My neighbor to the north has come to the same conclusion and sold to an urban family who is building a weekend retreat and will be an unlikely source of wood fiber in the future. My neighbor to the south is growing bumper crops of marijuana. This seems to be the

4 direction that forest land use is taking here on the north coast. It is my hope and the hope of many of my fellow forest land owners that the demonstrations on future harvests on

J.D.S.F. will show us how to keep our forest lands economically productive.

5 Though the state of California owns Jackson Demonstration State Forest, the citizens are the real owners and expect a balanced use as was the intent when J.D.S.F was purchased from Caspar Lumber Company. A substantial portion of the public lives on a limited budget with little or no discretionary income, particularly here locally. To deprive them of the economic benefits available from the resources of J.D.S.F. is unfair.

Please get this forest producing again; both in knowledge and fiber. I know this may seem to you like a lengthy correspondence but the decision you make will be a preeminent one for the direction of forestry on the north coast of or state and is of great importance to myself and my family.

Sincerely

William F. Smith

William F. Smith
Registered Professional Forester # 537 retired
275 Mendocino Place
Ukiah, California 95482
Ph. 707 462 3385

Mailed Letter P-8

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long term stewardship.

Response to Comment 2
The management plan will enable JDSF to continue to demonstrate new and improved management techniques. The demonstration program on the Forest serves as a valuable tool for informing the Board as regulations are considered.

Response to Comment 3
The Board concurs that JDSF provides a valuable source of timber and revenue for the local economy. The management plan includes provision for sustained production and long term sustained yield (LTSY). Support for Alternative C1 is noted. Please see General Response 2.

Response to Comment 4
The Board is also hopeful that JDSF can play a role in demonstrating that timber production is a viable and valuable use of forest land in the region.

Response to Comment 5
The management plan will provide for a significant economic contribution to the local economy.

P-9

January 27, 2006.

RECEIVED BY
JAN 30 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

California State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento CA. 94244-2460

Dear Board Members:

I am a retired eighty-seven year old Forester (RPF #89) who received a degree in 1941 from the College of Agriculture at Berkeley, California, with an education in Forestry.

My personal biases on forest use are born in the days when we could climb a stump and shout to the world around us that I am going to cut some trees. Things change.

I came to Mendocino County shortly after the sale of the Casper timberlands to the State and, since then, participated in review of many of the timber sales from the demonstration forest for my Consulting clients. I remember particularly Whiskey Gulch which had a pure stand of young growth Redwood resulting from the early day oxen and donkey engine clear cutting. I shared time in 1972 in the only loss of the Forest when an acreage was traded to the Union Lumber Company for the value of the Mendocino Headlands. In more recent years I worked on the appraisal for Park Acquisition of the Young Growth along the Navarro Strip which had been a clear cut in the first twenty years of the 1900s. The good results of reproduction from a Clear Cut, as demonstrated by the luxurious growth of the Navarro Strip, if one thinks as a normal human does, is but a blip in the lifetime of a tree. Coastal White Fir is difficult to control without careful forestry considerations. Forests and Foresters need freedom to make decisions for the future of our forests.

Times change human attitudes and I must reluctantly recognize this change. We are in an era of today and limited future. We must guide ourselves in thinking for the good of the future.

It seems to me that the best compromise of the present regrettable hiatus of the experimental use, with such an extended loss to the Redwood Region of the use that the Casper people intended in their practically give away of the Jackson State Demonstration Forest, is the Alternative Plan 'C1'. This might never satisfy the do-gooders and those that say 'logging' is a dirty word but that attitude is bad, bad, bad.

Please support Alternative 'C1'.

Respectfully,

Robert T. MacDougall, Jr
105 Barbara Street
Ukiah, CA 95482

Mailed Letter P-9

Response to Comment
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long term stewardship.

P-12

1/31/2006 Westport, CA

Dear Board of Forestry,

1 Regarding Jackson State Forest. I request you select Alternative D which permits Sustained Yield Forestry to be the primary use of the Forest. I would also like the proceeds from State Forest Sales to be utilized on the Forest to promote the following objectives;

- Stand Improvement Measures including Pre-Commercial Thinning, Hardwood Controls, etc.
- Reduction of Fire Hazards.
- Reduction of Garbage Dumped in the Forest.
- Increase in Security.
- Improvements to Infrastructure notably Stream Crossings.
- Implementing Recreational Uses, primarily hiking and biking.

2 I believe it is imperative Jackson be a working Forest which helps sustain our local economy. I also encourage you to select Alternative D which does not include Clear Cutting. I feel most of the landowners (the people of California) do not want to employ this Silvicultural Method. It is my hope the Board will consider the laymen viewpoint, even though it may not be based on the Science of Forestry.

3 One of my Clients owns about 200 acres adjacent to the State Forest in Caspar Creek. I know he does not enjoy the condition of the roads and the dumping of garbage and other common uses of the Public of the State Forest. In his case he has spent thousands of dollars cleaning up his property from illegal dumping from people using the Forest Roads. The lack of Security is degrading environmental values including water quality and upslope aesthetics. I manage his Timberlands for Sustained Yield Forestry and I believe he would welcome more active management of the State Forest. Of course improvements and maintenance must be funded via the income from Timber Sales. I strongly feel that if the Public saw Selection Methods which employed some minimal aesthetic considerations, and saw the ensuing funds improving the forest, there would be overwhelming support for Active Management of the State Forest.

As a Professional Forester and Timberland Owner I am tired of the legal wrangling which has not permitted the State Forest to be managed for the most basic purposes, including removal of garbage. Please select an Alternative which will get our Forest working to provide not only wood products but the recreational and infrastructure improvements that most members of the Public would be pleased about. I lived in Arcata for many years and the use of the Community Forest, including Harvesting, is accepted by people of many viewpoints. Jackson could be a similar situation. Please slightly compromise with the Critics of Jackson and Forestry in general and choose Alternative D that includes Sustained Yield Harvesting.

Sincerely,

Tom Kisliuk
RPF #2676

Agent for Timberland Owner Ed Powers on JSDF Road 500.

Mailed Letter P-12

Response to Comment 1
Support for Alternative D noted. The management plan provides for utilization of revenue in support of the items noted.

Response to Comment 2
The management plan will provide for a significant contribution to the local economy. The stated preference for no clearcutting is noted. The management plan restricts the application of even-aged management and restricts the use of clearcutting to that needed to support a diverse research program and areas with extreme regeneration difficulties where clearcutting offers a viable means to regenerate these sites. Very little clearcutting is anticipated (see also General Response 10).

Response to Comment 3
The Board believes that active management includes strong forest security, which will improve the level of environmental protection, and will reduce the impacts upon aesthetics caused by illegal dumping.

P-13

ALBERT PETER BELTRAMI
145 Mendocino Place, Ukiah, CA 95482

Tel: 707-462-6230 email: abel@ saber.net Fax: 707-462-7890

California Board of Forestry & Fire Protection
P.O.Box 944246
Sacramento, CA 94244-2460

31 January 2006

Re: Jackson Demonstration State Forest

Gentlemen/Ladies:

1 I am writing to urge you to support alternative C-1 as outlined in the Jackson Demonstration State Forest environmental impact review document.

After reviewing the document and its various alternatives carefully, I believe that Alternative C-1 is the best approach for a balanced and considered management of JDSF into the future.

This approach melds the best of past practice with updated and emphasized public protections and utilization. The proposal C-1, as recommended by your Staff, combines environmental concern with a balanced respect for appropriate timber harvest and education.

The provision of public access, public education, preservation of sensitive areas, appropriate harvesting, income for state and local governments, and economic benefits for local workers and industry are all ingredients for a successful and balanced approach to the JDSF.

JDSF has historically provided an avant garde approach to timber management and intelligent utilization of a growing resource. Proposal C-1 refines that historical utilization, with the added ingredients of increased public education, access and preservation of delicate areas.

Combine the success of the past 40 years with new features that serve the public and the environment and adopt proposal C-1.

Sincerely,

Al Beltrami

Al Beltrami

Mailed Letter P-13

Response to Comment

Comments and support for Alternative C1 noted. The management plan, as adopted, represents a reasonable balance between production, protection, restoration, and recreation. The Board agrees that the management of the past has been largely successful in implementing the intent of the Board and enabling legislation as specified in the various management plans of the past.

P-14

January 30, 2006

Robert G. Ingram
239 Harper Street
Grass Valley, CA 95945

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sac, CA 94244-2460

Dear Sir:

I am writing in support of the Jackson Demonstration State Forest's (JDSF) draft Environmental Impact Report. The preferred alternative – **Alternative C-1** best mimics the goals and objectives of the State's experimental forest.

For over 50 years the forestry research conducted at JDSF produced valuable best management practices information. Additionally revenues derived from the perpetual sustained harvesting helped the local economy with well paying rural jobs. With 80% of California's wood needs supplied by imported lumber, the public needs to observe and understand how all the state's resources can be protected while retrieving a continual supply of wood products.

Alternative C-1, clearly is the best choice.

Sincerely,

Robert G. Ingram

RECEIVED BY
FEB - 1 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-14

Response to Comment

Comments and support for Alternative C1 noted. The Board agrees that there is value in demonstration of effective resource protection while producing timber products at the State and local level. Continued or increased production from California forests may help to reduce the level of imports, and may serve to reduce environmental impacts in areas not subject to significant environmental protection.

P-15

MENDOCINO COAST AUDUBON SOCIETY

POST OFFICE BOX 2297
FORT BRAGG, CA 95437
707-964-6835

Warren Wade
President

David Jensen
Vice-President

Tanya Smart
Secretary

Judy Steele
Treasurer

Board Members
Andarin Arvola
Becky Bowen
Jeanne Coleman
Tony Eppstein
Charlene McAllister
Art Morley
Virginia Wade

February 2, 2006

Christopher P. Rowney, Program Manager
Demonstration State Program
California Department of Forestry & Fire Protection
P.O. Box 94426
Sacramento, CA 94244-2460

Re: Draft EIR for the Jackson Demonstration State Forest Management Plan, SCH# 2004022025

Dear Mr. Rowney,

This letter represents a response from the Mendocino Coast Audubon Society (MCAS) to the Draft EIR for the Jackson Demonstration State Forest Management Plan:

1 MCAS understands the importance of the timber industry to the local economy and respects the legal authority of the state to harvest timber in Jackson Demonstration State Forest with the understanding that the purpose of the timber harvest on state property includes research, management, protection and respect for the biodiversity of this area.

2 The society is concerned about protection of the following listed bird species in Jackson Demonstration State Forest:

Osprey
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Marbled Murrelet
Long-eared Owl
Spotted Owl
Vaux's Swift
Purple Martin
Yellow Warbler
Yellow-breasted Chat

Christopher P. Rowney, Program Manager February 2, 2006

2 Our Society feels management proposals in the DEIR do not adequately address protection of these birds (as well as other species).

3 Specifically, we do not believe clearcutting is an acceptable alternative in any timber harvest. Experience tells us this legacy of the 19th century is devastating to all wildlife as well as to vegetation, soil and watershed. After more than 150 years of practice, we see no need for clearcutting. However, as Jackson is a demonstration forest and research techniques require clearcutting as long as this practice is on-going in other areas of the state, we believe that clearcutting and tractor yarding in this forest should be practiced as little as possible with a management goal of elimination at the earliest possible date.

4 The Draft EIR Management Plan for the forest does not address habitat needs of birds that require trees for food and shelter. Research cited in the draft is confusing and hard to follow. References cited in the text are not always noted in the appendix. For instance the reference to a Lehmkuhl and Raphael, 1993, study cited on p. VII 6.6-28 about the configuration of mature and late seral forests surrounding owl nests is not cited in the appendix.

5 We see no basis or adequate explanation for the models referred to as "Tables of Per Cent Change in Habitat Capability." We question the source and accuracy of these models and believe the management of the forest should come from relevant data gathered about the specific area by scientists who can apply their observations about Jackson Demonstration State Forest to management of this particular forest.

6 It is our opinion that bird surveys are often out-of-date within a few years, do not necessarily meet professional protocol, and may not include many species that are vital to the ecology but are not on the endangered or threatened species list.

7 With that in mind, we are requesting regular professional bird point counts be part of the management plan for the forest.

8 We also request that protection of the redwood canopy ecosystem be part of the management plan. We think it is important for you to consider research currently underway at Humboldt State University-Arcata, CA, where scientists have described the ecology of older-growth redwood forest canopy that includes soil, fungi, ferns, mature Douglas fir and hemlock trees, amphibians, reptiles, crustaceans and mammals—located in the crowns of redwoods hundreds of feet above ground level (*New Scientist* London: Nov 9, 2002. Volume 176, Issue 2368, p. 46-49).

9 It is not our intent to ban tree harvesting in the forest or to tell professionals how to do their jobs. We ask only that good science be applied to the practice of sustainable harvesting and that the resources of this vital part of our community be used in a way that provides protection for wildlife and plants.

Christopher P. Rowney, Program Manager February 2, 2006

10 We generally agree with the alternatives E and F put forth in the DEIR, and find alternatives C1 and C2 unacceptable. Elements of alternatives E and F which we think should be part of the demonstration forest management include protection of the forest ecosystem, minimal even-age harvest for purposes of research only with a goal of elimination of clearcutting and tractor yarding, no harvest of old growth, a low-to-moderate level of harvest, development of recreational facilities only when there is no risk to wildlife (including fish) and removal of invasive species by the most environmentally responsible method supervised by an ecologist with botanical credentials.

11 A Marbled Murrelet recovery demonstration area of at least 4,000 acres at the headwaters of Jughandle Creek and Russian Gulch (or any other part of the forest that is designated by biologists as a probable Marbled Murrelet nesting site) would be a beneficial aspect of the forest management—as would continued study and monitoring of Northern Spotted Owls.

12 As a practical matter, we also request that future draft proposals as well as the final management plan and any further publications that invite public participation be distributed in paper form to the library at the Mendocino Campus of College of the Redwoods, Fort Bragg, CA, where these issues are studied as part of the natural history and environmental science programs. The college is the institution of higher learning nearest to Jackson Demonstration State Forest.

We appreciate the opportunity to write to you about this and look forward to a timely response.

Sincerely yours,

Board of Directors, Mendocino Coast Audubon Society

Warren F. Wade, President

Mailed Letter P-15

Response to Comment 1
The ADFFMP reflects the Board's policies. Active timber harvest is conducted for the purposes of research and demonstration, while providing protection and maintaining or enhancing biodiversity.

Response to Comment 2
The potential for impacts to listed bird species and species of special concern was considered within an extensive assessment area that includes not only JDSF, but also the entire Noyo and Big River watershed areas. The assessment considered currently available habitat, and anticipated habitat availability in the future. Both direct and indirect impacts to individual species were considered. Based upon the assessment that was conducted, significant impacts to these species are not expected to occur, due to the long-term retention and creation of suitable habitat.

Response to Comment 3
Please see General Response 10. The practice of clearcutting is to be minimized within JDSF. Significant impacts associated with this minimal level of clearcutting are not expected to occur. In fact, when utilized as proposed, the creation of even-aged forest patches may prove beneficial to some species of wildlife, in conjunction with retention of structural elements as proposed. Species such as the osprey and purple martin have been associated with structural elements that often occur naturally within or above forest clearings. In the past, these features were often associated with the natural occurrence of fire.

Response to Comment 4
The analysis performed for the DEIR specifically recognizes and considers the value of forested habitat for birds, including the values of food and shelter (see DEIR Sections VII 6.6 and VIII 7.2). The citation of Lehmkuhl and Raphael (1993) has been added to the list of references.

Response to Comment 5
The cited tables and methods are explained in detail in DEIR Section VII.6.6. An appropriate and thorough assessment of the potential for impacts to wildlife makes use of both models and scientific data and observation. The models utilized in the assessment are widely recognized, and their use is supported by the Department of Fish and Game. Specific local data and observation is limited. Due to these limitations, models are capable of providing valuable insight into potential for impacts.

Response to Comment 6
The comment is not specific regarding perceived survey limitations. The analysis included the best available information. The management plan will maintain habitat for all species that currently utilize the Forest, and will provide for creation of additional habitat for bird species that are associated with older forests.

Response to Comment 7
The management plan provides for protocol survey of bird species of concern, and an assessment of potential impacts associated with planned projects. Protection of species will also be provided by provisions for maintenance and creation of habitats. The finalized plan’s future research priorities include examining upland wildlife habitat relationships.

Response to Comment 8
The Board agrees with this statement. Development of late seral forest and associated canopy will be an important element of the management plan. The ADFFMP designates an Older Forest Structure Zone that will connect most existing old growth groves resulting in a 6,803 acre linkage across the forest. This can provide an area available for research on forest canopy.

Response to Comment 9
The ADFFMP makes use of good science in the practice of sustainable harvesting. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of timber production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. CAL FIRE has consistently harvested well below the growth of the forest, resulting in an ever increasing inventory of larger, older trees. Protection is provided to wildlife and plants, and significant impacts are not expected to occur.

Response to Comment 10
Support for Alternatives E and F noted. Comments concerning management preferences noted. The management plan provides for retention of old trees with structural characteristics of value to wildlife. The development of recreational facilities will be preceded by an assessment of the potential for impacts to fish and wildlife. Significant impacts will be avoided through use of thorough assessment, including appropriate siting, and mitigation. Invasive species control will be accomplished by utilization of methods that will avoid significant impacts (see DEIR Section VII.8), and will be administered by personnel with the appropriate credentials and training to meet existing regulatory standards. The Forest staff includes individuals with training, experience, and education in the field of forest ecology.

Response to Comment 11
The Board recognizes the contribution that JDSF can make to the recovery of the marbled murrelet. The proposed management of forested area for development of late-seral forest conditions will aid in the development of potential habitat for the species. The management measure found in DEIR Section VII.6.6.4 will insure that a future contribution toward additional potential habitat will be carefully considered. Alternative G designates an additional 1,549 acres in the area of upper Russian Gulch and lower Big River to late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1). See also General Response 9.

Continued study and monitoring of northern spotted owls is expected to occur.

Response to Comment 12
Request noted. The management plan and final EIR will be made available to the public.

P-16

Freeman Realty

1468 South Main Street • Willits, California 95490
(707) 459-6750 • Fax (707) 459-6620

RECEIVED BY
FEB 3 = 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Jan. 30, 2006

Dear Sirs;

I would like to register my opinion about the DEIR for Jackson State Forest. The Citizens Advisory Committee proposal Alternative D, with further restriction on herbicides, seems most appropriate for Mendocino County.

Yours truly,
Patty Freeman

Mailed Letter P-16

Response to Comment
Comments noted. Preference for Alternative D, with further restrictions upon the use of herbicides noted. The Board has initiated an approach that will limit herbicide use relative to C1. Alternatives to the use of herbicides will be explored and tested (see also General Response 7).

P-17

Allen Overfield
147 N. Sanderson Way
Fort Bragg, CA 95437

January 30, 2006

RECEIVED BY
FEB 3 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460

Dear Mr. Gentry,

1 Please forward my comments to the Board for consideration in regards to the Draft Environmental Impact Report for Jackson Demonstration State Forest. I am an RPF, a former local school board member and an avid recreational user of JDSF. It is my preference that either Alternative C1 or C2 should be adopted by the Board for the following reasons.

2 Either proposal will allow for an Annual Allowable Harvest of 31 MMBF/year. Both uneven-aged and even-aged management should be allowed in order to provide the flexibility needed to manage the individual timber stands in the most appropriate manner. Herbicide use should be allowed when it is applied in a professional and judicious manner.

3 I believe that the timber harvest program is an integral part of the management of JDSF. Our local economy and schools depend of this program for jobs and local revenue. Timber harvest is compatible with all the other uses of the forest and it is integral to the concept of sustainable living.

Sincerely,

Allen C. Overfield
RPF# 2093

Mailed Letter P-17

Response to Comment 1
Preference for Alterative C1 or C2 noted.

Response to Comment 2
The Board agrees that the form of stand management utilized should be appropriate for the stand and management objective. Both even-aged and uneven-aged management will remain available, though some site-specific limitations will apply (see also General Response 10). The management plan, as approved, uses a set of structural goals to guide planned harvest actions. The central goal is not a particular level of timber harvest or a preferred method of harvesting but a set of forest structures that represent the full breadth of forest conditions. A significant level of timber production is anticipated.

Herbicides may be utilized as part of an integrated pest management (IPM) system, and will only be applied in a professional and judicious manner (see also General Response 7).

Response to Comment 3
The Board agrees with these statements. State Forest management will make a significant contribution to the local economy, and will serve to demonstrate the compatibility between timber production and other forest uses and values.

P-18

SHORELINE RIDERS, INC.
P.O. BOX 695
FORT BRAGG, CA 95437

RECEIVED BY
FEB 3 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

January 30, 2006

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, ca 94244-2460

Mr. Gentry:

Our club represents over 200 members ranging in age from 6 months to over 80 years. Over the years many of us have enjoyed Jackson State Forest for recreational purposes, for others it has supported our households by way of jobs or revenue to our local businesses.

Since Jackson State Forest was shut down a few years ago the effect has been devastating to our club members, their families, our community and our county.

Our group **urges** you to accept the proposed EIR and return Jackson State Forest to an active forest. Jackson State Forests continued operation is imperative for many of us to survive.

Thank you for your consideration.

Sincerely,

Stacey Bradley

Stacey Bradley
Board Member

SB

Mailed Letter P-18

See Response to Form Letter 1.

Response to Comment
Comments noted. It is the intent of the Board through adoption of the management plan that JDSF continue to make a significant contribution to the local economy, while remaining a valuable recreational resource. The Board agrees that the recent absence of revenue has had a negative effect upon the local economy. It is the Board's intent to return JDSF to a status of full and active management as soon as possible.

P-19

RECEIVED BY
FEB 3 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

MENDOCINO COAST CYCLISTS
PO Box 742, Fort Bragg, CA 95437

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

January 29, 2006

Dear Mr. Gentry,

Thank you for asking for input on the Draft Environmental Impact Report (EIR) for Jackson Demonstration State Forest (JDSF).

Mendocino Coast Cyclists (MCC) is a cycling club interested in riding opportunities on the Mendocino Coast. In the last three years MCC has held three trash clean-up days and four trail workdays totaling over 400 hours of volunteer work on JDSF.

MCC is concerned about the statement in the EIR for JDSF under 14.2.1 Carrying Capacity stating, "outdoor recreation opportunities abound on other public lands in Mendocino County and the North Coast region". There are no other public lands in this area that allow cyclists to ride on single-track trails. Roads that are closed to motor vehicles and allow cycling are limited to a few miles other than on JDSF. There is no other place that camping is free in this area. Cyclists very much value all these recreational opportunities not open to them except on JDSF. MCC would like to see a large increase in single-track trail miles open to cycling on JDSF. Also of concern is the omission in 14.2 Existing Recreation on JDSF under Campgrounds of Volcano Camp on Road 1000. This camp offers a great stop for cyclists wishing to do a multi day ride thru JDSF.

MCC understands timber harvesting is important to JDSF and the community. Recreation opportunities can coexist with timber harvesting by temporarily closing active harvest areas as in the past. Efforts to reestablish trails in harvested areas are appreciated very much. MCC hopes to work with staff and management at JDSF for increased cycling opportunities creating other places to ride when an area is temporarily closed. Thank you again for asking for our input.

Sincerely,

Marc Tenzel, President / Chris Clutton, Secretary / David Desautels, Treasurer

Mailed Letter P-19

Response to Comment
The management plan proposes a modest increase in the recreational trail system within JDSF, following a site-specific environmental analysis (see also General Response 14). However, most of the road system within JDSF will remain open to riding and hiking, subject to seasonal closure, or temporary closure due to management activity for safety purposes. At this time, no change in camping policy is anticipated.

The Volcano Camp has been closed for many years, due to access and maintenance problems. The status of the camp will be evaluated and repairs considered. The request for maintenance and availability of the camp is noted.

CAL FIRE and the Board welcome continued participation by recreational groups, and welcomes consideration of alternative trail routes when existing routes are temporarily closed due to management activity. The Department will form and consult with a local recreational user-group.

P-22

RECEIVED BY
FEB 3 = 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

January 31, 2006

Re: Comments on JDSF DEIR

Dear Mr. Gentry and other Board Members:

My name is Michael Thrush. I graduated (B.S. Forestry) from UC Berkeley in March of 1979 with a Forest Management emphasis. I have been employed in forestry work since 1974. I obtained my RPF license in July of 1986 (#2303). I am writing to express my **support** of **Alternative C1 (Proposed Project – Management Consistent with the May 2002 Draft Management Plan)** as regards management of Jackson Demonstration State Forest (JDSF). This alternative best balances the stated goal(s) of JDSF while protecting the environment and other resource values. 1

JDSF is the only publicly owned forest in the redwood region where large-scale research and demonstration can take place. This is a vital evolving task which should be given maximum flexibility. I believe Alternative C1 affords the most flexibility and the widest range of research and demonstration opportunities. 2

Current Forest Management Policy (Chapter 0351.2 A) states that "Timber production will be the primary land use on Jackson, Latour, and Boggs Mountain State Forests." I believe Alternative C1 best meets this stated primary goal of JDSF. 3

While I would personally like the harvest during the first decade to be closer to estimated growth, I am also aware of the other resource values which must be satisfied. Alternative C1's 31 MMBF per year harvest during the first decade represents only 70% of growth and 1.4% of inventory. I have some concerns that by not harvesting growth, overstocking or fire concerns may become a problem. This alternative is certainly better than many of the others which harvest much less. 4

5 Another reason I like Alternative C1 is that it allows even-aged management and allows the use of herbicides. These are proven and safe management tools which certainly offer unique and needed research opportunities. I also like the less entries required (in clearcutting) and the foraging opportunities afforded to neo-tropical birds, etc. before the trees grow and close the stand. Going to strictly uneven-aged systems or no management at all would effectively negate these important early seral stages. With fire exclusion in effect for a century, clearcutting under an even-aged system is the only silviculture which closely mimics this natural disturbance.

6 I am also concerned with all the lumber being imported into our state. It is short-sided and irresponsible to be adding all the unrenewable (shipping) fuel hydrocarbons into our atmosphere when we have such a productive, renewable resource right here. As our state's population increases, this will be more and more important.

7 I also fear that the no or restricted timber management options will lead to further local job losses and mill closures. Once the infra-structure for timber products (loggers, mills, suppliers, etc.) is lost, it will be hard to re-establish. The likely result would be more catastrophic wildfire losses (and loss of homes, lives; unacceptable air pollution, soil and habitat destruction, etc.).

8 I believe the State and National Parks and Wilderness areas offer plenty of opportunities for recreation and old growth. Alternative C1 protects old growth stands and allows recruitment of old growth in riparian stream zones. It also will allow recreational corridors which emphasize demonstration values. This will be a great opportunity to educate the general public on various forest management treatments and appears to be at an appropriate level.

In conclusion, I believe that Alternative C1 represents the best alternative for management of JDSF. This alternative allows a reasonable annual harvest based on sustained yield principles and is compatible with recreation, soil, water, wildlife, fishery values, and aesthetic enjoyment. Thank you for considering my comments.

Sincerely,

Michael A. Thrush

Michael A. Thrush
RPF #2303

Mailed Letter P-22

Response to Comment 1
Support for Alternative C1 noted. The Board developed Administrative Draft Forest Management Plan (ADFFMP) strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the Demonstration State Forest system (see General Response 2). The timber harvest level and allocation of silvicultural prescriptions under the Alternative G and the ADFFMP are based on providing a varied landscape with a diverse set of forest structures designed to support a world-class forest research and demonstration program, rather than to achieve a particular level of timber production.

Response to Comment 2
Comment noted. The Board agrees that the size of JDSF provides a unique opportunity for research and demonstration at the sub-watershed or habitat-level. The management plan retains management and research flexibility, while also providing for protection, restoration, and recreational opportunities.

Response to Comment 3
Comment noted. The legislation that provided for establishment of the State Forest makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of forest management at JDSF; therefore a significant level of sustained timber production will occur at JDSF. The Board supports a balanced multiple use concept and maximum sustained production of high quality timber products.

Response to Comment 4
The level of fire hazard presented at JDSF is affected by many factors, including timber harvesting. However, the relative level of fire hazard is not directly related to the level of annual harvest, being much more influenced by stand structure, fuel levels, access, ignition potential, and fire control opportunities. While harvesting tends to reduce the volume of timber in a given area, the reduction in standing volume alone does not necessarily reduce the level of fire hazard. Please see Section VII.8.3 of the DEIR for the assessment of impacts associated with fire. Significant impacts are not expected to occur.

Response to Comment 5
Comments noted. Management of JDSF will include provision for continued use of even-aged management systems and herbicides, subject to limitations (see also General Response 7 and 10). Future stand management will create and maintain habitat for neo-tropical bird species through periodic creation of early seral stages of stand development. The potential environmental effects of stand management have been considered, and significant impacts are not expected to occur. Impacts will be avoided by many factors, including harvest limitations, establishment of protection zones, harvest level and rate, and erosion control measures. Please see DEIR Section VII for the assessment of potential impacts associated with general management of the Forest.

Response to Comment 6
Comment noted. The relative production of hydrocarbons associated with importation of forest products is speculative, and was not assessed in the DEIR.

Response to Comment 7
Comment noted. The management plan will provide for a significant level of sustained timber production, estimated to fall within the range of 20 to 25 million board feet per year for the first decade. The relationship between future production levels at JDSF and the remainder of the local area is somewhat speculative, as is the relationship between timber producing expertise and wildfire potential. However, the analysis considered the level of harvest proposed for JDSF in combination with an estimated level of harvest on private lands within the assessment area.

Response to Comment 8
Comments noted. JDSF is a valuable recreational resource, and this value is confirmed in Board policy. The Board agrees that forest management will provide a valuable public education benefit. Please see General Response 14.

P-23

February 5, 2006

California State Board of Forestry and Fire Protection,
P.O. Box 944246,
Sacramento CA 94244-2460

Reference: Jackson State Forest

I am unable to participate in a verbal session since I am very deaf and can not hear but maybe half of the close conversations that people with normal hearing easily hear.

I would like to say a good word for Clear Cutting.

I am a 1941 Graduate in Forestry from U.C. Berkeley, have resided in Mendocino County since 1951, and have worked mainly in the Redwood Region from near the San Luis Obispo County line in Monterey County north to the Oregon Border. A fair share of my experience is on the Jackson State Forest's timber sales programs.

1 I am against the vast area clear cutting of over a hundred acres as has sometimes been practiced in recent years by the Industry. However, Redwood reproduction often depends upon single species
2 management. In the whole region and particularly on the State Demonstration Forest I believe a system allowing clear cutting up to 20 or 25 acres in a block would be beneficial and allow for good Forest Practice and good land and forest management.

Robert T. MacDougall, Jr.,
R.P.F. #89 retired
Consulting Forester
105 Barbara Street
Ukiah, CA 95482
<rtmkvm@pacific.net>

Mailed Letter P-23

Response to Comment 1
The Forest Practice Rules restrict clearcut size to 40 acres or less, depending upon local conditions. Even-aged forms of management, including clearcutting, are appropriate under certain conditions and when appropriately applied. Though clearcutting will be limited, forms of even-aged stand management and forms of uneven-aged management that make use of small patches or groups of trees of the same or similar age will continue to be demonstrated within JDSF(see also General Response 10).

Response to Comment 2
While redwood regenerates and grows well in full sunlight, such as the condition often created after a clearcut, the species is capable of regenerating in association with other local species, including Douglas-fir, grand fir, hemlock, ceanothus, and tanoak.

P-24

George A. Hollister
PO Box 148 ph. (707) 937-5918
Comptche, CA 95427
e-mail hranch@saber.net FAX (707) 937-3064

Feb. 1, 2006

RECEIVED BY
FEB - 6 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

George D Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca 94244-2460

Re: JDSF Management Plan draft EIR

Dear Mr. Gentry

I have been a commercial forest owner and logger for the past thirty years. I know that human enterprise can make the forest a better place. And commercial forest management based on science can meet the needs of people better than forest management that excludes people and ignores science. Jackson Demonstration State Forest is an excellent demonstration of a commercial forest that uses science to achieve it's humanitarian goals. It is an example of management that is capable of meeting the diverse challenges of today as well as it met the challenges it faced when conceived fifty years ago.

The Draft EIR of the Draft Management Plan is beyond adequate. While it is not perfect, it is long on investigating issues with little humanitarian significance.

Alternative B is the preferred option for management. This is the most flexable choice and would meet the needs of the most people.

Sincerely, George A. Hollister

George A. Hollister

Mailed Letter P-24

Response to Comment
Preference for Alternative B noted. Due in part to changes in regulation, environmental assessment, and forest management, a management plan that combines provisions of Alternative B with those of other alternatives has been developed and is reflected in the ADFFMP (Alternative G).

P-27

Jere Melo, *Forester*
120 Jewett Street
Fort Bragg, CA 95437
Phone: 707 964-0676
Cell Phone: 707 357-1671
FAX: 707 964-4407
E-Mail: jlmelo@mcn.org

RECEIVED BY
FEB - 6 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 1, 2006

Mr. George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

VIA E-Mail: board.public.comments@fire.ca.gov

RE: Jackson Demonstration State Forest (JDSF)
Draft EIR and Management Plan

Dear Mr. Gentry:

I wish to register my **support** for the following:

1. The Board needs to certify the EIR for JDSF as soon as comments to the draft have been answered; and,

1

2. The Board should select Alternative C 1 from the range of management alternatives.

2

Following are the important reasons for my decision:

1. The EIR is a substantial summary of information related to forest land management. The EIR provides Board members with sufficient information to make a decision about the management of JDSF.

2. Much of the information for the EIR was developed on JDSF. The EIR is not dependant on information developed from other locations. While the local information is important in a judgment on this EIR, the same information provides guidance for development of a proper regulatory scheme for the entire Redwood Region.

3. Alternative C 1 is the closest fit for property zoned as TPZ. JDSF is a **Demonstration Forest**, and the legislation related to state forest purposes, the goals of the Forest Practice Act and the zoning as TPZ in Mendocino County are best accomplished by the selection of Alternative C 1.

3

4. There are the local, social aspects that support the selection of Alternative C 1. Since management of JDSF was curtailed by court decision, jobs have been lost on the JDSF staff, and direct jobs in the logging and wood products manufacturing industries have diminished. Depending on the economic multipliers used, additional jobs have been lost in the support sectors of the local economy. Local governments and schools have

seen substantial reductions from timber taxes. Alternative C 1 is the single alternative to mitigate those losses.

The Board will likely get a large number of comments to make active management a low priority. I urge the Board to consider the above factors in selecting a proper alternative for the management of JDSF.

Thank you for the opportunity to comment.

Sincerely,

Jere Melo
Forester

(Original with signature to be sent by mail)

Mailed Letter P-27

Response to Comment 1
Support for Alternative C1 noted. Since this comment was made, the Board has developed Alternative G and the ADFFMP, which build on C1.

Response to Comment 2
Comments noted. The Board agrees that the DEIR appropriately assesses the potential for environmental effects to occur. The Board agrees that management conducted at JDSF can serve to demonstrate to, and inform policy makers, including this Board. Management at JDSF will provide a meaningful demonstration for owners of land zoned for timber production (TPZ), recognizing that owners are not likely to imitate the entire management program that is implemented at JDSF. The Board recognizes that timberland owners manage differently and have differing objectives.

Response to Comment 3
Most of the alternatives considered would provide a significant contribution to the local economy, including Alternatives B, C1, C2, D, F, and G, as well as the ADFFMP, which is based on Alternative G. With the exception of Alternative A, all alternatives provide some level of sustainable timber yield. Given the complex interaction between economic forces within the County and within the local timber industry, the variation in economic effects produced by estimated timber production levels associated with some of the alternatives is not a certainty. No significant adverse economic effects are anticipated as the result of adoption of the management plan.

P-29

Chamber of Commerce
MENDOCINO COAST

RECEIVED BY
FEB - 6
BOARD OF FORESTRY
AND FIRE PROTECTION

February 1, 2006

George D Gentry
Executive Officer
Board of Forestry and Fire protection
PO Box 944246
Sacramento, CA 94244-2460

Mr. Gentry,

1 The Board of Directors of Mendocino Coast Chamber of Commerce is pleased to see progress being made on the Management plan and EIR for Jackson Demonstration State Forest (JDSF). The Chamber Board understands the difficulty of balancing the diverse points of view regarding forest management.

We feel strongly that education, restoration, recreation, and habitat conservation play a significant role in the management of JDSF. The Board further believes that all old growth stands and isolated old growth trees in JDSF shall be preserved and protected for future generations.

2

3 JDSF needs to be the leader in research and education on such issues as erosion control, stream restoration, habitat conservation and other issues affecting the overall health of the forest ecosystem. Research from the forest needs to be better disseminated to land owners and the general public so that all stake holders can share the educational opportunities.

4 The board further supports timber harvesting on JDSF in a sustainable manner with the utmost in environmental protection. We recognize the economic benefits to the general welfare and prosperity of our local business community provided by JDSF. Coastal Mendocino County needs a mix of forestry, fishery and tourism related jobs to keep our diverse economy sustainable.

Sincerely,

Debra De Graw
Executive Director

Mailed Letter P-29

Response to Comment 1
Comments noted.

Response to Comment 2
The old-growth stands within JDSF will be preserved, as will individual old trees of significant size, and those with unique structural characteristics of value to wildlife. Please see General Response 8.

Response to Comment 3
Research and education are important components of the management plan. The Board agrees that research and demonstration results should be widely distributed. CAL FIRE is currently developing a website to catalogue the research and demonstration projects and/or publications that have been developed on the State forests (http://demoforests.net/). The website is incomplete, but the intention is to provide a comprehensive catalogue and a means to disseminate information, including data sets, regarding projects on the State forests. This website will be moved to the main CAL FIRE website (http://www.fire.ca.gov/) in the near future.

Response to Comment 4
The ADFFMP proposes to implement a program that includes a sustainable level of timber production to benefit the local economy, while providing a high level of environmental protection.

P-31

RECEIVED BY
FEB - 7
BOARD OF FORESTRY
AND FIRE PROTECTION

Michael Bates
P.O. Box 1018, Burney, California 96013

February 02, 2006 11:53 AM

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Subject: Jackson State Forest

Dear Members Board of Forestry:

1 I strongly support the proposed management plan for Jackson State Forest. I support the plan's clear-cutting, commercial logging, managing all timber stands in the forest, the more than adequate stream protection, wise herbicide use, and the continue recreation use. I personally want Jackson State restored to a working demonstration redwood forest that is also profitable to the State of California.

2 I fully support approval of the draft environmental document (Draft EIR) Alternative C1. The JDSF is set up for natural resource scientists to test hypotheses and conduct demonstration projects to help California forestry meet new challenges and reclaim its ability to compete in the global market place. Scientists need a management plan with maximum operational flexibility, while still protecting important values such as old growth, water quality and fish/wildlife habitat.

3 The Draft EIR concludes that the state's proposed logging plan (Alternative C1) can be carried out with "less than significant environmental impacts." I also support this conclusion.

4 The draft environmental document is comprehensive and I was able to review it thoroughly. It's 1500+ pages make the electronic version very easy to use, and the printed copies are expensive to buy - over $200 per copy, but it is worth it!

5 The Draft EIR (C1) totally meets its legal obligation to provide the information and analysis I need to be able to make an informed judgment on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,
Michael Bates

cc:
Senator Sam Aanestad
Mendocino County Board of Supervisors
Assembly Member Doug La Malfa
Governor Arnold Schwarzenegger

Mailed Letter P-31

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. It is the Board's intention, through adoption of the management plan, that JDSF be restored to a working demonstration forest that produces revenue for the State.

Response to Comment 2
The Board agrees that management of the Forest can serve as a research laboratory and forest management demonstration, while retaining management flexibility and protecting public trust resources. The management plan will serve these purposes.

Response to Comment 3
The Board has found that the DEIR/RDEIR demonstrates that the proposed management of JDSF will not result in significant environmental impacts.

Response to Comment 4
The Board agrees that the DEIR is comprehensive, which necessarily results in a lengthy document and a substantial reproduction cost (see also General Response 5).

Response to Comment 5
Please see Response 3 above.

P-32

RECEIVED BY
FE - 7 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Michael Goodner
22104 Lippencott Ct. , Burney, California 96013

February 02, 2006 10:27 AM

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Subject: Jackson State Forest

Dear Members Board of Forestry:

I strongly support the proposed management plan for Jackson State Forest. I support the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, the more than adequate stream protection, herbicide use, and a plan to for existing recreation. I personally want Jackson State managed as a demonstration forest with not more than 25% of the area managed as an old growth redwood forest for habitat, recreation, education and research.

I support Alternative C.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy. This makes the EIR process work in the real world.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is very true.

The draft environmental document is so huge and obscure but I still am able to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy! This is a bad thing for enviros who have partaken of too many drugs.

The Draft EIR totally meets its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,
Michael Goodner

Mailed Letter P-32

Response to Comment

See P-31 above. In addition, please see General Response 2. The allocation of stand types at JDSF is based upon consideration of the enabling legislation, Board policy, and existing regulation. The planned allocation of forest area to late-seral forest protection and development does not preclude the development of a vast array of stand conditions that are suitable and available for demonstration of timber production and other forms of active management research. Most of the forested area of JDSF, including the area designated for late-seral forest development, will remain available for management that will help create, maintain, or enhance the values for which those areas were designated. See also General Response 8 and 9.

P-35

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Sheryl Smith
15555 Hearst Road
Willits, CA 95490-9235

George D. Gentry, executive officer
Board of Forestry & Fire Protection
P. O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry:

Regarding the draft plan for the future of the Jackson State Demonstration ~~Forest~~:

D please

Why? Because it best protects water—the next most valuable resource. Also, it takes the long view. We have plenty of examples of what happens in the short view.

Thank you,
Sheryl Smith

Mailed Letter P-35

Response to Comment
Support for Alternative D noted. The DEIR analysis determined that some elements of Alternative D may be inconsistent with the current Public Resources Code, regulations, and Board policy that guide the management of JDSF (see Table VI.1). Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. One example of the research and demonstration emphasis will be to test the cost and effectiveness of the riparian zone management approaches contained in Alternatives C1 and D-F. The results of these experiments will be utilized as part of the adaptive management process defined in Chapter 5 of the DFMP.

The Board and CAL FIRE believe that the ADFFMP and DEIR/RDEIR have sufficiently addressed the potential environmental impacts and, in addition, allowed the flexibility needed in a management plan to monitor and adjust management activities as needed. Significant impacts to water quality due to management as approved by the Board are not expected to occur (see General Response 11). Please refer DEIR Section VII.10 and VIII.4 for a detailed analysis. See also General Response 2.

P-36

George Gentry, Executive Officer
California State Board of Forestry and Fire Protection
P. O. Box 944246
Sacramento, CA 94244-2406

Feb. 6,2006

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Dear Mr. Gentry,

Please see the following comments on the Jackson Demonstration State Forest Draft EIS.

First let me say I think it is a well done and very complete document. The different options and their consequences are well described. I believe option C - 1 is the most appropriate option for the Board of Forestry to choose. My reasons are:

1

1. This option best fit's the existing Board policies, Public Resources Code provisions and regulations. It provides for management of the forest to achieve maximum sustained production of high quality forest products while giving consideration to recreation, Watershed, wildlife, range and forage, fisheries and aesthetic enjoyment. In fact it provides for increased consideration of all of these factors including development of a late-seral forest component. It, through the management plan, sets out future desired stand conditions and out lines how they will be achieved. It also provides for enhanced stream protection and restoration as well as enhanced wildlife considerations. It provides for a variety of stand conditions allowing for increased opportunity for research and demonstrational projects.

2

2. Option C-1 provides for the best mix of economic, social, and environmental factors. By doing what is mentioned above it protects the environmental attributes as well as providing economic values to the county and the community through tax revenues and jobs. This option provides for an annual cut of 31 MMBF and a long-term sustained yield of 45.2 MMBF which provides more return to the county through yield tax and more good paying jobs to the community. The other options, with exception of C-2, provide less.

3

3. One of the over-riding social benefits is the example of reducing our states dependence on imported lumber products, products often produced in areas with far fewer environmental considerations than California. This not only true of finished products but of logs as well. There is at least one mill in the county that imports logs on a regular basis. Jackson State Forest may be a small step state wide in reducing this problem but it is the example that counts.

I sincerely urge the Board to adopt option C-1 as their favored option and move Jackson Demonstration State Forest forward after so many recent years of stagnation.

Sincerely,

Forest B. Tilley

Mailed Letter P-36

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long term stewardship. See General Response 2.

Response to Comment 2
Comments noted. The Board is aware of the relative timber production levels presented by the various alternatives included in the analysis. The ADFFMP provides similar benefits.

Response to Comment 3
The Board recognizes that the regulation of logging in California incorporates high levels of resource protection when compared to many other timber producing regions, and that California imports approximately 70% of its forest products, with much of that coming from regions with lower levels of environmental protection. The Board supports the idea that by demonstrating forest management that incorporates high levels of resource protection as a viable enterprise that can be economically and environmentally sustainable, JDSF and the other Demonstration State Forests can serve to reduce this problem and can continue to provide at least one example in each forest type within California.

P-42

RECEIVED BY
FEB - 9 . 06
BOARD OF FORESTRY
AND FIRE PROTECTION

COAST ACTION GROUP
P.O. BOX 215
POINT ARENA, CA 95468

February 6, 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244

Subject: Support draft EIR Alternative F

Dear Members of the Board:

1 Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coast redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range. In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves according to an analysis published by the Save-the-Redwoods League in 2000. It is this context that brings a heightened urgency to management issues at Jackson.

2 **I strongly urge you to adopt Alternative F, the "Older Forest Emphasis"** plan for management at Jackson. Given the legislative mandate under which the forest is operating, Alternative F balances a high level of environmental protection with a carefully implemented timber production program. A gently applied timber management program will be consistent with the existing legislative mandate while greatly reducing the long-running controversy at Jackson. At the same time, regionally scarce fish and wildlife habitat will be enhanced. Alternative F strikes a good balance.

Outline of considerations as basis for Coast Action Group support of Alternative F:

3 • Maintains and creates connectivity among the existing older forest areas, including 11 old growth groves, which total 459 acres, some of the largest such groves remaining in Mendocino County.

4 • Emphasizes maintaining much of the old second growth forest, roughly 10,000 acres that are 80-120 years of age. By contrast, the CDF-favored plan, Alternatives C1 and C2, would log much of the old second growth in the next ten years, leaving the old growth groves and very small "late seral development areas" as islands in a sea of commercial logging.

5 • Recommends that timber production be limited mostly to selection logging, which leaves better wildlife habitat and more natural looking surroundings and generally eliminates the conditions that might trigger consideration of herbicide use. Even-aged management is limited to scientific experiments.

1

6 • Applies federal watercourse protections across the forest that are dramatically more extensive than the standard California rules. This will help Jackson maintain habitat for salmon, which are under siege in the region from destructive land management practices.

7 • Designates areas for enhanced protection of the endangered marbled murrelet, a small sea bird associated with old growth forest known to be nesting nearby; and creates habitat development areas specifically with murrelets in mind.

8 • Encourages research and demonstrations for small landowners on habitat recovery processes.

Although Alternative E, (Late Seral Emphasis) is designated by the EIR as the environmentally superior alternative, the EIR notes the Alt E plan to turn the whole forest into old growth over time and eliminate logging is not consistent with the legislative mandate for Jackson, which is to demonstrate "maximum sustained production of high quality forest products while giving consideration to values related to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment." "Forest products" is defined to mean traditional outputs like timber, poles, etc. Sierra Club sponsored legislation in 2004 that would have changed that mandate. Although the bill passed both the Senate and Assembly, it was vetoed by Governor Schwarzenegger. ***Alternative F was created to implement major reforms at Jackson while still being consistent with current law.***

For the past ten years there has been a high degree of dissatisfaction with Jackson's management. I urge you to adopt the meaningful reforms that are outlined in Alternative F, and *finally* put the controversy to rest.

Sincerely,

For Coast Action Group

2

Mailed Letter P-42

Response to Comment 1 and 2
Please see response to Form Letter 6

Response to Comment 3
Significant impacts to wildlife associated with a loss of connectivity are not expected to occur. The finalized management plan proposes to maintain forested habitat throughout JDSF, including the creation of a contiguous 6,803-acre corridor, extending across JDSF from west to east and north to south, composed of Older Forest Structure Zone, the majority of Old Growth Reserves (359 acres), and Late Seral Development Areas (see RDEIR Map Figure 1). In addition, it designates management of riparian zones on Class I and II streams for the development of late successional habitat, including the recruitment and placement of large woody debris. Other areas of the Forest may be managed on an even-aged basis, producing some temporary interruption of local connectivity for some species that are unwilling or unable to cross through or above young forest. However, this is a temporary and insignificant effect. A site-specific wildlife analysis will accompany all projects, including the habitat needs of listed species. Significant impacts are not expected to occur. See also General Response 9, 10 and 12.

Response to Comment 4
Alternatives C1, C2, and F would allow stand management to occur within most second-growth forest stands, but to varying intensities, and utilizing differing ranges of stand management. Actions implemented under the ADFFMP , including timber harvesting, are based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program (refer to RDEIR Table II.1). Stand management and logging activity does not necessarily create islands of the old growth groves and late seral development areas, but does alter the structure of the forest temporarily. The Older Forest Structure Zone will link many of the old growth groves and late-seral development areas, as will the watercourse and lake protection zone, which will be managed to develop late seral forest. Logging is the practice of falling and extracting trees from a forested area, generally for commercial purposes. The intended stand management determines the resultant structure of the forest, not the mere fact that an area has been logged for commercial purposes. The management plan provides for management to accelerate late seral and older forest structure development. This management can include logging and the development of commercial forest products. The majority of stand management proposed in areas of older second-growth forest during the coming years will produce temporarily thinned stands of young forest, while maintaining a forest canopy and providing an opportunity for development of multiple canopy layers. These are conditions that are favorable to many species of wildlife. Old growth forest also tends to possess multiple canopy layers, and trees of varying sizes and ages.

Response to Comment 5
The contention that selection logging leaves "better wildlife habitat" is not supported. Selectively harvested stands have unique characteristics of value to wildlife. These stand conditions change as stands develop. Even-aged management can produce highly variable conditions that are also of value to wildlife (see General Response 10). The management plan proposes to create a dynamic and varied matrix of stand conditions of value to a broad range of species.

Aesthetics have been considered. Significant impacts associated with aesthetics are not expected to occur. Please see DEIR Section VII.2 for the assessment of potential effects associated with aesthetics. This protection will be augmented by the creation of the Older Forest Structure Zone, and the addition of acreage to be developed into habitat for the marbled murrelet. It is untrue that selection logging "generally eliminates the conditions that might trigger consideration of herbicide use". While invasive species are quite variable, and their environmental site preferences are not the same, most of the currently known invasive species associated with JDSF can be found along

roadways and in areas of recent soil disturbance. These conditions can be produced by many forms of even-aged and uneven-aged management, including selection management.

Response to Comment 6

Significant impacts associated with the proposed watercourse protection measures are not expected to occur. Please see DEIR Section VII.6.1 for the analysis of potential impacts to aquatic resources within the assessment area. See also General Response 11.

Response to Comment 7

Comment noted. Several of the alternatives provide for the development of additional potential future habitat for the marbled murrelet, including Alternatives C1, C2, D, E, F and G. Alternative G designates an additional 1,549 acres in the area of upper Russian Gulch and lower Big River to late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1).

Response to Comment 8

Several of the alternatives considered are likely to produce management that includes provisions for research and demonstration involving habitat recovery and the processes involved, including Alternatives C1, C2, D, E, F and G. See General Response 9 and 12.

—P-43

February 7, 2006

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Re: DEIR for Jackson Demonstration State Forest

Dear Mr. Gentry,

I want to submit my comments for this DEIR which is under consideration for approval. The Environmental Impact Report is well prepared and provides a clear evaluation of the impacts of the alternatives as well as providing analysis of the issues associated with forest management. It is comprehensive yet easy to understand. It will be a valuable resource for small forest landowners, like me, by providing scientific analysis of forest management alternatives.

I recommend adoption of Alternative C1 as it supports the environmental findings and recognizes the important role the JDSF plays in forest research. It recognizes the need to balance the uses of JDSF and does not support any single use management program. Alternative C1 also provides the greatest benefit to the greatest number of California residents.

I urge you to vote for Alternative C1 during your deliberations.

Thank you,

Jackie

Jackie Bozeman
J&B Tree Farm
PO Box 4373
Georgetown, CA 95634-4373

Mailed Letter P-43

Response to Comment
Comments and support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long term stewardship. The management plan will provide the benefits outlined in the comment letter.

P-45

ROBIN GOLDNER, MSW
Licensed Clinical Social Worker #15873
245 S. Humboldt St., Suite B • Willits, CA 95490 • (707) 459-5673

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY AND FIRE PROTECTION

February 3, 2006

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Support for Alternative F for Jackson State Forest

Dear Mr. Gentry:

1 In the past twenty-four years, I have seen the economy of Mendocino County, which was once tied to the extraction of forestry products and fishing, become reliant on sustainable timber production and tourism. Willits and Fort Bragg's retail and hospitality businesses are increasingly dependent on the dollars spent by visitors. That is one reason that the Mendocino County Board of Supervisors, and the City Council of Willits voted to endorse the passage of the California Wilderness Bill, which protects lands near Willits. Mendocino County is fast becoming a respite for the Bay Area.

2 You too have an opportunity to enhance the future economic and recreational opportunities for the region. That is why I urge you to support Alternative F management plan. This plan will provide sustained production of high quality timber products while at the same time help maintain and restore habitat for flora and fauna in our local redwood forests, and limit clearcutting. This plan will incorporate habitat protection, maintenance and creation of new hiking trails, and an advisory committee that is environmentally based.

Please support a sustainable future for Mendocino County.

Sincerely,

Robin Goldner, MSW

Mailed Letter P-45

An identical letter was received from Marc Komer. The following serves to respond to both letters.

Response to Comment 1
The Board recognizes the value of sustained timber production and recreation to the local economy. The ADFFMP provides for sustainable timber production and recreational opportunities. Please see DEIR Sections III.5, III.6 and VII.14 for the assessment of potential economic and recreational impacts. Also see General Response 14.

Response to Comment 2
Support for Alternative F is noted. The management plan is expected to enhance future economic and recreational opportunities within the region. The plan will also provide for a significant level of sustained timber production, while maintaining and restoring habitat for flora and fauna. Please see DEIR Section VII.6 for the environmental assessment associated with flora and fauna. Clearcutting will be limited (see General Response 10).

The plan incorporates habitat protection, maintenance and creation of hiking trails, and a JDSF advisory committee. The Board has provided for the creation of a JDSF advisory committee, which will advise the Department on implementation issues, and advise the Board on policy issues. There will also be a recreation user group organized to help guide the recreation program (see ADFFMP Chapter 3). The Department intends to maintain a broad spectrum of membership, including abundant expertise and knowledge in environmental issues. The JDSF committee is expected to include representation by local government, scientific experts, and the general public. The membership specifics have not yet been determined. This is in addition to the advisory committee for the state forest system as a whole.

P-46

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Gareth Loy
274 Sausalito St , Corte Madera, California 94925

February 02, 2006 02:32 PM

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Subject: Jackson State Forest

Dear Members Board of Forestry:

I know Jackson State Forest personally from years of camping there, hiking, and helping repair the Mendocino Woodlands as a volunteer, and I strongly oppose the proposed management plan for Jackson State Forest. How can the state conscience clearcutting and the use of herbacides on this land? This land belongs to the people of California -- you and me -- not to the timber industry. It belongs to the creatures that inhabit it, that have no other home. The

1 State cannot benefit from destroying the recreational and ecological value of this land unless it is motivated by greed of private parties who would benefit at the public's expense. This must be a jobs give-away to the timber industry. These lands are supposed to be held in trust for the greater good, not narrow, unsustainable greed of a few.

2 I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

3 I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

4 The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy. This makes a mockery of the EIR process.

5 The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd. How can this be that clearcutting 1/3 of the land and use of herbacides will somehow be "less than significant?" What would be significant by this definition? Total clearcutting?

6 The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

7 The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,

Gareth Loy

cc:

Senator Carole Migden
Assembly Member Joe Nation
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

Mailed Letter P-46

Response to Comment 1
The management plan proposes to manage specific areas of the forest on a sustainable basis, as a demonstration of sustained timber production in consideration of other resources. The recreational and ecological value of the Forest will not be destroyed. Please review the DEIR for an assessment of potential to impact recreational and ecological values associated with the Forest. Significant impacts are not expected to occur.

Response to Comment 2-4
Please see response to Form Letter 2.

Response to Comment 5
The statement is in error. The management plan does not propose to clearcut 1/3 of the land. As approved, the management plan proposes to allow utilization of even-aged stand management methods in up to 26 percent of the Forest over the next several decades. Very little clearcutting is anticipated (see General Response 10). Even-aged management will be implemented to create stands between 60 and 150 years-of-age, consisting of various forest structure conditions. Please see Sections VII and VIII for the assessment of potential impacts to fish, wildlife, watersheds, and impacts associated with the use of herbicides (see also General Response 6 and 7).

Response to Comment 6 and 7
See response to Form Letter 2.

P-49

P.O. BOX 224 • BRANSCOMB, CALIFORNIA • (707) 984-6181
FAX: (707) 984-6631

HARWOOD

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 9, 2006

George D. Gentry
Executive Officer
Board of Forestry & Fire Protection
PO Box 94246
Sacramento, CA
94224-2460

RE: JDSF DRAFT EIR

Dear YG & Board of Forestry:

1 I am writing in support of Alternative D as submitted by the Citizens Advisory Committee. This alternative best represents where the public is today, the science is sound, it demonstrates the appropriate things to the right people and most importantly promotes the vision and leadership needed to sustain a healthy forest products industry in California.

2 As a member of the CAC established by then CDF Director Richard Wilson in 1997, I can tell you that a great deal of thought and cooperation went into our progression. Working with a diverse group, it was very satisfying that we did not have to compromise our principles in coming up with these recommendations.

3 With the resource professionals represented both on the CAC and in advisory capacities, I feel confidant that the science our recommendations are based on is sound. JDSF can no longer be managed based on arbitrary volume, or revenue targets set by politicians in Sacramento. Harvest levels must be based on sound forest management, not the other way around.

4 As a demonstration forest, JDSF must reexamine its audience. The future of forestry in California is no longer the old industrial model. If the public needs to know the long term effect of even age management on a large scale, there are ample examples to study on industrial ownerships throughout the State. The future is in demonstrating how you can balance economic viability of keeping forest land in timber production while at the same time maintaining the public trust resources that society depends upon. In fact, these public trust resources can only be maintained if there is a vibrant / healthy forest products industry.

5

The forest products industry in California is at a crossroads. The old industrial model is a thing of the past. The public is demanding that we manage these forest resources for the greatest public benefit. We face low cost global competition in the marketplace that threatens to make California's forest products industry extinct. JDSF has the capacity to create and demonstrate a new paradigm to California's timber producers that will meet the challenge of a new millennium.

6

Alternative D, the recommendation of the CAC is the best proposal put forward to date to get JDSF and the State of California headed down the right road in addressing the challenges I have mentioned. Because we exist in dynamic times, no alternative including Alternative D should be cast in concrete. As science becomes better and the pressures of a global forest products industry come to bear, we must be flexible enough to adapt to the changes coming at us.

7

We now have a historic opportunity to act with the support of the vast majority of concerned Californians. I urge the Board of Forestry to be part of a positive solution by acting in a way that hopefully will get us past the acrimony that has plagued the forest products industry and the management of our forest resources for the past century.

Sincerely;

Art Harwood

Art Harwood
CEO
Harwood Products

Mailed Letter P-49

Response to Comment 1
Support for Alternative D noted. The DEIR analysis determined that some elements of Alternative D may be inconsistent with the current Public Resources Code, regulations, and Board policy that guide the management of JDSF (see DEIR Table VI.1). Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. The Board's intent in adopting the management plan is to implement the intent of the Legislature.

Response to Comment 2
The Board recognizes and appreciates the effort made by the committee appointed by Director Richard Wilson.

Response to Comment 3
The committee appointed by Director Wilson was not intended as a technical advisory committee, though the Board recognizes that a significant breadth and depth of technical knowledge was evident in the committee membership. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program, rather than a goal of a particular level of production, while providing a high level of protection for a wide range of forest resource values.

Response to Comment 4
The Board agrees that the State Forest should remain relevant to the needs of timberland owners, and remain a source of information and education for the public. The Board also recognizes the very broad range, and varying objectives of timberland owners in California today. In order to provide for research and demonstration related to a broad spectrum of viable management methods, it is beneficial to maintain a dynamic matrix of forest conditions available for research and demonstration. While even-aged management occurs on private lands, the condition of the stands and availability for study is not assured, nor is the availability of those lands for public study, education, and research.

The management of JDSF will contribute to the maintenance of a healthy forest industry, by contributing forest products, creating revenue, and primarily by providing a demonstration of sustainable forest management.

Response to Comment 5
See Response 4 above.

Response to Comment 6
The Board has proposed to adopt a management plan (ADFFMP) that incorporates many of the provisions set out in Alternative D. Board policy directs the Department and the Board to periodically review and update the management. Adaptive management is an important element of the management plan.

Response to Comment 7
The Board shares in the hope that the management plan will be greeted favorably by the majority of the interested public, and will serve as a model of modern forest management.

P-50

PACIFIC AUTO BODY & RENTAL INC.
746 NORTH MAIN STREET
Fort Bragg CA 95460
707-964-5983

January 30, 2006

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Mr. Gentry:

Please accept the Proposed Alternative B EIR and return Jackson Demonstration State Forest to active status. The shut down of Jackson Demonstration State Forest has had a devastating effect to our community and our county. In addition the State of California has not been receiving the much needed revenue from the sale of the timber.

The 50,000 + acres of JDSF was donated in the 1950's in order to create a demonstration forest; it has historically been a well managed forest. The purpose and intent of the donor's was to demonstrate and evaluate different methods of logging.

I **encourage** you to accept the proposed Alternative B EIR and return Jackson Demonstration State Forest to an active production forest. The revenue and jobs it will provide are very important to our community, county and our state.

Thank you for your consideration.

Sincerely,

Stacey Bradley

Stacey Bradley
President

Mailed Letter P-50

See response to Form Letter 1

Response to Comment
Please see General Response 2. JDSF was acquired for the purpose of demonstrating economic forest management including, but not limited to, logging methods. JDSF will remain a demonstration forest. The Board recognizes the importance of generating revenue to support important management activities as well as its contribution to the local economy. The legislation that provided for establishment of the State Forest makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of Forest management. A significant level of sustained timber production will occur at JDSF.

The Board developed Administrative Draft Forest Management Plan (ADFFMP) strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the Demonstration State Forest system (see General Response 2).

P-52

Sierra Club Lake Group

PO Box 1011 Kelseyville, CA 95451

RECEIVED

FEB 10 2006

BOARD OF FORESTRY

February 6, 2006

State Board of Forestry and Fire Protection
P.O. BOX 944246
Sacramento, CA 94244-2460

Re: Jackson State Forest EIR and Management Plan

1 The Sierra Club Lake Group strongly opposes the Preferred Alternatives in the draft EIR for Jackson State Forest. These would permit extensive clearcutting, industrial-strength commercial logging, destruction of pristine second-growth stands, and increased applications of herbicides, while doing nothing to reverse the degradation of the Forest's waterways and ignoring opportunities to expand low-impact recreational uses. Instead of being sacrificed for the transitory profit of certain favored extractive industries, Jackson State should be managed for habitat, recreation, education, and research, with the ultimate goal of restoring it as an old growth redwood forest.

2 The draft EIR fails even to consider the restoration alternative in a comprehensive manner; although Alternative E does promote old growth restoration, it fails to fund the repair or decommissioning of hundreds of miles of roads that currently degrade forest streams, much less pay for restoration of salmon habitat or expand opportunities for recreation. Alternative E, limited though it be, is moreover ruled out as "infeasible," while the massive logging proposals in Preferred Alternative C are absurdly deemed to have "less than significant environmental impacts."

3 Public oversight and comment has furthermore been unreasonably restricted by the size (1500 pages), obscurity, and expense ($200) of the draft environmental document itself. Thorough review of such a ponderous tome is extremely difficult, and in its electronic version to all intents and purposes impossible. Therefore we protest the entire process, on the grounds that the legal obligation under CEQA to provide the facts and analysis needed for an informed judgment has not been met.

Yours sincerely,

Victoria Brandon

Victoria Brandon

Chair, Sierra Club Lake Group

cc: Governor Arnold Schwarzenegger

State Senator Wes Chesbro

Assemblymember Patty Berg

Mailed Letter P-52

See Response to Form Letter 2.

Response to Comment 1
The comment incorrectly characterizes the management plan. The management plan does not propose "extensive clearcutting" (see General Response 10). The management plan does not propose to destroy “pristine second-growth stands”, but to manage on a sustainable basis in these stands, managing most of them on a selective basis. These stands originated from historic clearcuts, and are in various stages of development. Herbicide use is expected to remain limited. Any herbicide use will occur as part of a carefully considered and limited program (see General Response 7).

The streams within JDSF are in a state of recovery, and the management plan proposes to promote a continued recovery trajectory (see General Response 11). Low impact recreational opportunities will be maintained and a modest increase in these opportunities is expected to occur (see General Response 14). A significant portion of the Forest will be managed to promote late-seral forest conditions, while also recognizing that legislation establishes timber production as a primary land use of the Forest.

Response to Comment 2
The DEIR includes the assessment of a broad range of alternatives in an appropriate manner (see General Response 4). The Board agrees that Alternative E has a lesser potential relative to some of the other alternatives to create revenue to support some restoration activities. The management plan combines some elements of several alternatives to arrive at a management plan that will implement the intent of the Legislature and the Board's policies. The Board determined that some elements of Alternative E may not comply with existing law and policy. The writer is encouraged to review the analysis presented in the DEIR for an assessment of potential impacts associated with the management plan. Significant impacts are not expected to occur.

Response to Comment 3
The DEIR is comprehensive, which results in a relatively large document with a corresponding cost of reproduction. The DEIR is available electronically separately by section, and is also available for review at several libraries and CAL FIRE offices. The EIR and management planning process are in full compliance with CEQA. See also General Response 3 and 5.

P-53

Autumn R. Kruse
422 Evelyn Avenue, Apt. F
Albany, California 94706

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

February 7, 2006

State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460

Re: Jackson State Forest

Dear Sir or Madam:

I strongly oppose the proposed management plan for Jackson State Forest, which allows clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research!

The Draft EIR document is huge (1500 + pages!) and byzantine. A printed copy costs more than $200. Because of this the Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments.

However, it looks as though the Draft EIR's only reasonable alternative (Alternative E, which STILL doesn't commit funds for repairing the miles of road that pour sediment into salmon streams or for actively restoring salmon habit) has been rejected as "contrary to state law and Board of Forestry policy". This turns the EIR process into a joke. The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is crazy and they know it.

1 2 Please reject the Draft EIR. There is no reason logging can't be done sustainably, but logging old growth redwoods is by definition unsustainable. Please do not trust these short-sighted lumber companies to shepherd this resource. They have shown over and over that they prefer a dollar today to assets for the next generation.

Thank you for your time.

Sincerely,

Autumn R. Kruse

Cc: Governor Arnold Schwarzenegger
Mendocino Country Board of Supervisors
Senators Barbara Boxer & Diane Feinstein
Assembly members Loni Hancock & Don Perata

Mailed Letter P-53

See Response to Form Letter 2.

Response to Comment 1
The management plan proposes to preserve the existing old growth groves within the Forest, and to protect individual large old growth trees and those old trees with unique structural attributes of value to wildlife. In addition, the plan proposes to devote a significant portion of JDSF forest to management intended to develop late-seral and older forest characteristics. Please see also General Response 2, 8 and 9.

Response to Comment 2
Authority to draft the management plan is vested in the Department of Forestry and Fire Protection. The Board must approve the management plan. Lumber companies do not manage the State Forest or its resources.

P-54

February 8, 2006

Ken B. Jones
5 Andrew Way #46
Tiburon, CA

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

Mr. Stan Dixon, Chair
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Dixon,

1 I think it is important for the state and particularly those in the area around Mendocino to look at how much money in lost business revenue that will come from how many fewer people will be interested in the area as it loses the beauty that draws people there. But that is only part of what the focus should be. I was so struck by Jackson State Forest when I ran into it by accident years ago that it has been a big reason why I still go up to the Mendocino area from where I live. As we destroy ecosystems in our attempt to find a quick fix to a budget (sell trees rather than raise taxes even though the polls show people
2 want just the opposite) we get ourselves closer and closer to what happened to the community that lived and died out on Easter Island. What do you think the last resident said when they cut down their last tree (or maybe it was the last group of trees that, when chopped down, made the others unstainable and caused their demise) Government managers are supposed to be a check against the rush to fill an immediate need at the cost of all the life that comes after us. We elect representatives to stand for what we want. Their appointees are an extension of that mandate. The people in this state do not want
3 more trees clear cutted (How can anyone allow this with what we know of what that procedure does to the land?) They will pay more in taxes to keep that from happening. They will throw out government officials that are elected and do not follow their wishes.

I strongly oppose the proposed management plan for Jackson State Forest. It is just one more attempt to whittle away what little we have left of our life sustaining forests.. I oppose the plan's clear cutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document (draft EIR). It fails to consider a restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy. This makes a mockery of the EIR process.

The draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." Exactly how did we come to this conclusion???

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. Its 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy! Which trees were cut down to make this report?

The draft EIR fails to meet its legal obligation to provide the information and analysis I (and you) need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Finally I want to thank the Mendocino Board of Supervisors for their stand on wanting to keep their County a beautiful resource for all of us in the state. They are doing their jobs. Now you need to do yours.

Sincerely,

Ken Jones

CC. Governor Arnold Schwarzennegger
Joe Nation, State Assemblyman
Carole Migden, State Senator
Mendocino Board of Supervisors:
Kendall Smith; J. David Colfax; Hal Wagenet; Jim Wattenburger; Michael Delbar

Mailed Letter P-54

See response to Form Letter 2

Response to Comment 1
The potential for impacts to aesthetics and the local economy have been considered. With mitigation, significant impacts are not expected to occur. Please see DEIR Sections VII.2 and III.5.

Response to Comment 2
The primary intent of management of the State Forest is not the production of revenue for the State, though the demonstration of economical forest management is a primary purpose of the state forest. The intent of Forest management is clearly laid out in the enabling legislation and in the policies of the Board. See also General Response 2.

Response to Comment 3
The management plan appropriately reflects existing legislation, policy and regulation. The wishes of the majority of citizens within the State of California, relative to individual potential elements of forest management, is unknown, though the Board recognizes that many people do not favor the practice of clearcutting. The practice of clearcutting will be restricted (see also General Response 10).

P-59

Paul Ederer
31400 Little Valley Rd.
Ft. Bragg, CA 95437

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

1/30/2006

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Jackson State Forest Draft Environmental Impact Report

Dear Mr. Gentry

1 I am writing to support the adoption of alternative C-1 in JDSF's DEIR released for public comment in early 2006. As a forester working for 15 years in California's redwood region with two years working for the State on JDSF, I have seen many changes in how this important
2 renewable resource has been managed. The recent cessation of active management on JDSF has hindered the State's ability to test new regulations and validate existing ones in a research environment. Good scientific information that can be used for the benefit of all Californians is needed and Alternative C1 provides managers the flexibility to adapt to or test ever-changing regulations while still providing for the protection of fish and wildlife.

The pressure to convert California's forestland to more profitable subdivisions is
3 increasing. JDSF is the only publicly owned forest in the redwood region where large scale, long term studies can be reasonably accomplished to benefit the many different owners of redwood trees. This information can help landowners manage their lands better and avoid selling for non forest uses.

The tourist economy has been trumpeted as the golden egg for our local community to crack open. However, wages in the tourist industry are too low to maintain a livable income let
4 alone purchase a decent house in our area. Families are leaving Ft. Bragg in search of affordable housing and a lower cost of living. Alternative C1 helps keep the higher paying logging and milling jobs local. Community stability cannot rely on the whim of the tourist dollar.

I feel that Alternative C1 provides a variety of active and passive management techniques
5 across the landscape so JDSF can keep abreast of the many demands placed on the forest by the human and non-human residents of the State. Keeping the "Demonstration" in the forest is essential to perpetuating the original vision, and allows a unique opportunity for the citizens of the State to learn about their environment that more restrictive alternatives cannot provide.

Thank you for your consideration,

Paul Ederer
Registered Professional Forester #2509
Agricultural Advisor #2124

Mailed Letter P-59

Response to Comment
Please see response to Mailed Letter P-6.

P-60

ROGERS
FOREST
MANAGEMENT

1525 Glenwood Drive
Ukiah, CA 95482
(707) 463-0356

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

February 8, 2006

Re: Comments on Jackson Demonstration State Forest DEIR

Dear Mr. Gentry;

I am submitting the following written comments for the Board of Forestry in consideration for the final EIR of the Jackson Demonstration State Forest (JDSF).

1 After reviewing the Draft Environmental Impact Report, I have decided to support the preferred alternative C 1. This alternative is not only responsive to the legislative intent for JDSF to be a working, demonstration state forest, but also promotes long term forest stewardship. Alternative C 1 offers greater economic, ecological and social benefits than any others under consideration.

2 Alternative C1 is working towards a long-term desired future habitat, watershed and growing stock conditions, while also toward a high level of timber production and maintaining recruitment habitat needed for listed and other species of concern. Other benefits of this alternative include a road management plan to reduce sedimentation, the enhancement of demonstration capabilities and the potential increase in recreation facilities.

Mailed Letter P-60

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long-term stewardship.

The Board developed Administrative Draft Forest Management Plan (ADFFMP) strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the Demonstration State Forest system. The analysis process examined individual alternatives with varying benefits associated with economic, ecological, and social values.

Response to Comment 2
Please see General Response 2. The ADFFMP also provides for these current and future values, and includes a road management plan and an enhancement of research and demonstration opportunities and capabilities (see General Response 2). The management plan will provide for a modest increase in recreational opportunities (see General Response 14).

Response to Comment 3
The Board agrees that JDSF is not a park, while it provides many similar values and opportunities. It is the Board's intent, through adoption of the management plan, that JDSF remain a productive forest that makes a significant contribution to the local economy.

P-66

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RECEIVED
FEB 10 2006
BOARD OF FORESTRY

February 7, 2006

Dear Sir:

1 I am writing this letter to voice my support for resuming active management of the Jackson Demonstration State Forest (JDSF) as described in the current Draft Environmental Impact Report (DEIR), alternative C1, being considered by the Board of Forestry. As a registered professional forester in California, I am well aware of the many public benefits that can result from proper forest management.

2 When the State of California acquired Jackson State Forest in 1947, it had been heavily logged over a span of 80 years. Once acquired, it was managed under sustainable forestry practices to provide research and recreational opportunities, fish and wildlife habitat, and timber. This mission has been successfully implemented over the past 50 years as evidenced by the numerous campgrounds and demonstration trails, significant research such as the Casper Creek watershed study, abundant fish and wildlife, and use of timber revenue to fund essential state forestry programs including state nurseries and the California Forest Improvement Program (CFIP). Not only has active timber management helped make this possible but it has done so while increasing the standing timber volume 160%! Alternative C1 of the DEIR allows for growth to exceed harvest, ensuring the continuation of healthy forest conditions on JDSF, while providing these other vital public benefits.

3 The emotional outcry to save the "old growth" forests of JDSF is its best defense in demonstrating the success of active forest management, particularly when one compares the stand conditions of 1947 to today. You cannot admire the beautiful second growth redwood without acknowledging, and supporting, the role of continued forest management in maintaining these stands and their associated public benefits. I strongly encourage the Board to support active management of JDSF by selecting alternative C1.

Thank you for your consideration of these comments.

Sincerely,

Mark Pustejovsky
RPF #2583
545 North Fairfield Ave.
Susanville, CA 96130

Mailed Letter P-66

Response to Comment 1
Support for Alternative C1 noted. The Board strongly supports a return to full and active management of JDSF. Many provisions of Alternative C1 have been adopted by the Board and are included in the management plan. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP contains elements from several alternatives and is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest (see also General Response 2).

Response to Comment 2
The Board recognizes that the management of the Forest has produced a variety of public benefits, including research, recreation, habitat and timber. The management plan will provide for a continued increase in standing timber volume, with growth exceeding harvest. The Forest will continue to be managed to promote healthy forest conditions while providing many public benefits.

Response to Comment 3
Active forest management is an essential element of the management plan. The Forest serves as a valuable demonstration of sustainable forest management to the public and forest landowners.

P-70

Gentry, George

From: Walter [walter@pacific.net]
Sent: Tuesday, February 07, 2006 1:22 PM
To: Gentry, George
Subject: Comments on the Draft EIR/Management Plan for JDSF

Dear Mr. Gentry,

Please forward my comments regarding the EIR and Management of Jackson Demonstration State Forest below to Mr. Dixon and others on the Board of Forestry

Thanks, Walter

February 6, 2006

Stan Dixon, Chair
State Board of Forestry
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Chairman Dixon,

I am writing to provide comment on the forest management and administrative management of Jackson Demonstration State Forest (JDSF). I am a long time resident of Willits and have been employed in the timber industry for over 30 years. I have worked as a timber faller from 1974 to 1984 and as a logging contractor from 1984 to 1990. During the 1970's and 80's I worked in JDSF (my father worked in JDSF as a timber faller and a logging boss in the 1950's, 70's and 80's) primarily on the eastern half of the forest. From 1989 to 1992 I served on the Mendocino County Forest Advisory Committee. Since 1990 I have worked in the field of forest auditing with a Forest Stewardship Council (FSC) accredited certification body and have been an auditor for over 80 forest management audits in North America and Asia. Many of the forest management audits were on public forestlands. Several private FSC certified lands that I have audited are neighbors to JDSF.

1 Mendocino County is the most directly affected California constituency of JDSF. The Board of Forestry must seriously take into account the social, economic and environmental needs of the county when considering the management of JDSF. JDSF directly affects Mendocino jobs in timber, fishing, and tourism. These jobs are directly connected to sound environmental forest management that emphasizes the long-term maintenance and enhancement of an older forest structure, fish and wildlife habitat, water quality, and aesthetics. These qualities in turn are of the utmost importance to the citizens of California.

2 I would support the Citizens Advisory Committee proposal (Alternative D) because it has the most broad-based public acceptance. I have outlined below what I think are important elements of appropriate management of JDSF given the social, economic and environmental concerns of the citizens of our county and our state. Many of my suggestions will reiterate the Citizen Advisory Committee's recommendations, while others are provided as my personal advise derived from reviewing first hand the management of public forests here in the US and in many foreign countries.

3 **Social/Economic**

- JDSF as a public institution must become more open and transparent in the management of the forest. The public must be invited as a participant/partner in the management of the forest. This

is both a right of the public and an obligation of JDSF. An ongoing citizen's advisory committee could provide part of that participation. However, every year, prior to planning forestry activities, the public should be informed about what, where, when and why. Field trips should be held. They should be allowed to provide input and suggestions. That input could then be vetted with the citizen's committee and the resulting inputs are incorporated into operational plans. In the long run open public involvement will provide for more productive and acceptable management (I think under the current management, lawsuits have stalled harvesting for several years). Constant vigilance by JDSF and the Board of Forestry is needed to remain transparent and open to the public in order to maintain the social license to operate.

The citizen's advisory committee should be made up of nominations from the Mendocino County Supervisors, The State Board of Forestry and the University of California extension. The Mendocino choices would represent the local community, the Board of Forestry choices would represent state constituents and UC would represent the research and scientific interests.

4 • Timber harvests should be completely administered by the JDSF foresters. That means that timber companies no longer hire the loggers. The loggers bid on logging jobs directly with JDSF. Timber harvests should be of multiple sizes and volumes so that the cross-section of logging contractors can bid (some large, some medium, some small).

5 • JDSF should operate a log sort yard and auction. This is the fairest, most competitive and potentially the most economically profitable way of selling timber. The log auction should have multiple log grade/species sorts and sale volumes to attract multiple buyers. This would enable micro sawmillers and specialty wood workers as well as large primary sawmills to participate. A private sector contractor could bid on running the log sort and auction yard.

6 • The income from the timber sales must be put in a JDSF account. After forest management costs are covered, including restoration, a portion of the remainder can go to the general fund. An additional portion should go to a trust fund that would be used in emergencies (fire, for example).

7 • Recreation areas need to be developed and enhanced. JDSF, transected by highway 20, has huge potential for recreation and educational opportunities.

8 • Demonstration and research regarding participatory forestry, community forest economics, non-timber forest product development and eco-tourism and recreation should be an emphasis of forest management.

9 • Take the Scientific Certification Systems FSC preassessment results seriously and make them public. Whether JDSF pursues FSC certification or not, they should be managing to the FSC standards. The FSC standards for the Pacific Coast can be found at www.fscus.org

Environmental

10 • JDSF should only employ uneven-aged silviculture. Not only does the public want JDSF to end clearcutting, but also redwood does not regenerate naturally through large stand replacing events. Individual trees topple and small openings are created through wind, landslides and falling trees. Clearcutting is done in the redwood region as an economic way to move volume. JDSF should not make economics a primary decision point.

11 • JDSF must stop using herbicides. Industry uses herbicides because they believe that is too expensive to use hand control methods. However, JDSF should be 1) trying to demonstrate alternative methods given that most Californians are against the use of herbicides; 2) trying to maximize employment on the forest and; 3) using silvicultural prescriptions that do not create the need to use herbicides.

2/9/2006

12 • Rehabilitate the roads and streams on the forest, particularly the eastern half. JDSF has basically ignored the eastern half of the forest since it stopped harvesting there is the 1980s. These streams and roads are in the headwaters of the Big and Noyo rivers. Roads and landings are in the WLPZs (some actually in the streams). The roads built from the 1950's to 80's are not up to today's standards.

JDSF participated in "stream restoration" in the 1970's where in-stream wood was removed. We know now that this was not an appropriate strategy and in most cases destructive to habitat. Some of the tributaries to Big River had logs washed down to the mill at the town of Mendocino during the late 19th and early 20th centuries. These upland streams are still affected from these events and need habitat enhancement work. Mendocino and Humboldt Counties have knowledgeable and experienced stream and road restorationists who could bid on these projects (and add more employment). This obviously implies a JDSF restoration needs assessment, plan and funding.

13 • Develop an old growth retention policy. Old growth trees must off limits to harvesting. A landscape plan should be developed to create connecting corridors between existing old growth patches both on and off JDSF.

14 • Harvesting in WLPZs and riparian zones should only be to enhance structure, habitat and sediment filtering qualities. All stream crossings should be evaluated and the best available research and technology should used to repair, replace or abandon them.

15 • Demonstration and research regarding landscape ecology, landscape management among multiple landowners, development of stream and road restoration technologies, development of forest structures and habitats that are rare in the redwood ecosystem, non-timber forest management and alternatives to pesticides should be the emphasis of forest management.

Thank you for considering these points. I would glad to be available for further consultation.

Sincerely,

Walter Smith
1794 Hilltop Drive
Willits, California 95490
707.459.0800/ 707.459.0576
walter@pacific.net

2/9/2006

Mailed Letter P-70

Response to Comment 1
The Board agrees with these statements. The DEIR provides substantial discussion of social and economic issues related to the management of JDSF (see DEIR Section III). The management plan will provide support to the local economy, while protecting and enhancing values associated with aquatic and terrestrial habitats (see also General Response 11 and 12). The plan also provides for the future development of late seral forest habitat, while providing for maintenance and enhancement of water quality (see also General Response 2, 8 and 9).

The management plan will provide for protection of aesthetic values, especially in areas of high public use, such as highway corridors, high-use recreational areas, and near rural residential neighborhoods. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in Section VII.2 and VIII.9 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in Section VII.14. The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). The DEIR analysis of these potential impacts found that application of several mitigation measures would reduce the potential negative impacts to less than significant.

Response to Comment 2
Support for Alternative D noted.

Response to Comment 3
Please see response to P-45 and General Response 18. Recommendations concerning the constituency of advisory committee membership, while noted and appreciated by the Board, are not an environmental issue. The current Demonstration State Forest Advisory Committee includes local representation by government and environmental interests, as well as representation by the University of California. The JDSF committee is expected to include representation by local government, scientific experts, and the general public. The membership specifics have not yet been determined.

Response to Comment 4
All timber harvest plans are administered by JDSF foresters and all licensed timber operators are subject to the applicable forest practice rules. The Board generally agrees that timber harvest demonstrations should vary in size, and be available to a broad range of log buyers and timber operators. The Board is interested in the concept of using licensed timber operators that are hired and administered by the Department. This is not an environmental issue.

Response to Comment 5
The Board is interested in the concept of public log sales. This is not an environmental issue.

Response to Comment 6
Comment noted. The Board cannot allocate revenue generated by the state forests. The current budget law (Public Resources Code § 4799.13) directs timber revenue from state forests to support of the state forest system. Revenues beyond the needs of the state forests may be shifted to the General Fund.

Response to Comment 7
The Board agrees that there is untapped potential for education in forest management and for recreation. The management plan provides for a modest increase in recreational opportunities, and a user-needs survey to identify additional recreational opportunities. Please see General Response 14.

Response to Comment 8
The Board agrees that there is merit to these values and activities.

Response to Comment 9
Preference for adoption of FSC standards is noted. The Department has initiated the certification process, and has obtained a pre-assessment from both SFI and SCS. If full certification is sought by the Department, it is anticipated that FSC standards will be adopted.

Response to Comment 10
The Board agrees that many people do not favor the use of clearcutting. The use of this regeneration method will be limited (see General Response 10). However, the Board finds value in the continued demonstration and research of even-aged systems, which have merit in terms of stand and habitat management, but also in terms of imitating natural stand-replacing events and processes. Little research has been done to determine the modes and extent of regeneration in old redwood forests, and is likely that a high degree of variability once occurred. Board regulation and management plan provisions restrict the size of even-aged regeneration units.

The use and demonstration of silvicultural systems and stand management methods includes consideration of a broad range of impacts and values, including economics. Economics is a very important consideration in the management of timberland by both state and private entities.

Response to Comment 11
Herbicides may be used as part of an integrated pest management system for the control of invasive weeds (see General Response 7). The Board has selected an approach that treats hardwoods only where specific criteria are met (RDEIR II-1); seeking to minimize the use of herbicides and employ alternative methods. The ecological basis and incorporation of a range of treatment options shares some attributes with Integrated Pest Management for invasive weeds. The JDSF approach to invasive weeds will be prevention oriented, ecologically based program will utilize a combination of control methods and the use of herbicides will be minimized by using them primarily where cost and effectiveness precludes the use of non-chemical control approaches.

The use of herbicides within JDSF has been low relative to that utilized by large forestland owners in the region. Please see DEIR Section VII.8.2 for the assessment of potential for impacts associated with herbicide use. Employment is a consideration in the management of JDSF, but not the only one. In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation and available alternatives and their potential effectiveness, costs and risks. The plan includes commitments to examine alternatives to herbicides.

Both silvicultural prescriptions and harvesting methods can affect the need for herbicide use. The DEIR/RDEIR details how changes in post harvest activities have reduced the need for herbicide use. The ADFFMP includes provisions for consideration of this aspect of stand management, and includes a stated intention to manage in a way that reduces the need for herbicide use.

Response to Comment 12
The management plan includes provisions to inventory the road system within the Forest, and to prioritize maintenance, improvement, and selective road decommissioning activities (see also General Response 13). The Department recognizes the basic condition of many roads and landings in areas that were roaded and logged decades ago. A significant level of restoration and improvement is anticipated during the coming decade.

The Department is aware of the condition of aquatic and riparian zones within the Forest. The management plan includes provision to manage the WLPZ to develop late seral forest conditions, and to maintain or restore ecological function to these areas (see also General Response 11).

Although the Board does not directly control the operating budget of JDSF, the Board is aware of the need for funding to appropriately manage the Forest. Based upon the recent adoption of a Budget Change Proposal (2006), the level of operating funds that can be made available for road

management and improvement will be substantial, contingent upon the flow of harvesting revenues from JDSF to the Forest Resources Improvement Fund.

Response to Comment 13
The management plan will provide for connectivity between old growth stands on JDSF, consisting of forested area in various stages of development and with variable structural characteristics, including the creation of a contiguous 6,803-acre corridor, extending across JDSF from west to east and north to south, composed of Older Forest Structure Zone, the majority of Old Growth Reserves (359 acres), and Late Seral Development Areas (see RDEIR Map Figure 1). In addition, it designates management of riparian zones on Class I and II streams for the development of late successional habitat, including the recruitment and placement of large woody debris. The management plan includes provisions to preserve the mapped old growth groves, individual large old growth trees, and old growth trees with unique structural attributes of value to wildlife. See also General Response 8, 9, and 12. Please see DEIR Section VII 6.6 for the assessment of potential impacts to terrestrial species.

Response to Comment 14
The Board generally agrees with these statements. See General Response 11. The WLPZ will be managed to develop late seral habitat conditions, although the Board also recognizes that some level of timber production can occur coincidental to habitat development. Stream crossings will be evaluated as provided in the Road Management Plan (ADFFMP, Chapter 3). Stream crossings will be managed though utilization of good science and technique.

Response to Comment 15
The Board agrees that these are areas that should be integral to research and demonstration, and management of the Forest. However, the management plan will also provide for other management goals, as stated in the enabling legislation and Board policy.

P-73

Program Office
Street
Suite 170
Sacramento, California 95814
Telephone 916-313-5800
Fax 916-313-5812
www.defenders.org/california

1

2

3

4

5

National Headquarters
1130 Seventeenth Street, NW
Washington, DC 20036-4604
Telephone: 202-682-9400
Fax: 202-682-1331
www.defenders.org

Printed on Recycled Paper

RECEIVED BY
FEB - 9 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 9, 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244

Re: Jackson Demonstration State Forest – Support draft EIR Alternative F

Dear Members of the Board:

On behalf of Defenders of Wildlife and our more than 90,000 members and supporters in California, I am writing to urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

While we understand logging will take place at Jackson, clear-cutting is not an acceptable practice for an area of such ecological importance. There is less than two percent of protected redwood forests in the Central redwood region encompassing Mendocino, Sonoma and Marin counties. The public is not going to tolerate large-scale clear-cutting of our largest public redwood forest. CDF needs to focus on demonstrating restoration forestry, creating habitat, recreational opportunities, and doing meaningful scientific research.

Jackson is a critical resource in the region. For example, the National Marine Fisheries Service recently upgraded the Central Coast Coho from Threatened to Endangered, and Jackson is the only large chunk of public land in the region that can be managed to contribute to Coho recovery. Alternative F applies federal watercourse protections across the forest that will help Jackson maintain habitat for salmon.

This alternative also designates areas for enhanced protection of the endangered marbled murrelet, a small sea bird associated with old growth forest that is known to be nesting nearby. Additionally, the emphasis on maintaining and creating connectivity between old growth and old second growth is key to providing much needed corridors for many wildlife species.

This issue is of statewide concern, and the public is looking to the Board to provide clear direction to CDF to resolve this long-running controversy. We believe that by adopting Alternative F, you will strike a balance between producing high quality forest products while also protecting other key forest values, such as protection of water quality, wildlife habitat, and recreational opportunities.

For all of these reasons, we urge you to adopt Alternative F. Thank you for your consideration.

Sincerely,

Kim Delfino
California Program Director

Mailed Letter P-73

Response to Comment 1
Support for Alternative F noted.

Response to Comment 2
While the commenter states that clearcutting is not appropriate, no environmental concern is stated in support of this position. The Board has significantly restricted the future use of clearcutting on JDSF (see General Response 10). While the commenter does not define the stated term "protected redwood forest," it should be noted that the JDSF is protected from development or conversion to agricultural uses such as vineyards. The Board recognizes that there is less area in park and preserve in this portion of the range of redwood than within areas to the north and south. The DEIR provided detailed information on redwood forestland in public park status throughout the redwood region (see DEIR Section VII.14). The potential for environmental effect was considered within a broad assessment area. Please also see response to Form Letter 6.

The research and demonstration program at JDSF will include restoration, habitat creation, and other forms of meaningful scientific research. Recreation and a demonstration of the compatibility between recreation and forest management will also be an important aspect of management.

Response to Comment 3
The Board recognizes the importance of JDSF in terms of contribution to direct protection of listed species, and also with regard to demonstration and research for the benefit of these species. JDSF is one of several relatively large public properties that can be managed to contribute to the recovery of listed species. Other local public properties include the various forested state and local parks, national forests, and lands administered by the Bureau of Land Management.

The management plan will include a high level of protection for aquatic habitat, and will provide for continued recovery of this valuable resource. Please see DEIR Section VII.6.1 for the assessment of potential impacts to aquatic species. See also General Response 11.

Response to Comment 4
Alternative G and the ADFFMP designate a significant area of forest to be managed to maintain or develop additional habitat for the marbled murrelet.

The management plan will provide for connectivity between old growth stands on JDSF, consisting of forested area in various stages of development and with variable structural characteristics, including the creation of a contiguous 6,803-acre corridor, extending across JDSF from west to east and north to south, composed of Older Forest Structure Zone, the majority of Old Growth Reserves (359 acres), and Late Seral Development Areas (see RDEIR Map Figure 1). In addition, it designates management of riparian zones on Class I and II streams for the development of late successional habitat, including the recruitment and placement of large woody debris. The management plan includes provisions to preserve the mapped old growth groves, individual large old growth trees, and old growth trees with unique structural attributes of value to wildlife. See also General Response 8, 9, and 12. Please see DEIR Section VII 6.6 for the assessment of potential impacts to terrestrial species.

Response to Comment 5
The Board has proposed a management plan (ADFFMP) that incorporates provisions of Alternative F, and provides a balanced management approach for JDSF.

02/12/2006 12:48 7074637114 STAPLES PAGE 01

P-74

FEB. 11, 2006

MR GEORGE D. GENTRY
EXECUTIVE OFFICER
BOARD OF FORESTRY & FIRE PROTECTION
PO BOX 944246
SACRAMENTO, CA 94244

DEAR MR. GENTRY,

I HAVE REVIEWED THE DRAFT ENVIRONMENTAL IMPACT REPORT OF THE JACKSON DEMONSTRATION STATE FOREST, AND AM SUBMITTING MY COMMENTS TO BE CONSIDERED BY THE BOARD OF FORESTRY AND FIRE PROTECTION.

1 I STRONGLY SUPPORT THE RESUMPTION OF ALL FOREST MANAGMENT ACTIVITIES ON THE JDSF AS AN INTRICAL PART OF THE RESEARCH AND DEMONSTRATION MISSION. I SUPPORT C1 AS THE BEST OPTION TO MEET THE LEGISLATIVE INTENT FOR THE JDSF.

2 YOU, AS THE STATE BOARD OF FORESTRY & FIRE PROTECTION, HAVE THE OBLIGATION TO PROTECT THE VIABILITY OF FORESTRY AND SOUND MANAGMENT OF CALIFORNIA'S FOREST LAND RESOURCES. THE HARVESTING OF TIMBER IS CRITICAL TO MEETING THESE OBJECTIVES ALONG WITH MAINTAINING A HEALTHY FOREST. EVERYTHING POSSIBLE MUST BE DONE TO INCOURAGE INDIVIDUALS TO HOLD TIMBERLAND FOR TIMBER PRODUCTION. THE

3 ALTERNATIVES DO NOT CREATE A PLESANT PICTURE FOR ME, IT IS LIKELY TO RESULT IN FRAGMENTED OWNERSHIPS AND DEVELOPMENT THAT WILL HAVE A FAR GREATER IMPACT ON CRITICAL HABITAT AND THE NON-TIMBER

02/12/2006 12:48 7074637114 STAPLES PAGE 02

RESOURCES THAT WE CAN BETTER PROTECT AND ENHANCE WITH SOUND FOREST MANAGEMENT. IN ADDITION FOREST LAND FRAGMENTATION SIGNIFICANTLY IMPACTS CDF&FP'S RESOURCES IN ITS MISSION OF FIRE PROTECTION. NOT ONLY WILL THERE BE MORE STRUCTURE IN THE FOREST. 3

LANDS TO PROTECT, BUT AS OUR TIMBER INDUSTRY DOWNSIZES CDF&FP IS LOOSING A VALUABLE ALLY WITH WILDLAND FIRE FIGHTING RESOURCES. 4

I AM NOT GOING TO BURDEN YOU WITH THE DETAILS OF THE ECONOMIC VALUES THAT A STRONG FOREST PRODUCTS INDUSTRY HAS TO RURAL CALIFORNIA, BUT IT NEEDS TO BE GIVEN STRONG CONSIDERATION WHEN YOU DECIDE THE FUTURE DIRECTION OF JDSF AND ITS MISSION TO DEMONSTRATE SOUND FOREST MANAGEMENT PRINCIPALS AND THE VALUES OF LONG TERM FOREST STEWARDSHIP. 5

THE ADOPTION OF OPTION C1 WILL SEND A MESSAGE TO INVESTORS IN CALIFORNIA FORESTLAND, FOR TIMBER PRODUCTION AND RESOURCE PROTECTION, THAT THEY HAVE THE STRONG SUPPORT OF THE BOARD OF FORESTRY.

SINCERELY,

J.M. Anderson

JAMES M. ANDERSON RPF# 771
RETIRED CDF FOREST PRACTICE OFFICER

Mailed Letter P-74

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The management plan reflects the intent of the legislative mandate for the State Forest. The State Forest will continue to be a working demonstration of viable and effective forest management, while also promoting long term stewardship.

Response to Comment 2
The Board agrees that the primary purpose of the State Forest is to serve as a demonstration of viable and productive forest management to private timberland owners.

Response to Comment 3
The Board recognizes the problem of increased forest fragmentation and loss of productive timberland due to the economic pressures to convert the land to other uses. The Board is obligated to consider a range of alternatives in the environmental analysis process. The range of alternatives closely mirrors the range of public and agency comments that the Board has received relative to future management of the Forest. Please see General Response 4 for more detail. The management plan will provide both a useful demonstration and valuable source of information to private timberland owners, providing an incentive to maintain their lands in timber production and other forms of active management.

Response to Comment 4
The Board agrees that fragmentation of timberland ownership can reduce the level of resources available for fighting fire.

Response to Comment 5
The management plan provides for a viable demonstration of economic and productive forest management, and will make a significant contribution to the local economy. Economics has been considered in detail (please see DEIR Section III.5 and III.6).

IV.6 Individual DEIR Mailed Comments P-76 to P-150

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Mailed comment submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR

P-79

EMPLOYERS COUNCIL
of Mendocino County

February 12, 2006

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Calif. 94244-2460

Dear Board Members:

1 We encourage you to adopt alternative C-1 for the future management of Jackson Demonstration State Forest (JDSF).

2 The Employers Council of Mendocino County represents 200 local business members who provide around 4000 jobs in our County, which is about 10% of our County's 40,000 jobs. We are deeply concerned with the condition of our community's economy.

Our County has lost its historic economic base. In 1970 over 1/3 of the jobs in our County were created by the wood products industry. Today it's not even 5%. Just between 2000 and the end of 2004 we lost over 1600 goods producing jobs, many if not most timber-related, and replaced about 1450 of them with much lower-paying service jobs. During that same time local governments increased their staffs by over 1200. The trend of losing private sector jobs and shifting private sector workers income down while increasing local government jobs and payroll can not continue.

3 Your decision regarding the future of the JDSF will determine the economic viability of hundreds of timber-worker families and dozens of businesses in what remains of our timber industry. It will also determine whether or not our County, one of California's most indebted per resident, will be able to use a restored timber harvest tax to help retire that terrible debt burden. Our timber workers have been devastated by the collapse of timber jobs. We believe it is unconscionable to continue to deny them the opportunity to earn a living in their chosen and honorable career when responsible timber harvest operations can occur under Alternative C-1.

Alternative C-I is a fair compromise. On the one hand it will allow a significant economic contribution from timber harvests and the continuance of JDSF's research and education mission. At the same time it establishes significant protections for the environment and provides for public enjoyment of the woods.

Some of the positives we see in Alternative C-1 and the rest of the EIR and Management Plan are:

4 1. The E.I.R. and the proposed management plan listed and answered the concerns and recommendations of the previous citizen's advisory committee.

5 2. Clear cutting, though allowed on a limited acreage basis under current California Forest Practice Rules, would only be carried out when needed for scientific research purposes. A major part of JDSF's mission is to test different forest management systems in different situations to determine

Employers Council of Mendocino County ✦ 597B Main Street
Ukiah, CA 95482 ✦ (707) 462-5021 · (fax) 462-0318
www.ecmconline.com ✦ ecmc@ecmconline.com

best practices, both environmental and economic, for the long run. Whereas everyone accepts that some of the practices of the past can no longer continue, we need to refine our knowledge of what works and what doesn't.

6 3. Each harvest is to be planned around a specific harvest regime to further the demonstration goals of the forest.

7 4. Legislation regarding the Forest Practice Rules relative to the Forest is quoted and followed in the EIR and accompanying plan.

8 5. JDSF personnel have recognized for decades environmental concerns and have been at the forefront in improving forest harvesting practices and the protection of stream and wildlife resources. Their one shortcoming has been their inability to distribute to forestland owners and the general public the results of the myriad harvesting and other studies that have taken place on the forest. Resumption of full management will provide the funding and incentive to get information out where it can be used.

9 6. Approval of the EIR and the accompanying management plan would allow the return of management to the Forest and the funding, incentive and direction to re-staff JDSF so that the roads and other resources can again be maintained. This 50,000 acre forest was hard hit by the heavy rains of this winter and had considerable road and erosion damage.

10 7. Somewhere around half of the land here on the north coast is forest. A major challenge to the timber industry, both industrial and non-industrial, is the constantly changing approaches of various agencies, including State Forest Practice Rules, Fish and Game Dept. concerns, Water Quality Board rules, and other State and Federal agencies. Demonstration harvest operations at JDSF are needed which can show private landowners how to cope with regulations and at the same time leave the forest in a productive and healthy state.

11 8. The remaining mill capacity and harvesting operators on the north coast need the regular timber sales program that the JDSF provided in the past. Without JDSF's volume, the continuance of the necessary infrastructure for this industry is at risk. A regular sales program helps maintain operational stability as well as a stable, capable, work force.

12 9. We all recognize the acute housing needs in California. The proposed harvest program provides the fiber needed to build upwards of 3000 single family houses annually. It is irresponsible to live in one of the most productive timber-growing regions on earth and make more and more forestland unavailable for timber production while our state continues to use huge amounts of timber products.

13 10. California and Mendocino County are struggling to meet budget needs. JDSF will provide the State and County with significant resources to fund other vital services. The last yield tax return from a full season of harvesting was in the neighborhood of $350,000. The income from the proposed harvest level at current market prices would be about $15,000,000 to be used to support the management of the Forest and for the State's Forest improvement Program without dipping into the state's budget. Our state hasn't been able to balance its budget; why not bring JDSF back on line to help?

Employers Council of Mendocino County ✦ 597B Main Street
Ukiah, CA 95482 ✦ (707) 462-5021 · (fax) 462-0318
www.ecmconline.com ✦ ecmc@ecmconline.com

14 The EIR projects that if JDSF comes back on line it will sustain 240 timber jobs paying $7,600,000 in wages and 240 support jobs producing $4,700,000 in wages. The EIR also projects sales taxes from these wages at $162,000. We believe these estimates, though impressive for this county, are too low. Forest jobs produce three or more support jobs for each job in the forest or mill. We think the economic benefit of a productive JDSF will spread throughout the North Coast community.

15 The shutdown of JDSF has imposed a huge cost to Mendocino County and our citizens – families have lost jobs, small businesses are hurt, taxes and income are way down. California's North Coast has one of the oldest average aged populations in the United States. We used to export wood products, now we export our kids because they can't earn a living. Our beautiful region has only a few economic advantages in the emerging global economy; growing redwoods clearly is one of our main strengths. Your decision literally will determine if hundreds of young people will be able to stay in their home towns or be forced to leave. In order to prevent further deterioration of our communities, we truly hope you will adopt Alternative C-1.

Sincerely,

Richard P. Selzer
Chairman, Board of Directors
Employers Council of Mendocino County

Employers Council of Mendocino County ✦ 597B Main Street
Ukiah, CA 95482 ✦ (707) 462-5021 · (fax) 462-0318
www.ecmconline.com ✦ ecmc@ecmconline.com

Mailed Letter P-79

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The Board has emphasized JDSF research and demonstration role.

Response to Comment 2
The economic analysis provided in the DEIR supports these comments.

Response to Comment 3
The Board agrees that JDSF can help support the local economy, in terms of direct jobs, indirect jobs, payroll, timber products, tax revenue generation, and demonstration that contributes to sustainable forest management by the private sector. The management plan will make a significant contribution to the local economy, in part by providing for a significant level of sustained timber production.

Response to Comment 4
The Board agrees that the management plan addresses most of the recommendations made by the Citizen's Advisory Committee.

Response to Comment 5
The Board agrees with this statement. It is the Board's intent that JDSF be utilized to test, understand, and demonstrate a wide variety of forest management practices.

Response to Comment 6
It is the intent of the management plan that each harvest be an integral component of a long-term stand management regime.

Response to Comment 7
The management plan reflects the enabling legislation and regulation.

Response to Comment 8
The management plan provides for a significant effort to distribute the results of research and demonstration.

Response to Comment 9
Comment noted. The revenue generated by the Forest will be utilized primarily in support of management activities within the state forest system.

Response to Comment 10
The Board agrees with these statements. Demonstration of environmentally and cost effective management in compliance of regulatory requirements is an important aspect of state forest management.

Response to Comment 11
The management plan will provide for a significant contribution to the local economy, including a sustainable level of timber production.

Response to Comment 12
The Board agrees that a stable and productive local timber economy can make a significant contribution to local needs for timber products.

Response to Comment 13
The management of the Forest is expected to make a significant contribution to the local economy, and will provide economic support for the management of the Forest.

Response to Comment 14
Comment noted. The estimates of jobs produced for a given level of timber production are variable among economists.

Response to Comment 15
Comment noted. Please see DEIR Sections III.5 and III.6 for the assessment of potential economic effects. The Board fully supports full and continued management of the Forest and support of the local economy.

P- 84

James D. Hooper
203 East Pine Street
Fort Bragg, Ca 95437

RECEIVED BY
BOARD OF FORESTRY
AND FIRE PROTECTION

February 9, 2006

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P. O. Box 944246
Sacramento, Ca 94244-2460

Dear Mr. Gentry,

I live along the Mendocino Coast and have seen the impact of lawsuits resulting in the shutdown of Jackson Demonstration State Forest has had on our area. This has gone on long enough. A few years ago Oakland was being threatened by lawsuits in tearing down the dilapidated Montgomery Ward warehouse that was being used by drug users, etc. The aim of the lawsuits was harassment and to tie things up. I remember the mayor and council members got on TV and made it abundantly clear that this was not going to be allowed. Enough is enough. When is the State of California Board of Forestry going to stand up? The lawsuits against Jackson Demonstration State Forest are to eliminate the purpose it was intended for. One of the key individuals in trying to put Jackson Demonstration State Forest out of business was caught clear cutting his own property without a logging permit no less! Jackson Demonstration State Forest was established in 1947, and has over the years become the largest forest in the state forest system for the purpose of research and demonstration of sustainable timber harvesting methods. Research done in this forest has been used in other forest management areas. For sometime now as a result of lawsuits and our state not standing up and saying enough is enough research has stopped, road maintenance is very neglected, there is no stream restoration, no timber stand improvement, many jobs including state ones have been lost, and the state is losing badly needed income from timber sales and taxes including from employment. It is time to accept the Alternative B Environmental Impact Report and end the impasse.

James D. Hooper

Mailed Letter P-84

Response to Comment
Please see Response to Form Letter 3. Support for Alternative B noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including B. The Board has emphasized the research and demonstration mission of the state forest. The Board recognizes that some would like to "eliminate the purpose" that JDSF and the other demonstration state forests were intended. The ADFFMP strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system.

P-85

Dennis M. Crean, Jr.
16740 Tomki Road
Redwood Valley, CA 95470

RECEIVED BY
BOARD OF FORESTRY
AND FIRE PROTECTION

February 9, 2006

Board of Forestry and Fire Protection
1416 9th Street, Room 1506-14
Sacramento, CA 95814

Dear Board Members,

I am a resident of Mendocino County, and I care deeply about the future of Jackson State Forest. As you well know, the concern of citizens such as myself has helped to halt the "business as usual" approach to managing and logging the forest. It is time for us all to come together in support of a new direction for this public forest.

1
2 In this spirit, I urge you to reject the state's call for continued cutting of old growth, clearcutting, herbicide use, and only token input from members of the public into the future of the forest. I *strongly oppose option C-1* as outlined in the new Draft Environmental Impact Report. This option is backward looking and will surely result in a continued struggle between citizens and the CDF.

Instead, I urge you to support the sort of future as outlined in option E. I would like to see Jackson State Forest receive a greater focus on restoration, recreation, education, and scientific research into innovative new ways of understanding the forest ecology. This wonderful forest can serve to demonstrate more than logging techniques. We live in a new era in which the timber industry is no longer king in Mendocino County, and for which Jackson State Forest must not represent the few remaining crumbs for it to fight over. My forest demands a brighter future.

As for the DEIR, I am disappointed that it fails to fully consider the environmental effects of my preferred option, E. I have insufficient basis upon which to analyze and compare the various options. On top of that, the document is nearly impossible to understand and navigate due to its inordinate length. I hope you will reject this DEIR and demand an environmental analysis that *truly* considers all the management options.

Furthre, I hope you will join me in calling for a new management plan that looks forward, not backward, for the benefit of all Californians, and particularly for those generations who will follow us.

Sincerely,

Dennis M. Crean, Jr.

Mailed Letter P-85

Please see response to Form Letter 2

Response to Comment 1
See General Response 8.

Response to Comment 2
The Department has formed an advisory committee for the state forest system as a whole, and intends to maintain a broad spectrum of membership, including abundant expertise and knowledge in environmental issues. The current committee includes local representation by government and environmental interests, as well as representation by the University of California. The ADFFMP also incorporates plans for the creation of a JDSF specific advisory committee. The Board encourages the Department to consider local citizen input, and also encourages field trips and other public interaction to make the management of the State Forest open to the public and to the receptive of public input. See General Response 18.

P-90

Acme Automotive Company

DIVISION OF AACO AUTOMOTIVE DISTRIBUTORS, INC.
WHOLESALE DISTRIBUTORS OF AUTO PARTS, SUPPLIES AND EQUIPMENT
350 S. MAIN STREET FORT BRAGG, CA 95437
(707) 964-4011

RECEIVED BY
FEB 14 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 10, 2006

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento CA 94244-2460

Mr. Gentry:

The reason for this letter is to request that you return Jackson Demonstration State Forest to active status by accepting the Proposed Alternative "B" Environmental Impact Report. The shut-down of J.D.S.F. has had a very negative effect on the economy of our community and our county. As the owner of a small business in Fort Bragg I have had to cut my work force from 14 to 10 employees over the last 2 years and sales are down by about 15%.

We desperately need more jobs in our county and a working J.D.S.F. would provide nearly 500. Let's use the forest for what it was originally intended: timber production, scientific research, and recreation. The benefits are many: timber revenue for the State of California, timber taxes for our local schools, lower unemployment for our county, and the advancement of sustainable forestry and logging practices.

Please help our community, our county, and our state by restoring Jackson Demonstration State Forest to it's intended use.

Sincerely,

Joseph R. Pardini

Joseph R. Pardini

Mailed Letter P-90

Response to Comment
Please see response to Form Letter 4.

P-94

The Endangered Species Act is very important to many grassroots efforts, and the Forest Service and National Parks System is in transition. The National Parks Monopoloy (misspelling correction: monopoly) is not a joke. I feel that privatization of our trees, plants, soil, dirts, other animals, water, and air is a big mistake.

The Endangered Species Act is very important and is very important in that it holds the idea that all species maintain a necessary right to exist and coexist.

RECEIVED BY
FEB 14 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Nathan Daniel Stout
1260 Hopkins Street
Berkeley, CA 94702

Mailed Letter P-94

Response to Comment
The comment letter is not clearly related to the management of JDSF. The management of JDSF will comply with the Endangered Species Act. Privatization of JDSF and its forest resources is not proposed.

P-97

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA. 94244-2460

2/9/06

RECEIVED BY
FEB 14 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Dear Mr. George D. Gentry,

1 I am writing in regards to the new Environmental Impact Report for Jackson State Forest. I understand that in the past the CDF was logging on outdated management plans in Jackson State Forest and they have finally, three years later, come up with a new EIR.

It was so wonderful to stroll through Jackson State Forest over the past year and see re-growth in these areas. I think it's a shame that the CDF will be logging there again for business-as-usual. 2 This forest belongs to the people and I don't agree with what ~~is going to~~ SB will happen there soon. This Forest is the only State Forest that is home to a significant percentage of mature Redwoods, an increasingly rare and valuable forest ecosystem for both wildlife habitat and recreation!

3 I am asking for the logging to stop in Jackson State Forests. ~~and~~ IF you allow it anyway then I am asking you to allow another 60 day comment period. The complexity and sheer volume of the 1,500-page E.I.R. makes it difficult for the public to respond during the too-brief period allowed for public comment. Thank you.

Sincerely,
Sophia Brennen

My address
901 Stanyan St. #18
San Francisco, CA. 94117

Mailed Letter P-97

Response to Comment 1
Future management of the Forest will be conducted pursuant to an updated management plan.

Response to Comment 2
Comments noted. There are eight state forests within the state forest system. The state forest system is occupied primarily by second-growth forest stands with a significant component of trees between 60 and 100 years of age. The management plan proposes to maintain a significant area dominated by larger trees in this age range, and will recruit or develop a substantial area of older forest structure and late seral forest dominated by trees that are larger and older than currently exist in most areas of the forest. Please see also General Response 2 and 9.

Response to Comment 3
Comments noted. The primary legislated purpose of the State Forest is to serve as a demonstration of economical forest management. The Board has provided a public comment period that is sufficient to allow for thorough review and comment on the DEIR (see General Response 5).

P- 100

RECEIVED BY
FEB 14 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

George D Gentry
Executive Officer
Board of Forestry and Fire protection
P.O. Box 944246
Sacramento, Ca 94244-2460

February 9, 2006

RE: Jackson Demonstration State Forest Draft EIR and Management Plan

Dear Mr. Gentry,

1 I would like to express my approval of the contents of the current Draft EIR for the Jackson Demonstration State Forest (JDSF). It appears to me that the documents are a good faith effort to identify, disclose and analyze a variety of management alternatives and their potential environmental impacts on a number of different levels of scale.

2 I would also like to express my approval of the preferred alternative of C1. I believe that the Draft Management Plan of May 2002 offers the flexibility to allow continued management of the forest under a variety of different silvicultural prescriptions which will provide a wide range of habitat types. It is a well thought out management plan updating environmental protections for wildlife, fisheries, beneficial uses of water, old growth groves and individual old growth trees. It is a flexible plan which allows for the forest to be managed as the current legislation mandates. The variety of harvest types are important to create the different types of habitat and forest conditions for different research. This is a demonstration forest and it should be allowed to demonstrate the wide range of current and future forest management practices. It should not be hindered by unnecessary restrictions on otherwise lawful and productive forest management practices. The research programs contribute to improved forest practices on JDSF and many private land holdings. In order for this type of research to continue the forest needs diversity in stand structure only obtained by continued harvesting. JDSF needs to remain a laboratory for research and demonstration of innovative techniques for private landowners. The preferred alternative C1 allows this to continue in the most beneficial way.

3

Congratulations on completion of the EIR. I would like to encourage the California Board of Forestry & Fire Protection to accept and certify the DEIR, and to choose the preferred alternative C1 and help keep JDSF working for all of California.

Sincerely,

Robert Horvat

Robert Horvat
320 S. McPherson Street
Fort Bragg, CA 95437

Mailed Letter P-100

Response to Comment 1
Comment noted.

Response to Comment 2
Support for Alternative C1 noted. It is the Board's intent that JDSF remain a relevant and diverse research setting with a wide variety of forest stand conditions. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The Board has emphasized JDSF research and demonstration role.
Please see also General Response 2.

Response to Comment 3
The management of JDSF will provide a valuable demonstration to timberland owners throughout the region and the state.

P-103

RECEIVED BY

Foothill Resource Management
P.O. Box 818, Pine Grove, CA 95665
(209) 296-1569

FEB 14 2006

BOARD OF FORESTRY
AND FIRE PROTECTION

State of California Board of Forestry
c/o Mr. George Gentry, Executive Officer
P.O. Box 944246
Sacramento, CA 94244-2460

8 February 2006

Dear Boardmembers,

As a forest landowner and Registered Professional Forester, I am interested in the productive and sustainable management of all forests in California. I understand that the Board of Forestry is reviewing the EIR for the
1 management plan of the Jackson Demonstration State Forest and your board will soon be required to vote on the approval of this EIR and management plan. I would like to express my support for the EIR and Alternative C1. I support the continued management of Jackson Demonstration State Forest as a sustainably managed forest.

The advantages of harvesting timber on a sustainable basis have been demonstrated to me on our family tree farm. We enhance the health of the forest through thinnings, we remove unproductive and flammable brush, we plant more trees than have existed on the forest in the last 150 years and we protect wildlife habitat and
2 watershed values. At the same time we earn income and assist the local economy by providing jobs for people that work in the woods. The value of the timber that is harvested from our forest is enhanced by milling and tax revenues are received by the State of California at all stages of the manufacturing process. Our local schools benefit from the severance taxes and our county general fund benefits, as well.

All of these benefits can be realized by the people of Mendocino County and the State of California if Jackson Demonstration State Forest is managed the same way that our family tree farm is managed. The EIR that has been prepared for JDSF is comprehensive and illustrates the ability to harvest trees sustainably while
3 protecting other resource values. The preferred alternative is an example of true multiple use management. The expressions of "gloom and doom" that are being put forth by the opponents of timber harvesting on JDSF are unscientific and facetious. I would like to see the Board of Forestry support this kind of management on all our Demonstration State Forests.

Please approve the EIR for the Jackson Demonstration State Forest management plan and return this valuable property to a productive status.

Sincerely,

Steve Q. Cannon, RPF #2316

Mailed Letter P-103

Response to Comment 1
Support for Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The Board has emphasized JDSF research and demonstration role. The management plan will provide for sustainable forest management.

Response to Comment 2
The Board recognizes and promotes these values and benefits associated with good forest management. The management plan will provide for continuation of these values and benefits.

Response to Comment 3
JDSF will continue to be managed for multiple uses, values, and benefits. Please see General Response 2.

Alan Dunn
24861 Ward Ave.
Fort Bragg, CA 95437-9458

Memo from -
V. RUTH ~~DUNN~~

P- 106 2 -RECEIVED BY

FEB 14 2005

Dear Sirs,

The impact of ~~S~~ Shutting down Jackson State Forest are unbelievable! Our town & community are desperate for jobs so that our children may grow up in this beautiful, safe place. There are so few economic advantages for our aging population.

Your decision is vital to hundreds of lives! Thank you!

Alan & Ruth Dunn

Mailed Letter P-106

Response to Comment
It is the Board's intention to certify the DEIR and approve the management plan in order to restore full management to JDSF. A significant level of sustainable timber production will continue at JDSF under the ADFFMP. The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in section III.6.2 of the DEIR. The resumption of timber production is expected to have a positive economic impact in the region.

P- 112

Mendocino Woodlands
Camp Association

A National Historic Landmark
A Nonprofit Corporation since 1949

RECEIVED BY
FEB 14 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Post Office Box 267
Mendocino, Ca 95460
Call 707 937 5755
Fax 707 937 5415
www.mendocinowoodlands.org

February 10, 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244

Re: Support draft EIR Alternative F

Dear Members of the Board:

On behalf of the Board of Directors of the Mendocino Woodlands Camp Association and the thousands of campers that attend the Mendocino Woodlands annually, we are strongly urging you to adopt **Alternative F** for the management of Jackson State Forest. This is the same basic plan that was approved by both the Assembly and Senate last year, only to be vetoed by the governor. 1a

In addition, I am addressing a small corner of the Jackson State Forest that has an immense impact on the Mendocino Woodlands. That portion is now referred to as the Mendocino Woodlands Special Treatment Area (STA). Our goal at MWCA is the complete restoration of the original park, from all of the buildings and structures in the state park, to the reunification of the STA with the Woodlands. We intend, at this time, to address this issue of reunification of the land to its original boundaries. Following are background and reasons.

As you know, the Woodlands is a group campground. The facility is a wood-and-stone work of art built by the CCC in the 1930s. It was one of forty-six campgrounds created during that time, conceived to provide a setting for activities that would introduce the public to the wonders of nature. The Woodlands is the only one of these camps that has been continuously used for its original purpose and has survived intact. It was given to the people of California *in perpetuity* with a mandate that states "…said property shall be used exclusively for public park, recreation and conservation purposes." Now, it seems that the uses "public park" and "conservation" are at odds. 1b

In 1997, the Woodlands became a National Historic Landmark because its buildings are of exceptional architectural value and significant importance to the history of the United States. According to the National Park Service, "This is one of the best remaining examples of Recreational Demonstration Area planning and design in the country. The RDAs were a new kind of state park planned by the National Park Service during the New Deal."

Fifty-six years ago, in 1948, our nonprofit corporation was founded to manage and care for the facility. The campground is divided into three very large, private, group rental facilities. Each of the three camps is a separate, self-contained area with its own cabins, kitchens with dining and recreation halls, shower facilities, and campfire circle. In addition, there are forest, meadows, marshes, rivers and wildlife throughout the campground, making it a perfect setting for recreation, relaxation, meditation, or study.

Many campers who use the Woodlands have been doing so literally for generations. They brought their children over 50 years ago, who are now bringing their children. And they've booked their camps for years to come.

Lots of different kinds of groups enjoy the campgrounds. Groups of 30 to over 200 can be accommodated, depending on the camp. In the past year, we generated 32,810 camper-days at the Woodlands. According to the Chamber of Commerce, the average visitor to the Mendocino

1

Coast spends $500 during their stay. Thus we are a big contributor to the total income from Mendocino County's main industry: tourism.

Even more important than excellent camping, the Woodlands offers, as required by legislation, environmental education programs. We have qualified professional staff members who guide campers and students in exploring and learning about natural communities, wildlife, and understanding and respecting ecosystems. Naturalist-led day and night hikes, pond or stream life or tide pool exploration and slide shows are just a few of the programs offered.

Our Residential Outdoor Science School (ROSS) is the largest environmental educational program at the Woodlands and one of the best of its kind in the country. Every spring the Woodlands plays host to nearly 800 students and teachers from all over Northern California as they attend ROSS. The curriculum is based on in-depth studies of North Coast redwood and stream ecosystems. Teachers bring their students to the Woodlands to practice hands-on science in a pristine environment. Alternative locations to study forest and stream ecology for urban and suburban schools are few and are often limited to small roadside parks and irrigation ditches. Teachers and students have commented numerous times on the "wilderness feel" of Mendocino Woodlands State Park. They live on-site and study in small field groups of 10 students each under the guidance of a qualified naturalist. Students also experience being part of a small community where each person is a valued member. All activities—learning groups, recreation time and meals—are structured to encourage cooperation. By week's end, positive communication and problem-solving skills have been strengthened and new friendships have been fostered, as well as appreciation and respect for nature.

2

A major drawing point for visitors to Mendocino Woodlands State Park has always been the extensive network of trails. In 2003, the MWCA education staff led 2,135 campers in on-site hikes. Nearly every hike included traversing a trail within the STA surrounding the park. As large as that number may seem to be, it does not accurately portray the total trail usage. Missing are the numerous unguided day-hikers, bike-riders, and occasional backpackers. The number of hikers continues to increase each year.

Without access to the unspoiled trails within the STA, the public's experience would be severely limited. There are only four complete trails within the confines of the narrow 720 acres of the park. Altogether they total about 3 miles; a mere 12% of the 25 miles presently available to the visitor..

3

The STA that surrounds the Woodlands has been the subject of much discussion and confusion over the years. Originally, it was part of a grand park created by the federal government, which was then called the Mendocino Woodlands Recreation Demonstration Area. In 1976 it took legislative action, in the form of Senate Bill 1063, to secure a small portion of the original park—only 720 acres out of the original 5,425—and create what was then called the Mendocino Woodlands Outdoor Center. This was done in order to save and preserve the Woodlands' structures and immediate surroundings. The original park was carved up into pieces including the state park we have today and a two-piece Special Treatment Area consisting of 2,550 acres. One-quarter of the STA is now a virtual in-holding of State Parks, since Big River State Park was created in 2002. This STA surrounds the Woodlands as a designated "buffer". Senate Bill 1063 originally required State Parks' approval before any timber harvest activity in the STA. Later that wording was stricken from the bill. The California Department of Forestry (CDF) manages the STA and has harvested timber there in recent years.

4

The impact of the STA on the Woodlands is seen the moment you turn off Little Lake Road at the Mendocino Woodlands sign. You are completely surrounded by towering forests. Most believe they have entered the protected State Park but everywhere you look is the STA. For the next 3-1/2 miles you wind down through this unprotected area. Once you enter the narrow corridor that is the Mendocino Woodlands State Park, all of the hillsides and ridge tops that you see are within the STA. The STA totally dominates the Woodlands' landscape and contains all of its watershed, springs and most of its hiking trails.

2

Over the years, through communication with the California Resources Agency and its departments, we have been informed that the existing MOU provides adequate protection for the 5 STA. We disagree with this conclusion. Among other things, MOUs, by their very nature, can be terminated with only 30 days' notice, thereby providing no lasting protection at all.

At the celebration for the purchase of the new Big River State Park held in Spring 2002, it was announced that the area originally known as the Mendocino Woodlands Recreation Demonstration Area would be managed for "old growth development" including the existing 6 Railroad Gulch research area. There are frequent references in the draft management plan for the Jackson State Forest to managing the STA for "late seral habitat development", which is old growth. One problem is that it seems no one can provide us with any kind of description or guideline for exactly what that means.

The following negative impacts are compelling reasons for the complete cessation of timber harvests in the Mendocino Woodlands Special Treatment Area.

7 1. Camping experiences for the public would be greatly spoiled by noise and dust, thereby causing diminished use of this historic park.
8 2. Hiking/Camping experiences for the public would be greatly spoiled by the view of cut-down trees, also causing diminished use of this historic park.
9 3. Available trails would be greatly reduced.
10 4. Degradation of watershed.
11 5. The Little North Fork of the Big River would have additional silt, impeding salmon's ability to spawn.

12 Because of its very close proximity and the fact that the STA overlooks the entire park, we feel strongly that the STA should be reintegrated into the Mendocino Woodlands State Park, thereby permanently protecting the STA from future timber harvests and preserving the peace and beauty for which the public comes to the Woodlands, as originally mandated. At this time, the Mendocino Woodlands Camp Association respectfully requests that the Board of Forestry and Fire Protection consider these possible solutions to the challenges involving the STA:

1. The Special Treatment Area be transferred into the jurisdiction of the California Department of Parks and Recreation, thus ending many years of costly management conflicts and preserving, intact, the original RDA. CDF would not be giving up any investment on their part as the entire Mendocino Woodlands Recreation Area was given to the people of California as a gift.

13 2. Set the STA aside, with no harvesting activity, as a baseline example of how the redwoods can heal themselves and become old growth once again.

3. If the California Department of Forestry feels that they must manage the forest to bring about old growth characteristics, then use the south side of the STA, which is not contiguous with the rest of Jackson State Forest, as a baseline example of how the redwoods can heal themselves and become old growth once again, and manage the north side with an easy hand, with clearly stated limitations and practices, to insure the public that this land will be treated with the public's use and enjoyment in mind.

14

We understand that the board has a big challenge in dealing with the Jackson State Forest and thank you for your time and consideration on this matter.

Don Taylor
Executive Director
Mendocino Woodlands
Camp Association

3

Letter P-112

Response to Comment 1a
Support for Alternative F is noted. The proposed Administrative Draft Final Forest Management Plan (ADFFMP) contains elements of Alternative F, for example, designation of expanded areas for development of late seral and older forest structure.

Response to Comment 1b
The statement above expresses an opinion that public park and conservation uses are it odds. If fact, the area deeded to the State of California by the U.S. Government has been utilized successfully for both purposes since the area was placed under the administration of the Division of Forestry in 1947.

The forested area that includes the current Mendocino Woodlands State Park was deeded to the State of California by the United States of America during September of 1947. The deed was conditional, stating that the State of California shall use the property exclusively for public park, recreational, and conservation purposes. The State of California inquired of the U.S. Government; "Is it the intent and will the Department of Interior recognize the harvesting of forest products, and the conducting of forest experiments and demonstrations on the area as complying with the term 'conservation purposes'?" The U.S. Government responded to the question as follows; "I also believe that the harvesting of forest products in accordance with the recognized conservation principles and practices and the conducting of forest experiments and demonstrations would be compatible with the term 'conservation purposes', since it is generally acknowledged that such economic and scientific utilization of timbered areas ultimately results in the conservation of our forest resources." (G. Davidson, Assistant Secretary of the Interior, 1946).

Response to Comment 2
The Mendocino Woodlands Camp area is located within the Mendocino Woodlands State Park. The entire area was clearcut between 1850 and 1930, but has regrown into beautiful stands of redwood and Douglas-fir forest. However, this is not a pristine environment. Rather, it is a recovering forest and watershed area, with stands that reflect a long history of forest management and utilization. Teachers and students are able to examine a substantial area of forest that has remained relatively undisturbed for decades, and other areas that have been managed on a selective basis, where students can be educated in forest ecology, forest management, forest conservation, and forest utilization.

The current Mendocino Woodlands State Park was created by the enactment of SB 1063 (Behr) in 1976. In Section 5821, the legislature made the following finding; "The Legislature finds that there is need for a program to enable the children of the state to better comprehend the outdoors, particularly the social and economic importance of the study, conservation, protection, and utilization of natural resources. The Legislature further finds that the location and facilities of the Mendocino Woodlands Outdoor Center are especially well suited to serve primarily as an outdoor education center under the control and management of the Department of Parks and Recreation, as a unit of the state park system." While this form of childhood education is an element of the programs provided by the current concessionaire, Mendocino Woodlands Camp Association, it does not represent the principle use of the area.

Two timber harvest proposals are included in the Short-Term Harvest Schedule (DFMP Table 5). One of these is planned as a continuation of a selection harvest demonstration that was initiated in 1984. The second is a proposed harvest outside of the Special Treatment Area (STA) in upper Thompson Gulch, which is planned as a demonstration of selective harvesting intended to create late-seral forest habitat conditions. The vast majority of the STA and the remainder of the federally deeded area would continue to grow undisturbed in the near term, with the exception of regular recreational activity and road maintenance.

Response to Comment 3
It is anticipated that public access to the trails within the STA will not be eliminated, but periodic interruption of use could occur where trail segments enter areas that are subject to forest management activities. This would represent a temporary closure for public safety. As stated above, two limited stand management activities are planned, and one of these is within the STA. The segments of trail that would be affected were constructed in the mid-1980s specifically to offer recreationalists, educators, and students an opportunity to observe the selection harvest demonstration area. The major trails through the STA would remain open to public use, with optional routes available when segments are temporarily closed (e.g., Railroad Gulch Silvicultural Demonstration Area). The trails within the STA have been provided with mitigation measures to preserve their aesthetic values, including a buffer on either side of the trails and a limit upon the form of management that may occur within the buffer. Please refer to Sections VII.7.2, VII.12, and VII.14 of the DEIR for an analysis of potential impacts to aesthetics and recreation. Potential impacts to recreational resources are also discussed in other sections of the DEIR that consider specific forms of impact.

Response to Comment 4
The commenter's description of the STA as "towering forest," etc., illustrates the effectiveness of management of the STA, and has not resulted in conditions that detract from the Woodlands Outdoor Center or the State Park.

The purpose for establishment of the Special Treatment Area surrounding the Mendocino Woodlands Outdoor Center is clearly established in the enabling legislation. Section 5824 of SB 1063 (Behr) provides for access through the park "for purposes of cutting timber under the authority of the State Forester". Other than this passage and the descriptive establishment of the STA, section 5829 provides conditions placed upon the State Forester as follows; "Prior to authorizing the sale and cutting of timber from the area described in subdivision (c) of Section 5823, the State Forester shall solicit and consider the recommendations of the Department of Parks and Recreation with respect to the prevention of unnecessary or unreasonable interruption or loss of facilities or resources essential to center operations."

Response to Comment 5
The concern, as stated, does not enumerate the type of impact anticipated, or what form of protection is deemed to be adequate. There is an existing MOU between the California Department of Forestry and Fire Protection and the California Department of Parks and Recreation that involves the relationship of the two agencies with regard to management of the general Mendocino Woodlands area (Memorandum of Understanding, October 2000, CDF and DPR). The MOU includes restrictions upon forest management in proximity to the state park, intended to provide protection for recreational uses and to prevent significant impacts upon aesthetics and camp operations. The MOU also deals with issues related to the management and maintenance of roads in the area. Mr. Taylor is correct in stating that the MOU may be cancelled by either agency with prior notice to the other. The MOU is not intended specifically to serve as a means of providing "adequate protection for the STA", but is intended to deal with specific issues through agreement between the agencies.

Environmental protection of the STA is provided by a combination of legal statutes, established and proposed mitigation measures, regulatory limitations, and assessment processes. The Mendocino Woodlands State Parks is surrounded by a 200-foot-wide special treatment area established in the Forest Practice Rules. In addition, the Woodlands STA provides for consultation between CAL FIRE and DPR when timber harvesting is considered within that area. Other limitations and protection measures are provided in the current MOU, while still other limitations are provided in the draft management plan and the EIR. The reader is referred to Sections VII and VIII of the DEIR for an analysis of potential impacts to forest and watershed resources, recreational uses, and aesthetics associated with forest management activities.

Response to Comment 6
Note: The Railroad Gulch research area will be managed as a continuing demonstration of selection management, not for old growth development.

By using the term “old growth development,” the commenter appears to be describing the proposed form of stand management for most of Woodlands STA, that being late-seral development. The intent of this form of management is to produce stand conditions that support species normally associated with old-growth forests, and it is generally recognized that his form of habitat is dominated by larger, older trees, with a layered canopy and a high degree of diversity. This form of habitat also exhibits some degree of decadence, containing structural elements of value to wildlife, including snags, down logs, and cavities. It is also recognized that late-seral forests can be highly variable, so no single description or guideline is available to describe conditions or management prescriptions to achieve those conditions. Forests are dynamic by their very nature, and no forest condition is static through time. It is anticipated that a long period of time will elapse, and perhaps several incremental management steps undertaken, as the stands approach a late-seral condition. Please refer to Section VII.6.3 of the DEIR for a discussion of late-seral development.

Response to Comment 7
Potential impacts to persons and recreational users are considered and assessed in DEIR sections VII.3 (Air Quality), VII.12 (Noise), and VII.14 (Recreation). Depending upon the location, timing, and specific characteristics of a timber harvest proposal, a host of mitigation measures and other limitations are available to prevent significant effects related to noise and dust. Among these are choice of yarding methods, routes of travel, road surface treatment options, season of operations, timing of operations, and application of buffers. In addition, CAL FIRE would confer with DPR concerning the potential for impacts upon camp operations. As can be seen in ADFFMP Table 9, no timber operations are proposed in close proximity to camp sites in the short term (the next 5 to 7 years). Each timber harvest proposal is subject to a multi-disciplinary review and assessment of potential impacts when the specific proposal is planned. The RDEIR did not find that Alternative G, which is the basis for the ADFFMP, would result in any significant adverse impacts to the various resource values discussed here.

Response to Comment 8
The Woodlands STA is located within Jackson Demonstration State Forest. The legislated purpose of the State Forest is to serve as a demonstration of economical forest management [Public Resources Code § 4631(d)]. Recreation is recognized as an important, yet secondary use of the State Forest. The Federal deed restrictions associated with management of the area have been discussed above, as has the primary educational purpose for the Mendocino Woodlands State Park. Each of these mandates includes forest management or utilization. The recreational-educational trails within the STA and the Park offer the public an opportunity to observe nature and forests in both a natural and managed state. The recreational use of trails is discussed, considered, and assessed in Section VII.14 of the DEIR. As the DEIR and RDEIR demonstrate, proposed management provisions and mitigation measures will prevent significant impacts to aesthetics. In most instances, trails in close proximity to logging operations will be temporarily closed to provide for public safety until logs have been removed from the sites and operations have been completed. Management and mitigation measures may include a combination of visual buffers, harvesting restrictions, seasonal restrictions, and limitations upon silvicultural and yarding systems.

Response to Comment 9
The regularly maintained trails within the Woodlands STA have been identified within the ADFFMP, the DEIR, and the interagency MOU. The trails will not be reduced. When timber operations are conducted in close proximity to established trails, there may be a temporary reduction in availability for the sake of public safety. In most instances, alternative trails and routes are available. It is highly unlikely that a significant portion of the total trail system will be closed at any given time. Based upon the short-term harvest schedule for the State Forest (ADFFMP Table 9), very little trail is expected to be affected over the next 5 to 7 years.

Response to Comment 10
The potential for incremental or cumulative impacts to watershed resources has been thoroughly considered. Please refer to section VIII.4 of the DEIR. In addition, the location of the state park provides additional buffer for the Little North Fork of Big River and some of its tributaries. Recreational activity also has potential to impact watershed resources. Please refer to section VII.14 of the DEIR for a discussion of potential recreational impacts. The DEIR and RDEIR concluded that Alternatives C1 and G, respectively, with the application of the various detailed management measures and mitigations, would not result in any significant adverse impacts with respect to watershed resources.

Response to Comment 11
Please refer to sections VII.6.1, VII.6.10, and VIII.4 of the DEIR for the assessment of potential impacts to watershed and aquatic resources. The DEIR and RDEIR concluded that Alternatives C1 and G, respectively, with the application of the various detailed management measures and mitigations, would not result in any significant adverse impacts with respect to watershed and aquatic resources.

Response to Comment 12
The EIR and management plan are intended to describe and consider management of the State Forest, and to consider, assess, and mitigate environmental impacts. The issue of designation of administrative agency for the STA is not within the authority of the Board of Forestry, the Department of Forestry and Fire Protection, nor the Department of Parks and Recreation, and is beyond the scope of the analysis performed for the EIR.

Response to Comment 13
Setting some forest stands aside to serve as controls for the sake of comparison has merit and is likely to be an element of the demonstration that is ultimately performed. However, setting aside the entire STA is not in keeping with the legislative mandate for the State Forest (PRC 4631.5(a)). There are thousands of acres of second and third-growth forest within local and regional state, local, and national parks that are also available to serve as examples of how redwood forests develop in the absence of active management.

Response to Comment 14
No timber harvesting is proposed within the south side STA (non-contiguous portion of JDSF) in the near term (the next 5 to 7 years). At all times, the public's use and enjoyment of the STA will be an important consideration during the planning and implementation of timber harvest activities. As each project is proposed, the potential environmental effects will be thoroughly assessed, including the consideration of public and agency input, including that of DPR and the Mendocino Woodlands Camp Association. The ADFMP already provides for management of the northern portion of the STA on a selective basis by designating most of it for late seral forest development and applying other management requirements.

P- 117

Virginia Sharkey : Box 20, Mendocino, California 95460 : Telephone (707) 937-3021

RECEIVED BY
FEB 15 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Feb 10, 2006

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244

Re: Jackson State Forest

Dear Members of the Board,

I have lived in the Mendocino Coast since 1988 and Jackson State Forest I regard as one of our community's treasures — for all of us citizens. I am quite familiar with the dismal rates of remaining old growth redwood, both in this county and in the state.

1 I am adamantly opposed to Alternative C and urge you to support Alternative F. Please emphasize the aspect of conservation, along with the very careful harvesting this alternative indicates. We need the best environmental protection for these resources, which would be Alternative E, but recognizing the need for balance, I feel that Alternative F would be the most appropriate.

Sincerely,
Virginia Sharkey

Mailed Letter P-117

Response to Comment
Opposition to Alternative C and support of Alternative F is noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

P-119

February 13, 2006

State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Jackson Forest Management Plan and EIR

Dear Board Members:

1 I am writing to express my opposition to the proposed Management Plan and EIR for Jackson State Forest. The plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection and use of pesticides are all unacceptable.

2 Adoption of this plan would result in the clearcutting of 30%of Jackson State Forest. The level of logging would increase to 60,00 trees a year. Despite this, the EIR concludes that such horrendous destruction can be done with "less than significant environmental impact". The utter absurdity of such a conclusion is obvious.

3 The new Management Plan and EIR attempt to justify the irresponsible and irreparable destruction of a living forest - for profit.

Sincerely,
Dawne Schulte
(Miss) Dawne Schulte
199 Florence Street
Ft. Bragg, CA 95437-4401

RECEIVED BY
FEB 15 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-119

Response to Comment 1
Please see response to Form Letter 2.

Response to Comment 2
There apparently is a misconception that the adoption of the DFMP and the DEIR will result in the immediate removal of 30% of the standing timber. Alternative G includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions. Even-aged management will be implented in increments over the next several decades, within the applicable limits provided in the management plan.
Please see General Response 10.

The harvest level is regulated by the total board foot volume rather than a specific number of trees. As stated above, the current management plan calls for a reduction in the total harvested volume. Harvest level stated in volume rather than individual number of trees is used for planning as this reflects the stand conditions more fully.

While the veracity of the quoted number of 60,000 trees harvested per year is not stipulated for the reasons stated above, the resultant harvest would equate to an average of 1.2 trees per acre per year. The statement provides no evidence that this level of harvesting would create “horrendous destruction”, or significant environmental impact. The DEIR and the ADFFMP represent a good faith effort to guide the integrated use and protection of the Forest’s resources, to meet the requirements of legislation and Board policy, and to address local, regional, and statewide issues.

Response to Comment 3
Comment noted. Support for Alternative F, with a second choice of Alternative E noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternatives E and F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures.

P-120

Board of Forestry and Fire Protection
P.O. Box 944 246
Sacramento, CA 94244

Marie Champagne
P.O. Box 1
Caspar, CA. 95420

Dear Members of the Board,

This letter is written in regards to the Environmental Impact Report (EIR) for Jackson State Forest. I have grown up in Caspar, near Jackson State Forest. I am now sixteen, and ever since I was a small child I have enjoyed the beautiful trails of Jackson State. My father used to take me out in the woods and we would wonder from grove to grove amongst the redwoods pretending and playing games. Sometimes we brought picnics and sat on a mossy bank nibbling and chatting. I remember how sad it was when past logging destroyed our shady hangouts, leaving dusty clearings full of debris.

There is still many beautiful trees left, and since then I have enjoyed walking and riding my horses through the woods. The trails go on for miles and are perfect for riding horses hours on end. I am afraid of what extensive logging and clear cutting would do to this lovely area. 1 Logging trucks roaring by makes it nerve-racking to ride horses. Their thundering noise can scare horses, and make riding along the dirt roads dangerous. I would hate to see miles of stumps instead of tall trees. I have also heard that herbicides may be used, and I find the idea of that 2 happening so close to my home very disturbing. Such chemicals can be serious health hazards. If Jackson State Forest becomes no longer suitable for riding I will have no where to go with my horses. We can't afford a horse trailer, and there are no other good trail riding areas near by.

3 I know that many other local bikers, horse riders, and walkers share my concerns and hope to continue in the recreational use of Jackson State. **I oppose option C**, because it provides for clear cutting in the forestry plan. **Please adopt alternative F**, which provides a compromise between some necessary logging, and environmental and recreational purposes. **My second choice would be option E.**

Marie Champagne

RECEIVED BY
FEB 15 2[illegible]
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-120

Response to Comment 1
The ADFFMP calls for a reduction in the use of the clearcutting method and the total timber harvest, when compared to the previous management plan (see General Response 2 and 10). CAL FIRE has been actively managing this forest for approximately 60 years under the Legislative mandate for the "purpose of demonstrating economical forest management". Part of that management included restoring the forest from a largely cut over industrial property to the well stocked second growth forest that exists today. CAL FIRE has consistently harvested well below the level of annual growth, resulting in an ever increasing forest inventory on the Forest, with a substantial component of large young trees. Past management has resulted in a landscape that is conducive to multiple-use, including recreation, however demonstrating and improving sustainable forest management practices, including timber harvesting, will remain the primary purpose of Jackson State Forest. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

Response to Comment 2
Please see General Response 7.

Response to Comment 3
Please see General Response 14 for details on recreation on the State Forest. Opposition to Alternative C noted. Support of Alternative F noted. Support for Alternative E as a second choice noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternatives E and F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures.

P-122

Anthony Miksak/Joselyn Bartlett

44002 Fern Creek Road, Box 49 • Caspar, CA 95420 • (707) 961-0230

February 9, 2006

Board of Forestry & Fire Protection
PO Box 944246
Sacramento, CA 94244

Dear Members of the Board,

We are writing to comment on the new Environmental Impact Report (EIR) for Jackson State Forest in Mendocino County. We are members of the Caspar Concerned Citizens who live next door to Jackson State Forest. We have witnessed the devastation resulting from the vast clear cut of this forest in the 1990's. We pledge that it should never happen again. 1

We strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson. Given the legislative mandate under which the forest is operating, Alternative F provides for both environmental protection and timber production. 2

Our second choice would be Alternative E which would restore the forest to old growth over time, although this is not consistent with the legislative mandate for Jackson. This is the environmentally superior choice. 3

Public input is a necessary part of any decision about Jackson State Forest. A citizen's advisory committee is recommended because this is a public state park. 4

Any money made from Jackson State Forest should be returned to Jackson to protect the watershed, maintain roads and support the protection of this wonderful, rare resource. 5

Thank you,

Sincerely,

Joselyn Bartlett

Anthony Miksak and Joselyn Bartlett

RECEIVED BY

FEB 15 2006

BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-122

Response to Comment 1
Please see General Response 10.

Response to Comment 2
Support of Alternative F noted (see General Response 4). Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions.

Response to Comment 3
Support for Alternative E as a second choice noted.

Response to Comment 4
Jackson Demonstration State Forest is not a “state park”. Past management has resulted in a landscape that is conducive to multiple-use, including recreation. Please see General Response 2. The Board has included plans for JDSF to enhance relationships with recreation user groups, including equestrians. With regard to an advisory body, please see General Response 18.

Response to Comment 5
The Board does not control the operating budget for the Forest. However, the Board supports the concept that the Forest be self sufficient, and that it develop sufficient funding to enable full implementation of the management plan.

P-124

SAN MATEO COUNTY FARM BUREAU

765 MAIN STREET
HALF MOON BAY, CALIFORNIA 94019
PHONE (650) 726-4485

RECEIVED BY
FEB 15 [illegible]
BOARD OF FORESTRY
AND FIRE PROTECTION

February 11, 2006

George D. Gentry
Executive officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Jackson Demonstration State Forest Draft EIR and Management Plan

Dear Mr. Gentry,

The San Mateo County Farm Bureau has reviewed the Draft EIR and Management for the Jackson Demonstration State Forest (JDSF). Based on the information contained in the Management plan, we strongly recommend you adopt alternative B, and continue with the historic style of professional management to continue with the benefits this forest can provide to ensure sustainability in our timber industry here in California.

Due to the lawsuit this forest has suffered from a lack of good stewardship, and as a result there has been no stream restoration, limited road maintenance, no timber stand improvement, no research and little or no recreational use of the JDSF. Almost all infrastructure is in disrepair and local and state government has lost millions of dollars in revenue.

The research done at JDSF is world renowned, and this forest has been providing information on sustainable forestry for fifty years. JDSF is home for a permanent plot system that began in 1958and generates the majority of the date for growth simulations used by timber managers throughout the north coast region. The watershed projects on Casper Creek are studied at every forestry school in the United States. In order for these kinds of research and study to occur, JDSF must remain in production to insure the diversity needed for the betterment of the timber industry. JDSF must continue to be a laboratory for research and demonstration of innovative techniques for private and public timberland owners.

The question that needs to be answered is the EIR Adequate? The courts have not looked for perfection in this document. They look for adequacy, completeness and a good faith effort at full disclosure. This EIR provides all the reasonable information

needed to make a decision. As this is a programmatic EIR and is tiered to a Timber Harvest Plan which is the functional equivalent of the CEQA process. Specific issues such as buffer zones, silvicultural prescriptions, streamside protection, and project level concerns will be addressed at that time. Within the Timber Harvest Plan the public will have many opportunities to address their concerns.

San Mateo County Farm Bureau feels alternative B is option that provides the best flexibility needed to insure the continued management of JDSF, and we feel it is imperative that the Board of Forestry do all in their power to reestablish and continue the vital work done at the JDSF.

Please share our letter with all members of the Board.

Sincerely,

Jack Olsen
Executive Administrator

Cc Mendocino County Farm Bureau
Doug Mosebar, President CFBF
California Forestry Association

Mailed Letter P-124

Response to Comment
Please see response to Mailed Letter **P-7**. Support for Alternative B is noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including B. The plan will emphasize the research and demonstration mission of the state forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products.

Please see also response to Form Letter 8.

P-125

Board of Forestry and Fire Protection
P.O. Box 944 246
Sacramento, CA 94244

Rhonda Champagne
P.O. Box 1
Caspar, CA. 95420

Dear Members of the Board,

I am writing to comment on the new Environmental Impact Report (EIR) for Jackson State Forest. I am a Caspar Concerned Citizen and live right next door to Jackson State Forest. I have lived in East Caspar for sixteen years. The health and beauty of the forest, watersheds and streams in Jackson State are very important to me. My family walks, runs, bikes, and rides horses in Jackson State Forest. During our adventures over the years, we have met many other bikers, horse riders and dog walkers also out enjoying the forest and trails. I know this area is and has been enjoyed by many people. I would like greater emphasis placed on **restoration, recreation and research** in the management plan for Jackson State. 1

I have seen clear cuts first hand, and they are not an acceptable way to manage a forest. 2 I **adamantly oppose option C**, which supports clear cutting. I earnestly urge you to **adopt option F**, the older forest emphasis plan for management. It provides a compromise between environmental protection and timber production. Option E would be my second choice. 3

Rhonda Champagne

Rhonda Champagne

RECEIVED BY
FEB 15 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-125

Response to Comment 1
Utilization of the forest for recreation noted. Desire for greater emphasis on restoration, recreation and research noted. The ADFFMP strives to meet those goals (see General Response 2).

Response to Comment 2
Opposition to clearcutting noted (see General Response 10). The ADFFMP limits the use of even-age management to approximately 26 percent of the Forest (see General Response 2). Most of the remaining area consist primarily of uneven-aged methods. Clearcutting is further restricted as described in General Response 10.

Response to Comment 3
Opposition to Alternative C noted. Support of Alternative F noted. Support for Alternative E as a second choice noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternatives E and F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures. The Board has included plans for JDSF to enhance relationships with recreation user groups.

P-142

John G Dickerson
PO Box 301
Redwood Valley, CA 05470
(707) 485 0702 (johnd@pacific.net)

February 12, 2006

George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Comments Regarding Draft EIR
Jackson Demonstration State Forest

I am the Executive Director of the Employers Council of Mendocino County (ECMC). ECMC is a nonprofit industry association with about 200 members who together provide 10% of the jobs in our County. However, these are my personal comments and are not from the Employers Council. I can not speak with authority on forestry or ecological issues. However, my education and professional experience is in economic history and strategic planning. In addition, for a decade I have been one of the most active individuals in analyzing the Mendocino County economy. These are my strengths that led ECMC to seek my services.

1

My comments regarding the Draft EIR and Management Plans for Jackson Demonstration State Forest (JDSF) are focused on long-range strategic issues and our state and local economy. There are three topics:

- The Mission of JDSF: Sustainable Forestry in a 14 Billion Person World
- Horrid imbalance in California's Consumption v. Production of Lumber
- Mendocino County's Economy

The Mission of JDSF: Sustainable Forestry in a 14 Billion Person World

California State leaders in 1946 saw the need to learn and demonstrate how to restore heavily cut-over forests to provide future lumber. As stated in the enabling legislation:

> (The management of JDSF) shall be in conformance with forest management practices designed to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries and aesthetic enjoyment.

2

We owe a great deal to their foresight and vision. But today we're in a different world. In 1946 the world had 2.3 billion people. The nation had just emerged from World War II and feared the Great Depression wasn't over. The atomic bomb and the Iron Curtain had just been dropped, and the Cold War was just beginning. It's easy to see why the "American Dream" of owning a home, getting an education, having a good job, and being secure in a threatening world was the goal of many in that generation.

2 But people's views evolve over time. Since 1946 we've learned a lot about the impact of the 20th century's explosion in world population and our ability to impact nature through increasingly powerful technologies. Today we share the world with 6.5 billion people – about twice as many as were alive when JDSF was founded. We are clearly in the middle of the most profound change in humanity's ability to affect nature, for good, or for ill. And it's apparent the US will not be the singular wealthy and powerful nation in the world as we were coming out of WWII. It's entirely appropriate and in fact unavoidable to once again think about what JDSF's goals should be.

3

4 The UN expects 9.5 to 14 billion people to be alive in 95 years. As you know, ninety five years is not much in the life of forests. Billions of people are rapidly moving from third to first world consumer patterns in an increasingly global economy. According to Jared Diamond in his recent excellent book *Collapse* it took 8000 years to cut down the first 25% of the world's forests. The second 25% went in the last 50 years. Cut and run timber operations in third world countries threaten to remove almost if not all the world's lowland tropical forests in the next 50 years. Science has irrefutably shown that all of us are in big trouble without the world's forests.

How does that argue JDSF should be primarily a park? A park won't show us how to provide lumber to meet future demand while maintaining the health of forest ecosystems and the planet.

5 In Diamond's worst-case scenario all the world's forests outside heavily protected parks will be destroyed in this century. His best case is we learn how to provide the world's timber needs on 20% of its forests. This is precisely what JDSF should be about. It is 1946's mission updated for our time.

I can't urge you strongly enough to keep JDSF's mission and practices based solidly on the foundation established by its founders in 1946 updated to our times – learning and demonstrating how to move beyond past forestry practices that are increasingly unviable, and how to supply a much higher demand for wood products by a much larger population in the relatively near future while maintaining the health of forest and worldwide ecosystems at the same time.

Horrid imbalance in California's Consumption v. Production of Lumber

6 According to a series of articles a few years ago in the Sacramento Bee titled "A State of Denial", California was self-sufficient in lumber 50 years ago. Today we import 80% of the 8 billion board feet we use. We use more Canadian lumber than our own, where 90% is clear-cut and 2/3 from old growth. Lumber not produced in Jackson forces clear cuts in old growth Canadian forest. That not only doesn't make sense, but on its face is evidence of our statewide society's environmental irresponsibility. Instead of "Not In My Backyard" (NIMBY), we absolutely should produce more of our timber in our back yard.

Mendocino County's Economy

Thirty years ago 36% of the jobs in Mendocino County were in the wood products industry. Today it's less than 5%. No part of our county has been more harmed over the past 30 years than timber worker families. How can we in good conscience deny them jobs?

7 The County of Mendocino had less than $20 million in debt 8 years ago; today it's $132 million. I believe it will be at least $150 million at the end of this year. We are now one of the most, and perhaps the most indebted County government per resident in the state. The collapse of the timber industry has greatly damaged the tax base of local jurisdictions. The resumption of timber harvest taxes is vital to their ability to recover.

8 We need to rebuild our economic base. We have only a few economic advantages in the global economy; growing redwoods clearly is one. If done correctly, timber production should be a long-term component of our local economy.

Thank you for the opportunity to submit these comments.

John G Dickerson

Mailed Letter P-142

Response to Comments 1-2
Comments noted.

Response to Comments 3
The Board has given substantial consideration as to what goals should guide the management on Jackson Demonstration State Forest. The Administrative Draft Final Forest Management Plan being considered by the Board, which is based on Alternative G, provides an explicit set of goals for the management of the Forest (see Chapter 1).

Response to Comments 4
Comment noted.

Response to Comments 5
Since its establishment in the 1940s, JDSF has been managed by the State primarily for research and demonstration on sustainable forest management. The proposed Administrative Draft Final Forest Management Plan continues that direction, while incorporating new learning about sustainable forest management and providing an adaptive management component (see Chapter 5) to help continue that learning over time.

Response to Comments 6
Comment noted. A key part of the research and demonstration mission at JDSF is to help other forestland owners to learn how to manage their forests to increase their productivity of both timber and nontimber resources.

Response to Comments 7
The 2005 DEIR (see sections III.5, III.6, and VII.6.3) and the 2007 RDEIR (see section III.6.4) both provide substantial information and analysis related to the economy of Mendocino County.

Response to Comments 8
The Administrative Draft Final Forest Management Plan seeks to maintain timber as an important part of the county's economic base, both through timber production on JDSF and through increased productivity from other landowners who learn better management approaches through JDSF research and demonstration programs. Please see also above response to Comment 6.

P-144

GRAVES APARTMENTS
44550 Little Lake Road, Mendocino CA 95460
mail: P.O. Box 1701, Fort Bragg CA 95460

January 30, 2006

RECEIVED BY
RECEIVED BY
FEB - 7 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Mr. Gentry:

The reason for my letter is to insist that you to return Jackson Demonstration State Forest to active status. The shut down of Jackson Demonstration State Forest has had a devastating effect to our community and our county. In addition the State of California has not been receiving the much needed revenue from the sale of the timber.

JDSF was created in the 1950's as a demonstration forest; it has historically been a well managed forest. The proposed harvest rate for the forest will be less than 50% of it's annual growth. There are also road maintenance issues that will be addressed with the EIR.

I **urge** you to accept the proposed Alternative B EIR and return Jackson Demonstration State Forest to an active production forest. The revenue and jobs it will provide are very important to our community, county and our state.

Thank you for your consideration.

Sincerely,

Stacey Bradley

Stacey Bradley
Owner

Mailed Letter P-144

Response to Comment
Please see response to Form Letters 1 and 4. See also General Response 2 and 13.

P-147

Theodore W. Wooster
Consulting Biologist and Designated Biologist-Retired
6645 Yount Street, Yountville, CA 94599
Telephone and Fax Number (707) 944-8451

February 21, 2006

RECEIVED BY
FEB 22 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Board of Forestry
P. O. Box 944246
Sacramento,California 94244-2460

Dear Persons:

I am writing to provide additional information and recommendations on the draft Environmental Impact Statement for the Jackson Demonstration State Forest.

I have been involved with the Forest since 1976 when I became the Environmental Services Supervisor for the Region III, California Department of Fish and Game. From 1976 through 1999 when I retired I was involved in the review of all timber harvest plans on the Forest. In addition, I was designated by the State in 1990 to determine what measures were to be implemented to avoid take of the Northern spotted owl. In 1989 through 1992, I personally surveyed for active Northern spotted owls activity centers on the Forest. 1

As a result of those surveys and those that followed through the 1997 season, a draft report, dated December 8, 1998 was prepared. It is titled "Distribution and Status of the Northern spotted owl in Jackson Demonstration State Forest, CA 1990-1997 (Attachment 1). This report basically concluded that there are approximately 14 activity centersof Northern spotted owls on the forest of which most have successfully nested in the managed second growth redwood and coastal Douglas-fur forests in Jackson Demonstration State Forest. Studies since 1997 have also verified the continuation of these activity centers.

Also attached is a report by Gregory A. Guisti entitled "Woodrats and Northern Spotted Owls" published in the March 1999 issue of the Journal of Forestry (Attachment 2).

From these two studies it can be concluded that:

1. Woodrats are the most important food source for spotted owls in the redwood region.
2. Management activities that create dispersed clear cuts or group selection cuts (1 to 20 acres in size) could be useful in providing habitat for the primary NSO prey (woodrats).
3. The crude density of Northern spotted owls is much less on Jackson Demonstration State Forest than on Georgia Pacific lands (now Campbell) and/or Louisiana Pacific lands (now Mendocino Redwood Company.

I believe the lower density of Northern spotted owls' on the Forest are the result of much of the Forest has not been managed since it grew back from the original cuttings. There is a paucity of wildlife associated with these almost pure dense stands of Douglas fir and redwood of uniform

size and height.

2 From my review of past Timber Harvest Plans on the Forest and subsequent results of wildlife diversity, I believe that "Alternative C 1 the proposed Project-Management Consistent with the May 2002 Draft Management Plan": is the best alternative to maintain and improve the long term wildlife values on the Forest and in particular the Northern spotted owl.

Thank you for the opportunity to comment.

Sincerely,

Theodore W. Wooster
Consulting Biologist

Mailed Letter P-147

Response to Comment 1
The Board is aware of the surveys and the resulting report, "The Distribution and Status of the Northern Spotted Owl in Jackson Demonstration State Forest". This information is utilized by JDSF staff.

Future forest management will be designed to provide a variety of habitats and stand conditions. The desired future condition of the Forest will include a variety of tree sizes, densities, and spatial arrangements of trees and stands. Harvest operations will be restricted to the use of single tree and small cluster selection on portions of the Forest, but significant areas dispersed across the Forest will be designated to allow group selection and even-aged management (see General Response 2 and 10). The protection, retention and recruitment of structural elements including snags, LWD, and trees with deformities, such as broken tops, will be incorporated into silvicultural prescriptions to further enhance wildlife values.

Response to Comment 2
Support of Alternative C1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative C1. The Board has emphasized JDSF research and demonstration role.

P-149

Henry E. Gundling
P.O. Box 589
Philo, CA 95466

George D. Gentry
Board of Forestry & Fire Protection
P.O. Box 94246
Sacramento, CA 94224-2460

RECEIVED BY
FEB 21 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Feb. 15, 2006

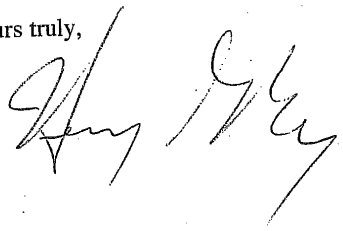
Gentlemen,

1 I am writing in support of Alternative D with regard to the Jackson Demonstration State Forest – EIR Draft. I have been involved in forestry issues in Mendocino County since 1988 and served on the county Forest Advisory Committee, the JDSF-CAC and have been on the Mendocino County Forest Council since its inception. I also own redwood forest land in the county which has been conservatively managed since 1968 with the same spectacular results as JDSF.

2 Director Wilson set up the CAC to help quell the anger and unhappiness of local residents who were primarily concerned about old growth retention, even-age management and herbicides. That tension still exists today and could even increase due to the influx of new people living in the Ft. Bragg area. If you want to end this bitter struggle, the CAC recommendations would be a great way to begin. In most respects CDF has done a fine job of managing JDSF over the years, particularly when compared to the neighboring industrial properties. The shut down of operations the last few years has been an economic tragedy for CDF and Mendocino County and so it is imperative to get the forest up and running again. The only good thing that can be said about the whole fiasco is that the trees continue to grow. With a little give on the part of CDF on even-age management and herbicides, there should be a light at the end of this tunnel. In addition, the net result to all of us will be a more valuable resource in the future.

3

Yours truly,



Mailed Letter P-149

Response to Comment 1
Support for Alternative D noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 2
The Board recognizes that old growth, herbicides, and even-age management are contentious issues. The ADFFMP protects old growth from harvesting (see General Response 8), and restricts the use of herbicides (see General Response 7), and even-age management (see General Response 10). The ADFFMP contains provisions regarding a new JDSF advisory committee that will provide for local representation and provide a forum for local input on the management of JDSF.

Response to Comment 3
The Board concurs that the Forest has been well managed in most respects. Unfortunately, there is no alternative likely to bring an end to controversy concerning the management of JDSF. The ADFFMP strives to balance concerns while remaining consistent with the legislative mandate and Board policy for the state forest system.

The Board recognizes the negative economic impacts that the “shut down of operations” has had on CAL FIRE and Mendocino County. The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to complete the EIR process and approve a management plan.

IV.7 Individual DEIR Mailed Comments P-151 to P-182

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Mailed comment submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR

P-158

RECEIVED
FEB 21
BOARD OF FORESTRY
AND FIRE PROTECTION

Heidi Knott
P.O. Box 589
Philo, CA 95466

Mr. George D. Gentry
Board of Forestry & Fire Protection
P.O. Box 94246
Sacramento, CA 94224-2460

Feb. 16, 2006

Re: Jackson Demonstration State Forest – Environmental Impact Report Draft plan

Dear Sir,

1 As a citizen of Mendocino county who has followed the struggle over JDSF among CDF, logging businesses, and environmentalists, I urge you to end the animosity by supporting Alternative D of the current EIR Draft plan. This is the one alternative that all sides can agree on. As you are aware, the Citizen's Advisory Committee many years ago outlined the recommendations in this plan, and they were a group of people from very diverse backgrounds. Please don't miss the opportunity to enact these suggestions and end the stalemate that has kept the forest closed for the last five years.

Sincerely,

Heidi Knott

Mailed Letter P-158

Response to Comment
Support for Alternative D noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

The scope of public comments received indicate that there is no alternative that “all sides can agree on”. The Board has developed an alternative that remains consistent with the legislative mandate and Board policy for the State forest system, while also incorporating public comment.

P-161

RECEIVED BY
FEB 17 2005
BOARD OF FORESTRY
AND FIRE PROTECTION

1. Kingston Way
Cotati, CA 94931
February 8, 2005

Mr. George D. Gentry
exec. director
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry,

Its come to my attention that the recent 1500 pp. EIR has a very rushed deadline for public comment. Please extend it so experts of all kinds have time to analyze it and offer suggestions.

I implore you to reject the business as usual ~~approach~~ approach to our forests and consider alternate approaches for sustainable diverse and earlth forests.

Thank you.

Sincerely,
Adrienne
Adrienne Lauby

Mailed Letter P-161

Response to Comment
Please see General Response 4 and 5.

P-164

STATE OF CALIFORNIA—THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

BOARD OF FORESTRY AND FIRE PROTECTION
P.O. Box 944246
SACRAMENTO, CA 94244-2460
Website: www.bof.fire.ca.gov
(916) 653-8007

RECEIVED BY
FEB 23 2006
BOARD OF FORESTRY AND FIRE PROTECTION

MEMO

Date: February 10, 2006

From: George "YG" Gentry, Executive Officer

To: Interested Parties

Subject: Comment Period for the Jackson State Demonstration Forest Management Plan Draft Environmental Impact Report (**SCH # 2004022025**)

You previously received a Notice of Availability for the above named document. The close of comment period in that notice was February 14, 2006, at 5:00 p.m.

Close of comment has been extended to **March 1, 2006, at 5:00 p.m.**

Comments must be submitted, in writing, by the close of the **comment period, ending on March 1, 2006, at 5P.M.** to: Board of Forestry and Fire Protection, P.O. Box 944246, Sacramento, CA 94244-2460; or Fax (916) 653-0989; or emailed to: board.public.comments@fire.ca.gov

Not having examined the above EIR, I will repeat only what I said in a letter years ago related to my long experience doing work for public Agencies: I urge that control of so-called "invasive Species" be given top priority using every appropriate scientifically approved method.

DICK VAN ALSTYNE
1430 CEDAR ST
FORT BRAGG CA 94105

R. W. Van Alstyne

(See over)

Spring-Summer '98

P 1&4, page 2

VOLUNTEER SPOTLIGHT

Dick Van Alstyne

Dick Van Alstyne is truly *A Man for All Seasons.* For five years now whether it is summer, spring, winter or fall nearly everyday you can find Dick in the Gardens doing the jobs most of us avoid. He has single-handedly waged a war on our most invasive weeds. Without a thought as to how large the job was, he thoroughly removed and has kept under control the Himalayan Blackberry on the entire 47 acres of the garden. In the new North Forest area he spent hundreds of hours clearing brush, burning slash and cutting wood. After working with Dick a few times, many court referrals ask to work in another part of the Garden, complaining "that old guy works too hard, I can't keep up".

Born and raised in Chico, Dick is a retired alfalfa farmer from Live Oak in the Sacramento Valley. He and Florence, his wife of over 48 years, have raised two sons. After retirement in 1990 he started doing volunteer work for the Nature Conservancy, National Forest Service and California State Parks. When he moved to the Mendocino coast for a change of climate he came to work at the Gardens (to our great benefit).

Dick was presented with his Lifetime Membership award at the volunteer party last December.

500 hours of volunteer time is needed for a lifetime membership. No-one has recorded exactly how many hours Dick has accumulated, but he has worked more than 500 hours each year he has worked at the Gardens. Without all his hard work the Mendocino Coast Botanical Gardens would not be the beautiful place we all know and love. Thank you Dick, for being our *Man for All Seasons.*

Ed Rose

NEW VOLUNTEER PROGRAMS

This coming year two new volunteer opportunities will be available at the Gardens. The first is a roving docent program. Docents will roam the gardens answering questions and talking with the guests in an informal manner. This will require a minimal amount of training, and handbooks with general information and commonly asked questions will be provided. The Roving Docents are not expected to be botanical experts, just informed volunteers who like to talk with the visitors in the Gardens.

The other program is a newsletter staff. We will be looking for people who have experience with editing, proofreading, formatting, and publishing newsletters *(or would like to learn). Other jobs that* are less demanding are helping with labeling and bulk mailings. There will also be chances to gather photographs and artwork for many of the articles. The staff will be putting out two newsletters a year. With the right group of people this should be a fun and rewarding job.

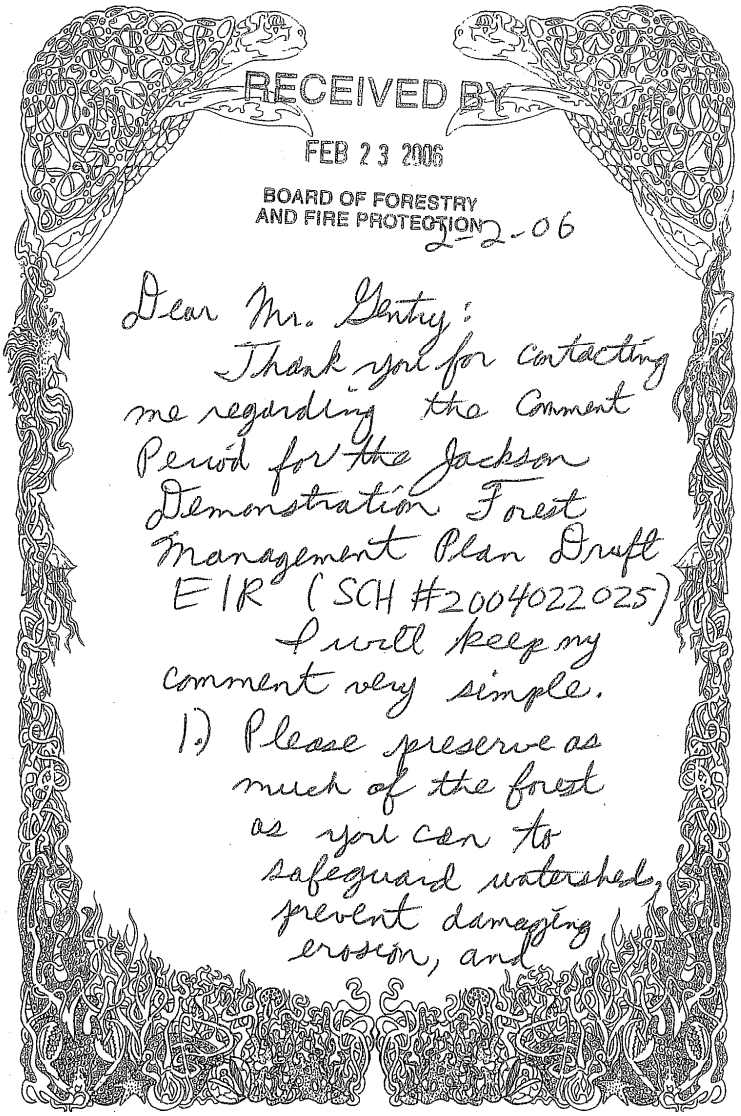
Both of these new programs are designed to be enjoyable with the least amount of stress possible. If you are interested or would like more information please contact the Volunteer Coordinator at (707) 964-4352 or stop in and say "hi" the next time you visit the Gardens.

Ed Rose

Mailed Letter P-164

Response to Comment
A desire for increased emphasis on the control invasive species using every appropriate “scientifically approved method” is noted. The ADFFMP places a high priority on controlling invasive species and provides the flexibility needed for managers to address this issue. The Management Plan includes as part of Goal 2 the objective to minimize the influence of invasive exotic plants and animals.

P-166



Hemp / Recycled Blend. U.S. Milled.

encourage healthy habitat for fish, birds and mammals.

2.) If logging is allowed in part of the forest please make sure it is logged sustainably.

Thank you very much for listening!

Elinor Taylor

Elinor Taylor
1311 Herbazal St.
Sonoma, CA 95476

Mailed Letter P-166

Response to Comment 1
Desire for a preservation oriented management approach noted. Please see General Response 2, 11 and 12. A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

Response to Comment 2
All timberland properties greater than 50,000 acres, including Jackson Demonstration State Forest, are required to develop a 100 year sustained yield plan in order to harvest timber. CAL FIRE has consistently harvested well below growth, resulting in an ever increasing inventory on the Forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving resource values over time in comparison to existing conditions.

P-167

R. Edward Burton

EBC COMPANY
"POLLUTION INTO PRODUCTS"

707-459-6219
Fax: 707-459-6210

February 21, 2006

RECEIVED BY
FEB 23 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Board of Forestry & Fire Protection
George Gentry, Executive Officer
P.O. Box 944246
Sacramento, Ca.94244-2460

Dear Mr. Gentry,

Professor Fritz was working to create Jackson State Forest while I was studying under him for my MS in Forestry in 1949-50.

Since then I have carried on several research-demonstrations projects, like the one described by my paper in Biomass Energy Development (Plenam Press 1986) enclosed.

Also enclosed is my current Willits News column on Ethanol and Cellulostic E85. My next column will describe how small villages (30 homes, 100 people) can live along the railroad. They can Telecommute while quietly harvesting Smallwood (brush, limbs and crowded small trees) using electric vehicles with Inverters to power electric chainsaws.

The bundled Smallwood will be brought to the railroad over four-foot wide roads like the one we built near Parlin Forest on JSF and described in my paper.

I have not read all of the plans bit it does not appear to me that I could again carry out a similar research program, without an expensive and time consuming review and THP.

The cost of oil dropped to $10./ barrel in the 1990's, today it is around $60./barrel and the end of oil awfully close.

Wood, wind and PV Solar will soon be the cheapest most reliable energy available in our region and state.

Sincerely,

R. Edward Burton
EBC Company

cc: Phillip Lowell, RPF , Santa Rosa

222 Franklin Avenue • Willits, California 95490

Mailed Letter P-167

Response to Comment
Comments do not relate directly to the EIR. The California Forest Practice Rules determine the need for a THP.

The finalized plan will emphasize the research and demonstration mission of the state forest. There may be opportunities for future demonstrations to be conducted supported by the appropriate environmental analysis. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products.

February 16, 2006 P-168

STATE BOARD OF FORESTRY AND FIRE PROTECTION
P.O. BOX 944246
SACRAMENTO, CA 94244-2460

Stan L. Dixon, Chair
Mark Bosetti
Kirk Marckwald, Vice Chair
David Nawi
Gary Rynearson
Ron Nehring
Pam Giacomini
James Ostrowski
Bruce Saito

RECEIVED BY
FEB 24 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

1 The California Board of Forestry want to issue a permit to allow logging in Jackson State Forest. The State's argument seems to be that this area is previously logged second growth, therefore it isn't worth restoring. To me (I live in Oakland) this is like saying we should log Redwood Regional Park (a previously logged second growth area located in Oakland). If that were proposed, damn near the whole population of Alameda County would turn out against it. I want to see Jackson State Forest be turned into a state park and be allowed to grow into a redwood forest that my grandchildren can enjoy- I want them to be able to say my grandpa helped save this park.

FL 2 I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document (Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

Paul Tumolo

408 Taurus Ave.
Oakland, CA

Mailed Letter P-168

Response to Comment 1
Please see General Comment 2. CAL FIRE has been actively managing this forest for approximately 60 years under the Legislative mandate for the "purpose of demonstrating economical forest management". Part of that management included restoring the forest from a largely cut-over industrial property to a well stocked young forest.

JDSF is not a park. The legislative mandate precludes the conversion of any of the state forests into parks. As demonstrated by the previous 60 years, active forest management, including the harvest of timber, can result in improved resource values over time. Many comments have noted the beauty of present-day JDSF.

Please see also response to Form Letter 2.

P-169

2-22-06

TO WHOM IT MAY CONCERN

I LIVE IN CLEONE AND OWN 15 ACRES OF REDWOOD FOREST. I HAVE LOGGED MY PROPERTY 3 TIMES. YOU COULD NOT TELL THAT I LOGGED IT THOUGH. I BELIEVE THAT THE JACKSON STATE FOREST SHOULD HAVE AN ACTIVE TIMBER HARVEST. WHEN WE LOGGED OUR PROPERTY THE SECOND TIME, WE HAD BYRON FALES COME WITH HIS HUGE SLASH FOREST MACHINE. IT DID A BEAUTIFUL JOB TURNING THE SLASH INTO A MULCH. PLEASE CONTINUE TO LOG AND MAINTAIN THE JACKSON STATE FOREST. THE STATE NEEDS THE MONEY. THE WOOD PRODUCTS SHOULD ALSO BE MILLED AT PARLIN FORKS AND CHAMBERLAIN CREEK CAMPS.

THANK YOU

KEVIN BERG
32010 OBAYLEY DRIVE
FORT BRAGG, CA

Ken Berg

RECEIVED BY
FEB 24 2006
BOARD OF FORESTRY AND FIRE PROTECTION

K. BERG

Mailed Letter P-169

Response to Comment
Desire to retain logging and maintenance of JDSF noted. The finalized plan will emphasize the research and demonstration mission of the state forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products.

Parlin Fork and Chamberlain Creek camp do not have the capacity to mill all of the wood products developed from JDSF. They will continue to provide limited production of primary and secondary wood products.

Mr Heinz Dullinger
PO Box 94
Redwood Vly, Ca 95470-0094

P-170

Feb. 21. 06

RECEIVED BY
FEB 24 2006
BOARD OF FORESTRY AND FIRE PROTECTION

To the Board of Forestry
Att. George Gentry
Regarding Jackson State Forest.

Dear Sir

Here in Mendocino County we love the Jackson State Forest and we stops in on our way to the Coast.

1 We feel strongly opposed to a 30 % clear cut
2 within a management plan to subsidize the
3,4 timber industry. Old groth and second groth
5 Redwood stands are a national inherid treasure. They provide habitat, recreation, education and research for the public on their land.
6 Modern fireproof buildings are build with steel, glas, concrete, cable and tile.
7 In the past this forest had to indure much destruction land slides, errosion and bad blood in the community

Please help planning for a sustainable future

Thank you

Ike Heinz Dullinger

Mailed Letter P-170

Response to Comment 1
Please see General Response 10. The finalized plan will include reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, and a management emphasis on research, demonstration and education.

Response to Comment 2
The comment provides no supporting information on the claim that harvesting on JDSF provides a subsidy for the timber industry. All sales greater than 100,000 board feet and/or $10,000 in value are required to be sold through a bid process to ensure that the State receives fair market value. The sale of timber will result in both direct and indirect timber related employment.

Response to Comment 3
See General Response 8.

Response to Comment 4
See General Response 9.

Response to Comment 5
See General Response 2, 11, 12, and 14.

Response to Comment 6
The comment does not relate directly to the EIR. The alternative building materials listed are not without environmental impacts (see page DEIR.VII.16-3).

Response to Comment 7
A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

P171

PAUL V. CARROLL
Attorney at Law
5 Manor Place
Menlo Park, California 94025
telephone (650) 322-5652
facsimile (same)

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 28, 2006

George Gentry, Executive Director
California Board of Forestry
1416 9th Street
Sacramento, CA 95814

Re: Draft EIR for Jackson Demonstration State Forest Draft Management Plan

Dear Mr. Gentry and Members of the Board:

I write on behalf of Dharma Cloud Charitable Trust Foundation, The Campaign to Restore Jackson Redwood State Forest, and the public they represent regarding the Jackson Demonstration State Forest Management Plan and its draft EIR.

The Draft EIR Fails to Consider a Range of Feasible Alternatives

1 A draft EIR is required to consider a range of reasonable alternatives. A reasonable alternative has two requirements: it must be (1) feasible and (2) less damaging than the project as proposed. (CEQA Guidelines, § 15126.6, subds. (a), (f).) The draft EIR fails to consider a range of feasible alternatives.

2 The draft purports to consider seven alternatives. Alternative A is the no project alternative. It is required in every EIR. It is not considered part of the range of reasonable alternatives because it cannot satisfy the basic objectives of the project proponent. Instead, it is used as a baseline for measuring impacts. Alternative B

3 is management under the 1983 management plan. This alternative is not feasible because CDF and the Board entered into a settlement agreeing not to manage

4 JDSF under the 1983 management plan. Alternative C is the present project, management under the 2002 management plan. It is not an alternative. Alternative C2 is a variation on C1 and is purportedly feasible. Alternative D is management towards an all–age forest and is purportedly feasible. Alternative E

5 is deemed infeasible by the draft EIR because it is not consistent with the Public Resources Code or Board policy. Alternative F is deemed infeasible by the EIR, because it too is not consistent with the Public Resources Code or Board policy. (1:7-9; VI:8-13.)

Thus, not including the project itself and the no-project alternative, only two feasible alternatives are considered, C2 and D. Two alternatives do not constitute a "range" no matter how broadly that term is construed. This is particularly the case for a project of this size and scope.

5 The EIR purports to rationalize this violation by contending that elements of alternatives E and F, even though infeasible, "are useful for how they offer potential ways to mitigate forest management impacts." (VI:12.) But this is true of many infeasible alternatives, including the no-project alternative. They can embody ways or mitigations to avoid a project's impacts. CEQA, however, requires that alternatives be feasible, because only a feasible alternative provides the decisionmaker and the public with a *real* alternative to the proposed project. Only a feasible alternative satisfies CEQA's goals of informed decisionmaking and public participation.

6 Under CEQA, an EIR must identify the environmentally superior alternative. Here, the EIR picks alternative E, which is not feasible. This too violates CEQA. A non-feasible superior alternative thwarts the goals of informed decisionmaking and public participation.

7 Finally, the draft EIR states that the no project alternative "is not required for analysis since it does not meet the project goals and objectives." (VI-9.) This is incorrect as a matter law. CEQA in fact requires an in-depth analysis of the no project alternative. (CEQA Guidelines, § 15126.6, subd. (e)(1)-(2).)

8 In short, the EIR's failures to consider a range of feasible alternatives, to identify a feasible superior alternative, and to analyze the no project alternative are fundamental violations of CEQA.

The Draft EIR Fails to Recognize that an Effect that Delays Recovery Is a Cumulative Impact

9 The draft EIR appears to take the position that any incremental impact from ongoing timber operations will be offset by various restoration measures, such as the road management plan. Take for example cumulative watershed effects from sedimentation. The draft EIR does not assert that logging under the modern Forest Practice Rules altogether eliminates sedimentation in streams and waterways. Indeed, even the various Casper Creek studies on which the draft EIR so often relies make clear that logging has impacts, albeit some that are lessened under the modern Forest Practice Rules. (E.g., Lewis, 1998; Reid, 1998.) Instead, the draft EIR appears to reason that sediment delivery from future timber operations will be offset by other measures like road restoration that are designed to eliminate ongoing sources of sedimentation. When everything is added up, so the reasoning

goes, the amount of sediment that is eliminated through restoration will exceed the amount that future timber operations produce. Thus, the draft EIR concludes that timber operations will not have a cumulative impact. (E.g., VIII:58.) (This same reasoning is applied to a variety of cumulative effects, including water temperature (VIII:45) and fisheries habitat. (VIII:82.))

There is a major flaw in this reasoning, because it ignores that ongoing timber operations will necessarily *delay* recovery. Assuming the draft EIR is correct—that restoration projects will reduce sedimentation by more than that produced by timber harvests—timber harvesting, because it still produces sedimentation, will delay recovery. Under CEQA, a project that delays recovery has a significant adverse impact, or at least a cumulative one, because it continues past environmental harm longer than necessary.

9

By way of illustration, imagine that someone has had a heart attack. His doctor advises him that if he does not smoke his recovery will take one year. If he smokes one-half pack a day, his recovery will take two years; a pack a day, three years; a pack and one-half, four years; and so on. No one would deny that smoking will have an adverse impact by delaying his recovery.

This same holds true here. Timber operations, because they will have some sedimentation (and other) effects even with the mitigations required by the Forest Practice Rules, will delay recovery. The draft EIR fails to acknowledge that a delay in recovery caused by timber operations is a significant cumulative impact. The draft EIR's conclusion that the project will not have cumulative impacts is therefore incorrect both as a matter of fact and law.

The Road Management Plan and Other Mitigations

The road management plan is an essential mitigation for the project. It is discussed throughout the draft EIR as a mitigation for a wide range of project impacts relating to hydrology, water quality, fisheries, sedimentation, landslides, and soils. (E.g., VII:6:1:92-94; VII:10:18-19; VII:7:31-32.)

10

At the same time, it is not clear from the EIR or the JDSF management plan whether the road plan is contingent on the availability of funding, or staff, or contractors, or a combination thereof. (See VII:6:1-97.) Please clarify and explain whether the road management plan and any other mitigations are contingent on funding or other factors that may not materialize. If so, they do not constitute valid, feasible mitigations.

11 **The Draft EIR's Conclusion that The FPRs Will Mitigate All Cumulative Impacts Is Not Supported by Scientific Evidence**

12 The draft EIR assumes that the Forest Practice Rules are adequate to protect the environment. In numerous places, it states that the FPRs will mitigate significant impacts of the project. It also implies as much when it contends that the FPRs plus additional mitigations like the road management plan will combine to have a beneficial effect on the environment.

13 The problem with this reasoning is that the draft EIR does not provide scientific evidence that the FPRs are reducing impacts to a level of insignificance, especially cumulative impacts. The draft EIR frequently cites to the Casper Creek studies, but those studies do not show that the modern FPRs reduce impacts to a level of insignificance. Far from it. Although the Casper Creek studies show that many impacts are lessened by the modern FPRs, they do not suggest, let alone conclude, that the modern FPRs eliminate *all* impacts. (E.g., Lewis, 1998; Reid, 1998.)

14 On the other hand, there have been at least three recent, comprehensive studies by independent scientific panels that have concluded that the modern Forest Practice Rules fail to prevent cumulative impacts, especially regarding water quality and fisheries, namely *Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat* (Ligon et al., 1999); *A Scientific Basis for the Prediction of Cumulative Watershed Effects* (Dunne et al., 2001); *Final Report and Phase II Report on Sediment Impairment and Effects on Beneficial Uses of the Elk River and Stitz, Bear, Jordan and Freshwater Creeks* (Collison et al., 2002-2003). The three reports were all commissioned by California agencies, namely the California Resources Agency (Ligon et al., 1999), CDF (Dunne et al., 2001), and the North Coast Regional Water Quality Control Board (Collison et al., 2002-2003). The first two of these studies were relied on by the California Senate Office of Research in its 2002 report, *Forest Practice Rules Fail to Adequately Address Water Quality and Endangered Species.* These studies and report are attached.

15 These studies constitute substantial evidence that the FPRs fail to prevent cumulative impacts. In short, they contradict one of the basic premises of the draft EIR. More importantly, the EIR does not address the studies, nor does it offer comparable evidence to counter them. It does not, for example, provide any scientific studies, measurements, or quantitative analyses that show that the FPRs alone or in combination with additional mitigations eliminate potential significant and cumulative impacts. The EIR's conclusions appear based on assumptions rather than scientific evidence.

In short, the draft EIR does not provide concrete evidence to support its claim that the FPRs alone or in combination with other mitigations will *totally eliminate* the

15 adverse effects of logging in JDSF. This lack of evidence is especially troubling in light of the fact that every major, independent study of the FPRs has found them inadequate to control cumulative impacts.

16 Please respond to this concern, including the conclusions of Ligon, Dunne, and Collison. Please also describe the actual, scientific evidence that supports the draft EIR's conclusion that logging in JDSF will not have a single cumulative or other adverse impact.

Very truly yours,

Paul V. Carroll

Mailed Letter P-171

Response to Comment 1
In February 2004, the Board distributed a Notice of Preparation (NOP) for the Draft Forest Management Plan (DFMP). The NOP described the proposed project as well as six alternatives to the project, including two "no project" alternatives. These alternatives (with the addition of Alternative F) were nearly identical to the alternatives that were analyzed in the Final EIR certified by CAL FIRE in 2002. It is the Board's belief that the alternatives, as described, are feasible and cover a broad range of possible management scenarios. However, some elements of some alternatives may require a change in statutes, regulations, or Board policy before they could be implemented. In response to comments received on the DEIR and DFMP, the Board later developed Alternative G and released a Recirculated Draft EIR (RDEIR) that assessed that alternative's potential environmental impacts. The Board later directed that the Department use Alternative G as the basis for the development of the Administrative Draft Final Forest Management Plan (ADFFMP).

Response to Comment 2
Alternative A is the traditional "no project" scenario required by CEQA where the project is not approved (the Plan is not adopted) and no further environmental changes occur [CCR 15126.6(e)(3)(B)]. While curtailing active forest management does not meet the Board's objectives, Alternative A is entirely feasible and discloses the environmental consequences of no management. Alternative A could become reality through further delay in approval of a final management plan, lack of funding for continued operations, or through changes in management direction resulting from legislation or litigation.

Response to Comment 3
The 1983 Management Plan ***is*** the plan under which management has continued to occur in the absence of a new Plan. Management of JDSF under the 1983 Plan will continue until a new plan is adopted by the Board. Thus, it is a feasible though less desirable alternative to meet management goals.

The CEQA Guidelines [CCR 15126.6(e)(3)(A)] require an EIR to consider a "no project" alternative which discloses the impacts of continued management under an existing plan. While the alternative is "infeasible" in the sense that it is precluded by Board policy and the settlement agreement, it is still an alternative to the Plan that is useful in disclosing the environmental consequences of continuing current management practices. The only element of the 1983 Plan which is not implemented at present is commercial timber harvest.

Response to Comment 4
Comment Noted – The Board concurs that the Proposed Project is not an alternative.

Response to Comment 5
The Board's intent in stating that these alternatives were not feasible was full disclosure; making it clear that in order for these alternatives to become a reality changes would be required in Board policy and/or legislation (Draft Environmental Impact Report (DEIR) wording was, "Thus absent changes to those legal mandates, it is not a [wholly] feasible alternative"; page VI-12 and 13). Changes in policy and legislation are not so remote or speculative as to make these alternatives infeasible for CEQA alternatives analysis purposes. In fact, changes in Board policy relating to updating State Forest management plans occurred as recently as 2001. And, the management described under Alternative F is in large part the direct result of legislation that was put forth under SB1648 (Chesbro) in 2003-2004 to change the management direction of JDSF. In addition, only portions of these alternatives could not be implemented immediately. It is the Board's opinion that, were either of these alternatives adopted, the alternative could be successfully implemented with the necessary changes in state law and Board policy.

The Board agrees that the terminology "not a [wholly] feasible alternative", for alternatives that were not immediately implementable without changes in Board policies or legislation was imprecise. This language was modified in the Recirculated Draft Environmental Impact Report.

Response to Comment 6
It is the Board's opinion that alternative E is feasible and therefore appropriate for identification as the environmentally superior alternative as required by CEQA [CCR §15126.6(e)(2)]. See also the response to Comment 5.

Response to Comment 7
This was an unfortunate misinterpretation of the statement in the DEIR in regard to Alternative A (no project). The Board interprets CCR §15126.6(e)(3) to allow two variations of the "no project" alternative: one being the Board not adopting a Plan and all forest operations ceasing (no management); the second being the continuation of forest operations under the existing Plan (maintaining the status quo). It is the Board's belief that the second variant is most applicable in the current situation where the Board is considering the adoption of an update to the 1983 Plan and considered the impacts associated with management continuing under the old Plan. However, the Board also recognized that some members of the public were interested in an analysis that considered the impacts of "no management" occurring and therefore analyzed a second "no project" alternative. It is the second "no project" alternative, Alternative A, that the Board stated was "not required" because "no management" at JDSF did not meet any of the Plan's goals or objectives. It believed that the analysis of Alternative B was sufficient for CEQA purposes but included Alternative A nevertheless. The Board fully recognizes the requirement to analyze a no project alternative and has, for the purpose of full disclosure, chosen to analyze both.

Response to Comment 8
See responses to the above comments.

Response to Comment 9
The commenter states that a project that delays the recovery of a resource (e.g., water temperature, sediment, and habitat) is a cumulative impact. In fact, this comment really opines that recovery is not fast enough, but provides no guidance as to what an acceptable rate of recovery would be. However, the commenter does not provide any measure as to what degree of delay leads to a cumulative impact; only that **any** delay is a cumulative impact. CEQA does not require or provide any guideline to address "delay of recovery." The Board does not believe that the DEIR, DFMP, RDEIR, or ADFFMP delay recovery of any resource to any significant degree and, in fact, implementation of certain measures actually enhances recovery (e.g., the Accelerated Road Management Plan, management of Class I/II WLPZs for late seral conditions, providing for large woody debris recruitment and placement, provisions for management of one-third of the Forest for the development of older forest conditions). The decision as to what rate of recovery is legally sufficient must be based upon substantial evidence in the record, evidence upon which the Board has relied in determining what mitigation measures and management practices to implement.

In addition, the commenter suggests that CEQA requires that a project cannot have any potential significant effects. However, where those potential impacts have been mitigated, CEQA allows the decision maker to determine, based upon substantial evidence, that the potential impacts have been mitigated to a level of insignificance. Lead agencies approve projects that may potentially contribute to an environmental effect by adopting mitigation that limits, reduces or compensates that effect to a level of insignificance. Mitigation may be implemented at a later time or in a different location from the significant effect and may even include measures that are unrelated to the original activity causing the effect. The suggestion that one area of the Board's Plan (i.e., timber harvesting) cannot have any effect on resource recovery, despite the Plan containing numerous elements that promote recovery (e.g., the Road Management Plan) which overwhelmingly mitigate the effect, is clearly contrary to the fundamentals of CEQA (see Response to Comment 15, below). The project must be viewed as a whole.

The DEIR demonstrates that implementation of the DFMP, as mitigated, will have a less than significant impact. In some cases a project may create beneficial effects on the environment as compared with the "no project" alternatives. In other words, the net effect of carrying out the activities proposed under the Plan (e.g., research and demonstration, timber management, recreation) in combination with implementing various restoration measures (e.g., the accelerated Road Management Plan) will not create a significant adverse impact greater than the baseline condition. Where the proposed project (Alternative C1) has a less than significant effect after mitigation as compared with the no project alternative (in this case two no project alternatives) the lead agency has complied with CEQA.

The commenter argues that any logging authorized under an adopted Plan will produce sediment that will, in part, negate the benefits of any restoration projects (e.g., the Accelerated Road Management Plan), thereby delaying recovery. He may be correct that restoration without timber harvests might accelerate recovery. However, restoration activities are statutorily funded through approved timber operations. Alternative A (the no logging alternative) does not include the restoration proposed in some of the other alternatives. The Board has not analyzed an alternative that includes restoration alone; in fact, alternatives similar to this were rejected by the Board as being infeasible (since there would be no funding to support restoration without some commercial logging) and for not meeting the project's basic goals and objectives, as well as not meeting the statutory obligation to sustainably harvest (DEIR page VI-3). CEQA does not require a lead agency to analyze or adopt a project alternative that is infeasible or does not meet any of the project proponent's basic objectives (CCR §15126.6). In other words, the commenter's suggestion that restoration measures should be carried out while timber management is prohibited would be a project alternative that failed the CEQA requirement that it be both feasible and achieve the desired objectives.

Response to Comment 10
Because it is a State program, all activities on Jackson Demonstration State Forest (JDSF) are subject to the annual budgets provided for its management through the legislative budget process. In the budget cycle for the 2006/07 fiscal year, the legislature sent several signals that it is supportive of increased management activities, such as the Road Management Plan, on JDSF, as well as the other Demonstration State Forests. These legislative signals include:

- Permanent shifting of a number of CAL FIRE programs (State Nurseries and Seedbank, Forestry Assistance, Pest Management, Urban Forestry, and the Fire and Resource Assessment Program) from the Forest Resources Improvement Fund (FRIF--the repository for state forest timber revenues) to the General Fund. Only the Demonstration State Forests remain under FRIF funding. This step will ensure that higher revenue levels are available to support JDSF, as well as the other Demonstration State Forests.
- Increasing, at the request of CAL FIRE, the level of the authorized Demonstration State Forests budget level from $3.2 million in fiscal year 2005/06 to $7.1 million in fiscal year 2006/07. This level of budget authorization continues in the current, 2007/08 fiscal year.

CAL FIRE's fiscal year 2006/07 $7.1 million budget authority included an increase in funding to JDSF to $3.5 million, a $2 million increase from the 2005/06 funding level. Included in this $3.5 million budget authority was $640,000 for initial implementation of the Road Management Program. The increased budget authority also included the addition of a senior wildlife biologist to the JDSF staff, and this staff person is now in place. A second heavy equipment operator also has recently been added to the JDSF staff, providing an additional staff resource for the implementation of the Road Management Plan.

These actions indicate that both the legislature and CAL FIRE are committed to ensuring that JDSF has the resources it needs to move forward with the implementation of the program elements called for in the DFMP, the Additional Management Measures identified in the DEIR, the mitigations required in the DEIR, and the further management direction provided by the RDEIR and ADFFMP.

Additionally, we note that for JDSF to be able to operate at the level of funding discussed above, revenues from timber harvesting on JDSF must be generated.

Response to Comment 11
The DEIR makes no conclusion that the Forest Practice Rules "will mitigate all cumulative impacts." The DFMP includes a number of management measures that exceed the Forest Practice Rules requirements to provide additional environmental protection (e.g., the Road Management Plan, management of Class I and II watercourse and lake protection zones for late successional forest). Additional management measures and mitigation measures to enhance environmental protection were included in the DEIR. Alternative G and the ADFFMP provide a greater range yet of measures beyond the Forest Practice Rules to protect and enhance environmental conditions (e.g., designating one-third of the Forest for the development of older forest conditions).

The cumulative impacts assessment in the Draft EIR and DFMP relied upon the results of two approaches widely accepted as being the best available techniques for addressing cumulative effects. Watershed analysis has been used as a defensible methodology for assessing cumulative watershed effects (CWEs) — particularly when landscape level assessments are being completed. For example, Berg and others (1996) concluded that watershed analysis is the best approach to address CWEs in the Sierra Nevada Mountains. The results of watershed analysis are used to identify the locations of high-risk areas and develop appropriate prescriptions for those areas on a watershed-wide basis. Rapid sediment budgets have come to the forefront of CWE assessment in the past decade. Sediment budgeting is a valuable tool for evaluating sediment sources and transport that can be used in CWE analysis (Reid and Dunne 1996). If roads, landings, and crossings are found to be a significant and ongoing sediment source, a road and crossing inventory can be completed, and a program can be developed to reduce the number of high risk sites on a watershed-wide basis in an acceptable time frame to prevent or mitigate cumulative effects (Weaver 1997).

The JDSF watershed analysis was completed for a subset of the current JDSF EIR assessment area as part of the Draft HCP/SYP completed by Stillwater Sciences for CAL FIRE in 1999. Included within the watershed analysis was a rapid sediment budget, quantifying sediment sources within the assessment area. The sediment budget included estimates of hillslope erosion, sediment yield to channels, and changes in sediment storage within channels. Results from the surface erosion and mass wasting modules completed for the watershed analysis were used for this work. The results of the watershed analysis and rapid sediment budget work revealed that road-related erosion (surface and mass wasting) accounted for 72% of the total hillslope erosion. The remaining 28% of the hillslope erosion was associated with natural and management related sources (e.g., in-unit landslides) on hillslopes and inner gorges.

Cumulative sediment impacts from multiple land management activities can be controlled by regulating practices to reduce overall on-site impacts, by repairing existing problems to off-set the impacts of new projects, and by limiting the rate at which new, sediment producing activities are introduced into a watershed relative to recovery from earlier activities. The JDSF Draft Management Plan and DEIR use the results of the watershed analysis work to reduce cumulative impacts to a level of less than significant. Specifically, on-site impacts from individual and multiple projects will be reduced by a combination of the FPRs, added measures in the DFMP and DEIR, and site-specific measures added from Review Team agency plan review, as well as from pre-plan consultation with qualified experts. Repair of existing problems will be accomplished through the accelerated use of the Road Management Plan.

The rate of sediment production from new activities (i.e., from roads and harvest units) described in the DFMP is not expected to inhibit watershed recovery. The total amount of harvest-related sediment and the proportion of sediment production between harvest areas and roads varies depending on logging systems and road location, type, design, and use and with differences in planning watershed sensitivity. In general, there should be near recovery to original or new baseline sediment conditions within approximately 10-20 years following harvest. The hazard of sediment

production from permanent roads can be considered as constant after about 10 years, although actual amounts will vary by road type and storm size–with less frequent, episodic inputs associated with large storms. Higher rates of surface erosion and failures due to poor design or execution are most likely during the first few years following construction.

Data provided in Table VIII.10 of the DEIR shows that the intensity of future harvesting on JDSF in the next 10 years will be less than has been tested in the North Fork of Caspar Creek, where approximately 45% of the watershed was clearcut harvested in three years. Research conducted in the North Fork of Caspar Creek watershed beginning in 1985 directly addressed cumulative watershed effects. Most of the logged units were cable yarded and new roads were built along the ridge lines. Nested watersheds with individual gaging stations measured sediment routing. None of the statistical tests performed on the sediment data revealed significant positive interactions that would indicate disproportionate disturbance effects at downstream gaging stations (Lewis 1998). In both pre and post-treatment, main stem gaging stations had higher unit area sediment loads than in the tributaries, which could reflect the greater availability of sediment stored in lower gradient reaches. The intensive level of timber management in the North Fork of Caspar Creek watershed also did not cause large changes in watershed physical or biological variables in this moderately stable geologic formation (Ziemer 1998, Lewis 1998, Cafferata and Spittler 1998, Nakamoto 1998, Bottorff and Knight 1996). The Caspar Creek results show that downstream water quality impacts of hydrologic changes resulting from timber operations can be prevented by the application of mitigation measures contained in the California Forest Practice Rules.

Finally, it is important to remember that cumulative sediment impacts are further addressed in the DFMP and DEIR with monitoring. Both detailed hillslope and instream monitoring activities are required, as described in the DFMP. Monitoring will provide a feedback loop on impacts and needed changes in practices. Hillslope monitoring of completed THPs will be used to determine the on-the-ground implementation and effectiveness of prescriptions and mitigation measures. Modification of practices or harvest rates in planning watersheds will be based on monitoring results.

Response to Comment 12

Also see response to comment 11. As explained in Section II-6.1 of the DEIR, this is a programmatic EIR that analyzes the potential impacts of the general management direction taken in the DFMP. There are a wide variety of activities that may be carried out under this Plan and not all of them are subject to the Forest Practice Rules. However, discretionary projects will be subject to CEQA as well as other environmental regulations. Subsequent, site specific projects will undergo additional environmental review to determine which laws or regulations are applicable and what additional measures are required in order to mitigate project-specific impacts to a level of less than significant (see Table II.1; page II-13).

Where future timber harvesting occurs neither the EIR nor the Board “assume” that the FPRs alone will mitigate impacts to a level of less than significant. The THP process is not a simple application of the FPRs but rather a multidisciplinary review, including participation by agency experts and the public thereby ensuring all site specific timber harvesting impacts will be identified and mitigation developed. This is a level of site specific review that cannot occur at the programmatic level.

The DEIR does not conclude that use of the standard FPRs alone will mitigate all cumulative impacts. In addition to the standard FPRs, mitigation for cumulative impacts is provided by requirements included in the Draft Management Plan and the Road Management Plan, that will be implemented both as stand-alone projects and as part of future THPs, and by site specific requirements identified as part of the THP review process.

In addition, the DEIR has identified particular practices and sensitive resources where impacts may occur that are not addressed by the standard application of the FPRs. The DEIR requires additional mitigation to lessen those impacts. For example, the DEIR identifies a potential for impacts to snag and LWD dependant species as a result of implementing the DFMP. As such, mitigation is required, that is in addition to the standard FPRs, which mitigates this impact (Page VII.6.6-131). Even where

no potential impacts are identified, the DEIR requires additional Management Measures in certain instances to ensure protection of sensitive resources (i.e., Section VII.6.2.7, Additional Management Measures for Botanical Resources).

Response to Comment 13
See also responses to comments 11 and 12.

The DEIR does not pretend to analyze the efficacy of the FPRs. The efficacy of the FPRs is addressed in the Board's rule making process. FPRs that are found to be ineffective or inadequate in protecting resources may be amended by the Board. The Board, in analyzing potential timber harvesting that may occur under the DFMP, concludes that the FPRs and the THP review process will mitigate timber harvesting impacts, including cumulative impacts, in most cases. In site-specific cases where application of the standard FPRs is not sufficient to reduce certain impacts to a level of less than significant the RPF may propose and the THP review team may require additional measures. In addition, the Board has found that there are several site-specific instances where mitigation above that required by FPRs is warranted.

Response to Comment 14
The conclusions reported in the three listed independent scientific panels must be considered in proper context with the practices that will occur with implementation of the DFMP and DEIR. Specific comments on these reports are outlined below. As noted in responses to comments above, the DEIR does not conclude that the Forest Practice Rules alone are adequate to prevent cumulative impacts related to the proposed project.

Scientific Review Panel Report (1999)

While the report of the Scientific Review Panel (SRP) (Ligon and others 1999) concluded that the FPRs did not ensure protection of anadromous salmonid populations in 1999, the current rules in effect for JDSF have been considerably expanded with the passage of the July 2000 Threatened and Impaired Watersheds Rule Package. The Threatened and Impaired Watersheds Rule Package was developed partly in response to the Scientific Review Panel Report findings. These rules require extensive 150-foot Class I WLPZs (i.e., buffer strips), with little harvest permitted within the first 75 feet, where a high percentage of large wood is recruited to stream channels. Road and crossing measures also were improved, such as requiring crossings to accommodate 100-year flood flows, along with sediment and debris passage.

Additionally, numerous resource protection practices beyond those required by the Threatened and Impaired Rule Package are specified in the DFMP and DEIR. Further measures are applied under Alternative G and the ADFFMP. Therefore, it is not possible to conclude, based on the SRP report, that significant cumulative watershed impacts will occur as a result of the implementation of the DFMP or ADFFMP.

Furthermore, the Threatened and Impaired Rule Package provides a tangible mechanism to address cumulative watershed effects, since they require that the beneficial uses of water, aquatic species, and beneficial functions of riparian zones be restored where they are impaired (in so far as this is feasible). Both the Big and Noyo River watersheds are listed as impaired by the North Coast Regional Water Quality Control Board. Also, in a recent independent review of assessment of cumulative watershed effects within the timber harvest planning process, Gerstein and Harris (2003) stated that, regarding the Threatened and Impaired Rule Package, "…it is an indication that CAL FIRE recognizes that additional measures may be required to avoid cumulative watershed effects in some watersheds."

We note also that Ligon and others (1999, Executive Summary, p. 1) conclude that "The primary deficiency of the FPRs is the lack of a watershed analysis approach capable of assessing cumulative effects attributable to timber harvesting and other non-forestry activities on a watershed scale." In fact, the DEIR, and the data and materials it relies on, provide just such a watershed analysis

approach. Thus, the DEIR addresses the very defect that Ligon and others found most problematic with the FPRs.

A further element called for by Ligon and others (1999) is the development of a program to introduce LWD into streams. JDSF has already conducted several projects to introduce LWD to streams. Further, the DEIR provides for an Additional Management Measure for the Survey, Recruitment, and Placement of Large Woody Debris. This measure, along with all of the various streamside protection measures provided in the FPRs and DFMP, plus the DFMP direction to develop late successional forest in all of the Class I and II WLPZs on JDSF, will ensure that large woody debris loadings on JDSF are increased to at least the levels recommended in the literature by Bilby and Ward (1989).

In addition, Ligon and others (1999) recommended that geologists be used to conduct a broad review of properties and to review proposed activities for potential slope stability problems. Since the release of the SRP report, maps of existing landslide features and of relative landslide potential have been created by the California Geological Survey. Information from these CGS products are incorporated into the DEIR. Further, the DFMP calls for a certified engineering geologist to be involved in the review of all proposed land use projects on JDSF. The SRP report also called for the kinds of analysis and upgrades of roads and crossing that will be carried out under the Road Management Plan called for in the DFMP.

Finally, it is important to note that Ligon and others (1999) reported that a reasonable “red flag” percentage value for concern over rate of harvest would likely range from 30% to 50% per decade, but would depend on numerous factors including geology, harvest prescriptions, past disturbance, etc. The Panel suggested that a blue ribbon panel be formed to investigate this issue further, however this step has not yet been taken. The 30% to 50% rate of harvest per decade is what occurred in the North Fork of Caspar Creek Study, as described above, without large changes in watershed physical or biological variables. Perhaps more important, Ligon et al. indicated that watershed analysis, which has been included in the DEIR, provides a superior analytical approach to percent-of-area-harvested approaches.

Dunne and others Report (2001)

While the report of Dunn and others (2001) provides considerable commentary on perceived limitations with cumulative effect analysis included as part of THPs in the late 1990s, it suggests requirements to deal with cumulative watershed impacts that would require additional budgetary and regulatory authorities. Additionally, comprehensive computer models suggested for addressing cumulative watershed effects prediction were not, and have not yet, been developed for this type of work. In particular, adequate models do not yet exist for robust risk-based analysis that includes the simulation of stochastic events, as called for by Dunne and others.

At the same time, the DEIR makes use of a number of the cumulative assessment tools recommended by Dunne and others. These include:

- Utilization of SHALSTAB and similar landscape-level slope stability modeling, including the California Geological Survey’s map series on relative slope stability;
- Utilization of SEDMODL2 to predict production of sediment related to roads;
- Utilization of the Delta-Q peak flow model to predict stream flow responses to timber harvesting;
- Compiling comprehensive information on past land use activities at the planning watershed level, including potentially disturbing activities such as timber harvesting, as well as restoration activities such as road or stream habitat improvements;
- Utilization of a cumulative effects assessment area based on entire river basins (i.e., the Noyo and Big Rivers);
- Utilization of the California Wildlife Habitat Relationships system and the FRAGSTATS model for modeling potential wildlife impacts.

Collison and others (2003)

Conclusions included in the Collison and others (2003) report were made with the Panel apparently unaware of provisions in the Forest Practice Act and Rules that give CAL FIRE the ability to require and enforce practices that protect water quality. This report also includes criticism of Forest Practice Rule sections that are restatements of legislative intent in the Forest Practice Act and misconceptions about the THP review process, which indicates that the Panel did not have an adequate understanding of the legal framework for the preparation, review, and approval of THPs. Therefore, many of the criticisms found in Collison and others (2003) are already addressed in the existing THP process.

Response to Comment 15
The DEIR does not "claim" that the adverse effects of logging will be totally eliminated; nor does CEQA require such a standard. Lead agencies are required to identify feasible mitigations and/or project alternatives that would **substantially lessen** the potentially significant effects of a project on the environment (PRC §21002). The measure of whether an impact is significant is based upon a comparison of the project's direct and indirect physical changes, as mitigated, with the "baseline" conditions established in the environmental setting (CCR 15125). The DEIR Environmental Setting (Section V; and each Resource Specific Analysis section) describes an environment that has been significantly affected by past land use activities. Where adoption of the DFMP was found to have the potential to cause significant adverse impacts to the environment, the DEIR requires the implementation of various measures that mitigate those effects to less than significant levels, but does not necessarily eliminate the effect altogether. In some instances a residual, less than significant effect may remain; in others, the implementation of the project and/or mitigation would have a net beneficial effect on the environment.

In addition, not all mitigation prescribed under CEQA must prevent an effect altogether; rather, CEQA allows for mitigation that compensates for the effect (CCR §15370). In other words, the primary effect may occur but the net effect may be lessened or eliminated through the requirement that the project proponent take additional actions that compensate for, or offset, the effect (i.e., wetland mitigation banking model compensating for the loss of wetlands). For example, the DFMP and DEIR require the implementation of the Road Management Plan to reduce road impacts to water quality thereby, compensating for some of the minor residual unmitigated impacts associated with timber harvesting.

Response to Comment 16
See the responses to the above comments. The DEIR does not conclude that "logging in JDSF will not have a single cumulative or other adverse impact." The DEIR does conclude that the proposed project, as mitigated by the DEIR, will not have any **significant adverse** impacts. The DEIR provides substantial evidence to support this conclusion.

References

Berg, N.H., K.B. Roby, and B.J. McGurk. 1996. Cumulative watershed effects: Applicability of available methodologies to the Sierra Nevada. Pgs 39-78 in Vol III, Assessments, Commissioned Reports, and Background Information, Sierra Nevada Ecosystem Project, Final Report to Congress. Centers for Water and Wildland Resources, University of California, Davis CA.

Bilby, R.E.; Ward, J.W. 1989. Changes in characteristics and function of woody debris with increasing size of streams in western Washington. Transactions of the American Fisheries Society. 118: 368-378.

Bottorff, R.L.; Knight, A.W. 1996. The effects of clearcut logging on stream biology of the North Fork of Caspar Creek, Jackson Demonstration State Forest, Fort Bragg, CA -- 1986 to 1994. Unpubl. Final

Rept. prepared for the California Department of Forestry and Fire Protection, Contract No. 8CA63802. May 1996. Sacramento, CA. 177 p.

Cafferata, P.H. and T.E. Spittler. 1998. Logging impacts of the 1970's vs. the 1990's in the Caspar Creek watershed. In: Ziemer, R.R., technical coordinator. Proceedings from the Conference on Coastal Watersheds: the Caspar Creek Story, May 6, 1998, Ukiah, CA. General Tech. Rep. PSW GTR–168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. P. 103-115. http://www.rsl.psw.fs.fed.us/projects/water/caspar

Collison, A., W. Emmingham, F. Everest, W. Hanneberg, R. Martston, D. Tarboton, R. Twiss. 2003. Phase II Report: Independent Scientific Review Panel on Sediment Impairment and Effects on Beneficial Uses of the Elk River and Stitz, Bear, Jordan and Freshwater Creeks. Independent Science Review Panel performed analysis on retainer to the North Coast Regional water Quality Control Board, Santa Rosa, CA.

Dunne, T., J. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. The University of California Committee on Cumulative Watershed Effects. University of California Wildland Resource Center Report No. 46. June 2001. 107 pp.

Gerstein, J. and R. Harris. 2003. Improving the assessment of cumulative watershed effects within the timber harvest planning process. Unpublished Final Report prepared for the California Department of Forestry and Fire Protection. Center for Forestry, University of California, Berkeley. 47 p.

Nakamoto, R. 1998. Effects of timber harvest on aquatic vertebrates and habitat in the North Fork Caspar Creek. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 87-95.

Lewis, J. 1998. Evaluating the impacts of logging activities on erosion and sediment transport in the Caspar Creek watersheds. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 55-69.

Ligon, F., A. Rich, G, Rynearson, D. Thornburgh, W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resources Agency of California and the National Marine Fisheries Service, Sacramento. 92 p. + 7 appendices.

Reid, L.M. and T. Dunne, 1996. Rapid Evaluation of Sediment Budgets. Reiskirchen: Germany, Catena Verlag (GeoEcology paperback), 164 p.

Weaver, W.E. 1997. Assessment and implementation techniques for controlling road related sediment sources. Unpublished Report prepared for the Second Watershed Academy, Santa Cruz, CA May 5-9, 1997. Pacific Watershed Associates, Arcata, CA. 29 p.

Ziemer, R.R. 1998. Flooding and stormflows. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 15-24.

FROM :

FAX NO. :

Mar. 02 2006 07:26AM P1

P-172

March 2, 2006

To The Board of Forestry and Fire Protection,

I have been out of town and unable to review the Draft EIR (SCH ## 2004022025) and unaware of the March 1 comment deadline, so I understand if this note is not made part of the official response. But I must express my belief that clear cutting must stop, that the use of herbicides must stop, that we deserve to experience the life of a healthy forest. Sustainable management with mixed use is possible and wise.

Thank you for all your work.

Yours truly,

Sam Waldman
P.O. Box 49
Mendocino, Ca. 95460

RECEIVED BY

MAR 1 - 2006

BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-172

Response to Comment 1
Please see General Response 10.

Response to Comment 2
See General Response 7.

Response to Comment 3
See General Response 2. Sustainable, multiple use management of JDSF is the continuing goal of the Board and CAL FIRE.

P-173

State of California
CDF
re: Jackson State Forest
via 1-(916) 653-0989

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

March 1, 2006

Dear Sirs, Mrs.,

1 If there was ever an opportunity to set an example of how to best follow the Intent Section of Z'Berg-Nejedly Forest Practices Act- this is it!!

2 Please support the decision of the Mendocino County Board of Supervisors.

Thank you —

Norman L. Devall
Mendocino County Board of Supervisors - Ret.
P.O. Box 3
Elk, California 95432

03/01/2006 16:25 7078952628 NORTH COUNTRY RE PAGE 01/01

Mailed Letter P-173

Response to Comment 1
The intent of the Z'berg-Nejedly Forest Practice Act is to create and maintain an effective and comprehensive system of regulation and use of all timberlands so as to assure that:
a) Where feasible, the productivity of the timberlands is restored, enhanced, and maintained.
b) The goal of maximum sustained production (MSP) of high quality timber products is achieved while giving consideration to values relating to recreation, watershed, wildlife, fisheries, regional economic vitality, employment, and aesthetic enjoyment.

The DEIR addresses each of the values listed above. One aspect of MSP is achieved in part by balancing growth and harvest over time. The ADFFMP calls for harvesting approximately 20 to 25 million board feet annually which is well below current growth. The goal of MSP has also been met by the extensive consideration given to recreation, watershed, wildlife, and fisheries resources.

Response to Comment 2
Support for the decision of the Mendocino County Board of Supervisors (Alternative D) noted. While the Board has carefully considered Alternative D and the wishes of the Mendocino County Supervisors, the management of JDSF is not based solely on their support. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This alternative a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. Please see also General Response 4.

P-174

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

John Jay Ulloth
10609 COLUMBUS AVE. MISSION HILLS CA 91345-2009

February 28, 2006 03:52 PM

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Subject: Jackson State Forest

Dear Members Board of Forestry:

1 I very strongly oppose the ill-conceived, self-serving, lobbyist-generated proposed
2. management plan for Jackson State Forest. This forest has already been preserved but weasel-mouthed logging company shills have bribed their way in to getting the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation back onto the land-use agenda as a way to further bankrupt the public purse. Money has already been set aside for Jackson State
3 to be restored to an old growth redwood forest for habitat, recreation, education and research.

I also very strongly oppose approval of the draft environmental document (Draft EIR). Alternative E of the Draft EIR promotes restoration of old growth, but it fails to commit funds to
4 repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities. The Draft EIR is another example of the ill-conceived, self-serving, lobbyist-generated attack on the already preserved Jackson State Forest. The Draft EIR is more effluvia from weasel-mouthed logging company shills who have bribed their way in to getting the plan's
5 clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation back onto the land-use agenda as a way to further bankrupt the public purse.

Please carefully consider my specific comments immediately below:

SPECIAL NOTE ON ENDANGERED SPECIES AT JACKSON STATE FOREST

Marbled Murrelet activity near or in Jackson Demonstration State Forest ("JDSF") has
6 been noted by Cota and Papke (1994), Ralph et al. (1994), Georgia-Pacific SYP (G-P 1997), Camp Three THP (Jameson 1999), M. Jameson (pers. comm. 2002), & other interviews and reports.

AESTHETICS

7 The Proposed Alternative C1 would substantially degrade the existing visual character and quality of many sites at Jackson Demonstration State Forest ("JDSF"):

a. aesthetic mitigations under C1 are clearly inadequate -- not only is the 29% of the 8 forest planned for clearcutting / even-aged management clearly not mitigatable, but other widespread commercial logging including of mature stands cannot be mitigated.

Amazingly, on page VI-10, the Draft EIR has the nerve to say that in relation to Alt. C1, with limited exception, clearcutting is permitted only for research purposes. The Board must explain how razing a wildlife habitat to the ground could serve any legitimate scientific research. 9 This language is specific example of the ill-conceived, self-serving, lobbyist-generated attack on the already preserved Jackson State Forest. The people who created this language are weasel-mouthed logging company shills who have bribed their way in to getting the Draft EIR to get the plan's clearcutting ambitions onto the land-use agenda as a way to further bankrupt the public purse.

b. Page VII.2-12 "Thresholds of Concern" points out that the proposed project would have a significant impact on aesthetics if it "substantially degrades the existing visual character or quality of the site and its surroundings" -- and mentions that the guidance as to what 10 is considered significant is based on the California Environmental Quality Act (PRC Section 21001 and CEQA Guidelines).

c. a Registered Professional Forester must not be the point person in making 11 determinations as to whether a certain management activity has a significant impact on aesthetics.

d. the Draft Forest Management Plan for Jackson is correct on page VII.2-19 where it says that "Alternatives C2 through F contain more provisions than C1 for aesthetic 12 considerations. Alternatives D through F include little or no clearcutting or other imagined management and provide for greater levels of late seral forest development."

WESTERN PART of JACKSON FOREST

A. Despite the stupidity of having a special "clearcutting experiment" on the Caspar 13 Creek watershed in the latitudinal middle of the western portion of the Jackson forest (and the existence of a eucalyptus plantation in the area), still this portion of JDSF is quite important.

In the western portion, MANAGEMENT ACTIVITIES SHOULD BE MINIMIZED and recreation should not be encouraged because:

14 a. Rare plants at Jackson are concentrated here -- Special status plant species found in the western portion of JDSF include: Pygmy Manzanita, Bolander's Beach Pine, Swamp Harebell, California Sedge, Pygmy Cypress, Coast Lily, and Leafy-Stemmed Mitrewort. Though Appendix 7B-2 did not say where on the forests these occurred, since Running Pine likes moist micro sites and Long-Beard Lichen likes older second growth and old-growth, they could well

inhabit the western part of the Jackson forest (and perhaps mature or old-growth areas elsewhere on the forest). (Humboldt Milk-Vetch is also found at JDSF.)

b. Some mature forests exist here (plus some old-growth residuals are in the Russian 15 Gulch watershed in the state forest, besides more substantial old-growth groves in the state park further west);

16 c. The "special clearcutting" area at Caspar Creek has already caused enough damage in the west, and apparently this area cannot be guided by the management plan];

17 d. There should only be an increase in campgrounds in this area if some campgrounds at adjoining state park land are closed to try to avoid disturbing marbled murrelet nests nearby -- and if campgrounds are relocated, JDSF personnel should educate campers not to leave food scraps which attract corvids which eat murrelet chicks and eggs.

Management activities such as logging should be minimized in the western portion (as well as in Lower Big River, Brandon Gulch, West Chamberlain Creek watershed, east side of main stem of Chamberlain Creek, and other areas), while road-related activities should generally 18 pertain to decommissioning damaging and unneeded roads. Off-road vehicles must be halted from damaging riparian and other areas, plus should be controlled to stop the spread of invasive plants and so as not to run over and damage the aforementioned rare plant species which 19 especially favor the western part of the Jackson forest. And due to this area being adjacent to murrelet nesting habitat (while hopefully being allowed to mature further to accommodate some 20 murrelet nests in the future), hunting must be prohibited at least in this part of JDSF.

MATURE FORESTS

A. "Under "Scenic Attractiveness" on pages VII.2-3 and 2-4, it says that "Distinctive landscapes on JDSF with a high scenic attractiveness are:" -- the fifth bullet point is, "forested areas dominated by a high level of stocking of relatively large trees (The high levels of 21 forest stocking and higher percentages of relatively mature timber stands, as compared to commercial industrial forest ownerships within Mendocino County, provide aesthetic values for forest visitors who desire to recreate or travel within JDSF)." (This quote also pertains to the Aesthetics section above.)

B. Page VI-8 says that, "JDSF is not typical of other large forestland holdings in its 22 maturing second-growth timber conditions, its ongoing research activities such as the Caspar Creek Study, its old growth redwood and Douglas-fir groves, and its special facilities such as conservation camps."

C. In relation to relatively rare habitat types and a forested mosaic, page V-11 says, 23 "Maintaining a forest mosaic that helps support the many species in the region is a goal for both forest management and private forest demonstration. Habitat protection and restoration of

relatively rare habitat types is also an important element of forest management." Clearly, old-growth forests which are predominately redwood, some residual old-growth within a mature redwood forest, and almost mature redwood forests are all "relatively rare habitat types". That same page mentions that, "It can be assumed that most of the redwood forest in this region was once dominated by old-growth."

COAST REDWOOD ECOSYSTEM and MARBLED MURRELET RECOVERY

The draft documents try to downplay the role which Jackson Demonstration State Forest can play in recovering old-growth forest dependent species. This area is quite vital due to it being the largest contiguous publicly-owned land in coastal Mendocino County -- a county and part of the county devastated by corporate timberland clearcutting. Also, the 459 acres of old-growth groves are a start, and the 10,000 to 12,000 acres of mature forests are quite unique in the county and vital to recovery of watersheds and various species in this region.

24

Page V-12 of the Draft JDSF Mgt. Plan says, "JDSF and the surrounding forested area provides habitat for a number of listed and sensitive fish and wildlife species, including the Northern Spotted Owl, coho salmon, and steelhead. In addition, JDSF currently provides or may provide in the future, habitat for several listed or sensitive species that are not currently known to occur on the forest. These species include the Marbled Murrelet, Pacific fisher, and Humboldt marten. As such, the large block of publicly owned forestland that is JDSF, in conjunction with other parcels of public land in central Mendocino County, represents a valuable resource of potential reoccupancy and sustainability for at-risk wildlife species."

25

Finally, ending on a disturbing note which should be a bright-line red-flag to environmentalists, managers at JDSF and the BOF) to action is that the 5-Year Murrelet Status review (McShane et al. 2004) which assessed status and trends of Marbled Murrelet populations within each of U.S. Fish and Wildlife Service's 6 Recovery Zones. Page VII-6.6-74 says, "The Zone Model projected an extirpation probability of 100% within 40 years for Recovery Zones 5 and 6 with a 2% annual migration rate into the zone." That means that murrelets will be entirely gone from the Humboldt / Mendocino County line all the way down to the southern extent of their habitat in Monterey County by the year 2044!!!

26

We need the agency managing the largest publicly-owned contiguous block of land in coastal Mendocino County to step up big time and do all they can to provide extensive habitat for the Marbled Murrelet (and other old-growth forest dependent species)! So-called mitigations to help murrelet habitat under the plan are a sad joke when they plan to log the bulk of the mature trees in the next five to ten years on the forest. The federally-threatened and state-endangered murrelet needs our help immediately! We can start by rejecting the Draft EIR for the Draft Jackson Demonstration State Forest Management Plan for what it is:

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy. This is another ill-conceived, self-serving, lobbyist-generated attack on the already preserved Jackson State Forest. The statement to rule out

27

Alternative E in the Draft EIR is more effluvia from weasel-mouthed logging company shills who have bribed their way in to getting the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation back onto the land-use agenda as a way to further bankrupt the public purse.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This call for state-sanctioned carnage to an already-preserved wildlife habitat should result in criminal indictments
28 for environmental crimes for the weasel-mouthed logging company shills and the bankrupt public-officials who take bribes, favors in exchange for influence in stealing from the public purse by getting the Draft EIR's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation back onto the land-use agenda.

The Plan could not succeed on lobbying and bribery alone, so the bankrupt public-officials who take bribes, favors also have attempted to blur the issues by creating a draft EIR so huge and obscure that no single person could review it thoroughly. There are over 1500+ pages
29 of pure nonsense, and the electronic version is impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to protect the public purse, public lands, taxpayer interests and amounts to a series of illegal act masking their intentions and actions in subverting the legal obligation to provide information and analysis I need to be able to make informed judgments on
30 the environmental effects of the proposed management plan relative to other alternatives. I urge you to strongly reject the Plan and the Draft EIR.

Sincerely,

John Jay Ulloth

cc: Senator Sheila Kuehl
Assembly Member Paul Koretz
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger

Mailed Letter P-174

An identical letter was received from Jack Neff. The following serves to respond to both letters.

Response to Comment 1
Opposition to the management plan is noted by the Board. The finalized plan includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 2
JDSF has been managed on a continual and sustainable basis since purchase by the State of California in 1947. The management plan provides for both stand management and stand preservation. Please see DEIR Chapters VII and VIII for an assessment of potential environmental effects. The comment concerning further bankruptcy of the public purse is unclear and not explained. A reasoned response is not possible. Significant impacts to the environment are not expected to occur.

Response to Comment 3
The statement by the writer that money has been set aside for JDSF to be restored to an old growth redwood forest for habitat, recreation, education and research is not explained by the writer. JDSF is supported by revenue, generated primarily by management activities from the various state forests, as well as limited and occasional funding by the General Fund when timber revenue is insufficient to support the state forest program.

Response to Comment 4
Opposition to approval of the Draft EIR is noted by the Board. The Board is free to combine elements from the various alternatives that were considered and assessed during the EIR process. Provisions are made within the scope of the alternatives considered and the approved management plan for road decommissioning, active restoration of aquatic habitat, and for expanding recreational opportunities. Significant impacts to these resources are not expected to occur.

Response to Comment 5
The writer's charges of bribery by logging companies is unfounded and not supported. Please see responses above.

Response to Comment 6
Marbled murrelet activity in the vicinity of JDSF is well known and considered within the DEIR. Please see Section VII.6.6 for the assessment of potential effects to the species.

Response to Comment 7
Significant impacts upon aesthetic resources are not expected to occur. Please see DEIR Section VII.2.

Response to Comment 8
Mitigation of aesthetic impacts as the result of clearcutting and other forms of even-aged management has been considered, as has the effect of logging of forest stands throughout JDSF. Significant impacts are not expected to occur. Please see Response 7 for reference to the assessment.

Response to Comment 9
The clearcutting silvicultural system is one of many potentially effective means to manage forest stands for timber production, when used and mitigated appropriately. Clearcutting is also capable of

creating habitat conditions favorable to many wildlife species. Please see Response 7 for reference to the assessment of potential effects upon wildlife. The reference to bankrupting the public purse is not explained by the writer.
A reasoned response is not possible.

Response to Comment 10
Comment noted.

Response to Comment 11
Comment noted. The registered professional forester is trained in making assessments of potential impacts to aesthetics. The Forest Practice Rules require this assessment by the RPF.

Response to Comment 12
Comment noted. The Board is free to select elements from the various alternatives that have been considered.

Response to Comment 13
The Board agrees that the western portion of JDSF is important, as is the remainder of the Forest.

Response to Comment 14
Many of the rare plant and lichen species can be found in the western portion of JDSF. These species will be protected during management activities. Please see DEIR Section VII.6.2 for the assessment of potential impacts to plant and lichen species. Significant impacts are not expected to occur.

Response to Comment 15
A substantial area of the Forest in the western portion will be managed to recruit late seral and older forest. In total, approximately one-third of the Forest area will be managed toward this form of older forest structure. The upper Russian Gulch area will be managed to promote late seral habitat for the marbled murrelet, and no impacts to old-growth groves within state parks are expected to occur. Please see DEIR Sections VII.6 for an assessment of potential impacts to biological resources associated with management activities.

Response to Comment 16
Future management within the Caspar Creek watershed area is guided by, and subject to, the management plan, including an assessment of potential environmental effects associated with management activities. Please see DEIR Section VII and REIR Section IV for assessments of potential cumulative effects. The writer has not specified the alleged damages associated with "special clearcutting" in Caspar Creek.

Response to Comment 17
Comment noted. The writer has generally identified "this area" in general terms as the "Western Part of Jackson Forest". There are no specific plans at this time to increase campgrounds, but some modest increase could occur in the future. Any plans to increase these facilities would be accompanied by a site specific and cumulative assessment of potential effects to wildlife species, including the marbled murrelet. All JDSF campsites are provided with covered garbage receptacles, to reduce access by wildlife, including bears and corvids. Please see DEIR Section VII.6.6 for the assessment of potential impacts upon wildlife.

Response to Comment 18
Request for minimization of logging activities in specific areas noted. Please see DEIR Sections VII and VIII for an assessment of potential impacts related to management activities.

Response to Comment 19
The ADFFMP does not propose to change off-road vehicle policies on the Forest; no adverse off-road vehicle impacts will result from the Plan. Public use of off-road vehicles is prohibited within the

Forest, but some illegal use occurs. Unit and Forest security staff patrol the Forest and help prevent this illegal activity. Further signs are posted in some locations and selected roads remain locked or otherwise blocked to help prevent illegal entry by motor vehicles. Significant impacts associated with illegal vehicle use are not expected to occur, due to patrol efforts and road closure. The vast majority illegal vehicle use occurs on roads and trails that are utilized by licensed motor vehicles, bicycles, and equestrians. The potential for damage to rare plants from illegal off-road use is extremely low and speculative. Known rare plant occurrences are protected. Please see DEIR Sections VII.6.2 and 6.10 for the assessment of potential impacts to watershed and botanical resources.

Response to Comment 20
Hunting within the Forest is regulated by the Department of Fish and Game, with the exception of closures established by other regulation or legislation. Patrol of JDSF by CAL FIRE staff helps to ensure compliance with hunting regulations. No change to hunting restrictions has been proposed in the management plan. The DEIR does not specifically assess the potential for hunting-related noise impacts or illegal hunting activity upon the marbled murrelet, which is somewhat speculative based upon the limited amount of hunting-related shooting that occurs within the forest, as well as the seasonality of hunting activity and the fact that numerous site-specific surveys for the marbled murrelet have thus far failed to detect the species within JDSF. If habitat occupied by the species were to be found, the species would be protected to avoid take, which could include site specific restrictions of many traditional activities within the Forest, including shooting.

Response to Comment 21
The Board agrees that stands with high stocking levels and large trees are generally considered to have high levels of scenic attractiveness. No specific concern is expressed by the writer. Please see DEIR Section VII.2 for the assessment of potential impacts to aesthetic resources.

Response to Comment 22
This is an apparent quote from the EIR. No specific concern is expressed.

Response to Comment 23
The Board is not aware of any official characterization of second-growth forest types within the assessment area as "rare". The term "mature forest" represents a broad range of generally mid-seral conditions in the literature, but is not specifically defined, though JDSF contains a substantial acreage of even-aged and uneven-aged young stands containing trees from 5 to over 500 years old, and a substantial area of stands with young trees greater than 50 to 80 years-of-age. The management plan includes provision to maintain and recruit older forest stands. Please see DEIR Section VII.6 for the assessment of potential impacts to biological resources. Please see the description of Alternative G in the RDEIR for the planned distribution of general forest age or seral classes. Also, please see DEIR Map Figure J for the distribution of vegetation habitat classes within the biological assessment area.

Response to Comment 24
Few species are known to be wholly dependent upon old-growth redwood forest. However, the marbled murrelet needs very large nesting platforms or branches, which occur most commonly in very large, old trees. The JDSF management plan will play an important role in the future development of late seral and older forest habitats within Mendocino County and the greater redwood region, as will the large acreage of young redwood forest under management by the Department of Parks and Recreation, and other forests dedicated to conservation and creation of older forest habitats, such as portions of ownerships currently under conservation easements or currently contemplating conservation easements (e.g. The Conservation Fund, Redwood Forest Foundation). Due to provisions of the management plan, an improvement in future habitat conditions for species normally associated with older forest will occur. The REIR finds that Alternative G provided a beneficial cumulative impact for marbled murrelet. The comment letter provides no basis for the premise that the county has been “devastated by corporate timberland clear cutting”.

Response to Comment 25
No specific concern is expressed in this statement and quotation.

Response to Comment 26
The future management of JDSF will provide a valuable contribution to the regional recovery efforts for the marbled murrelet. Please see DEIR Section VII.6.6 and VII for the assessment of potential impacts to the marbled murrelet. There is no plan to log the bulk of mature trees within the next five to ten years as the writer suggests. Regardless of how the writer defines the term "mature forest", the vast majority of the oldest age classes of trees and stands within JDSF will remain intact or be selectively managed during the term of the management plan. A significant acreage of these stands will be dedicated to the future development of late seral and older forest habitats.

The finalized plan includes measures from Alternative G that will benefit the marbled murrelet. The area devoted to late-seral forest habitat has been increased by 1,549 acres. The upper Russian Gulch and lower Big River areas will be managed to recruit habitat for the marbled murrelet and to provide linkages to State Parks. The Older Forest structure zone will link most old growth groves enhancing their value for this species.

Response to Comment 27
The Board has determined that some elements of Alternative E may not comply with existing state forest legislation and/or Board forest practice regulations. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative E. Alternative G includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 28
The writer has incorrectly stated that management pursuant to Alternative C would represent "state-sanctioned carnage to an already-preserved wildlife habitat". The Board has adopted an alternative that incorporates elements of several alternatives. The extensive analysis in the DIER and REIR found no significant impact wildlife for Alternative C1 or G. The legislature established JDSF for the purposes of demonstrating forest management, not for the purposes of preservation alone. Please see DEIR Section VII.6.6 and VIII for the assessment of potential impacts upon wildlife.

Response to Comment 29
The Board has produced a comprehensive EIR, due to the complexity of the resources involved, and due to the degree of public and agency concern. A thorough and proper analysis necessarily requires a lengthy document. This is not a significant environmental issue.

Response to Comment 30
This comment represents unsubstantiated opinion on the part of the writer.

EPIC

001

P-175

RECEIVED BY

MAR 1 - 2006

BOARD OF FORESTRY
AND FIRE PROTECTION

Richard Gienger
Box 283, Whitethorn
rgrocks@humboldt.net
California 95589
707-923-2931
Fax: 923-4210
1 March 2006

George Gentry, Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246, Sacramento, CA 94244-2460
<board.public.comments@fire.ca.gov>

RE: EIR for the Management Plan for Jackson Demonstration State Forest

Dear George Gentry and Board:

1 The following comments are written on behalf of the Environmental Information Center as well as myself. The overall message is that the Board needs to combine the best aspects of several alternatives, notably C2, D, E, and F. The comments and perspectives submitted by Kathy Bailey are firmly endorsed.

2 The forest needs to be managed for late seral and old growth forest -- the old growth and a portion of the late seral areas for protection and for provision of the needs for such species as Coho Salmon and Marbled Murrelet, with the balance of the late seral and younger forest, outside the protected areas, included in the 'working forest'. The concept of managing the forest for late seral is in Alternative E, but the inclusion of large areas of late seral in the working forest is compatible with Alternatives C2, D, and F. It is important to generally include the older stands of second growth in the areas to be protected.

3 It is important for the final set of management practices selected to include a 'working forest' with longer rotations and greater size. The third paragraph on page VI-4, which discounts the value and mandate for larger older trees, is disingenuous at best. A high proportion of the working forest managed for larger older trees would not significantly limit JDSF's "ability to function as a demonstration forest". This type of management would not only "demonstrate management for optimum long-run timber production", but would generally be more responsive to other essential resource values. There are many people interested in learning from this type of demonstration, and the economic benefit in years ahead from having and processing, for instance, 100 to 300 year old Redwoods will be immense. Lowering your standards of high-quality timber products to the debased current standards is an abnegation of your ethical and legal responsibilities.

4

1

5 Specific thought-out protected areas and connectivity must be part of the management plan, as proposed in Alternative F. The concerns and comments for EPIC by Lindsey Holm need to be carefully responded to in establishing the protected areas and connectivity.

6 The general and specific provisions in Alternative D need to be fully incorporated in the Management Plan. The support by the Mendocino County Supervisors and the unanimous support of the Fort Bragg City Council for Alternative D are extremely heartening show of support for JDSF management that responds to the needs of the people of Mendocino County and the State of California.

7 The mitigations in C2 are also important to include, but with more timely implementation of road, slope, and watercourse stabilization and improvement measures. C2 also emphasizes designation of marbled murrelet habitat, more retention and recruitment of large wood, and a higher "level of review, analysis, and mitigation" for proposed logging. These actions obviously need to be included in the approved Management Plan & EIR.

8 One significant concern for JDSF is that important 'big ticket' and large-scale issues such as fishery and wildlife recovery measures will often default to consideration on individual logging plans. Each Planning Watershed needs to have appropriate specific environmental constraints that individual THPs will comply with. And, of course, the standards of protection and conservation in the Planning Watersheds need to be compatible and enforceable.

9 The comments from the Salmon and Steelhead Recovery Coalition (SSRC) are also firmly endorsed. Recovery of watersheds, fisheries, wildlife and timberland productivity are paramount for Jackson Demonstration State

10 Forest. A Citizens Advisory Group and an Interagency Technical Advisory Team must be part of the future management as well.

Sincerely,

Richard Gienger

Mailed Letter P-175

Response to Comment 1
Please see General Response 2. Alternative G was developed by blending the elements and management strategies of several Alternatives. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. One example of the research and demonstration emphasis will be to test the cost and effectiveness of the riparian zone management approaches contained in Alternatives C1 and D-F. The results of these experiments will be utilized as part of the adaptive management process defined in Chapter 5 of the DFMP. Please see response to comment P-71 and P-188 for details relating to Kathy Bailey and the Sierra Club.

Response to Comment 2
See General Response 8, 9, 11, and 12.

Response to Comment 3
The expected average harvest under the ADFFMP is approximately 20 to 25 million board feet annually, which is well below current growth. The ADFFMP designates one-third of the Forest for late seral forest and older forest structure. The bulk of this area will be “working forest“ that receives uneven-aged treatments intended to foster the development the desired forest characteristics.

Response to Comment 4
The commenter provides no evidence that a significant portion of private landowners or the public would benefit from the demonstration of 100 to 300 year rotations on a high proportion of the forest. As stated in the same paragraph referenced in the comment, “few private landowners are growing large diameter logs for timber production anymore, and mills that can process large diameter logs are disappearing”. In order to remain relevant to the landowners of the region, significant portions of JDSF must demonstrate the potential effects of regional land management approaches, while avoiding significant effects. JDSF has a responsibility to, and the ADFFMP calls for, the demonstration of a variety of management regimes including short, medium, and long rotations/cutting cycles. This includes 33% of the forest being managed for late seral and older forest structure characteristics. The economic benefit of managing for 100-300 year old redwoods is unclear given the relatively slow rate of growth on some of these stands, along with the current lack of, and increasing loss of, infrastructure capable of processing large diameter logs.

The Board contends that JDSF has been managed in a manner that is consistent with current legislation and that our legal and ethical responsibilities to produce high quality timber products have not been renounced or debased.

Response to Comment 5
The ADFFMP includes “specific thought-out protected areas and connectivity” as part of the management plan. These include large blocks of late seral forest areas, connective Class I and II WLPZs managed for late seral forest development, and a contiguous 6,803-acre Older Forest Structure Zone. Please see response to comment P-176 for details relating to EPIC.

Response to Comment 6
See General Response 4. The Board has carefully considered Alternative D and the wishes of the Mendocino County Supervisors and the Fort Bragg City Council. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D.

Response to Comment 7
See General Response 11, 12 and 13. The ADFFMP incorporates many of the management activities suggested in this comment (see response to comment 1). This includes accelerated implementation of the Road Management Plan. A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. A Hillslope Management plan to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

The ADFFMP incorporates most of the Marbled Murrelet mitigation contained in Alternative C2. This allocates a large, contiguous block to be specifically managed for Marbled Murrelet habitat. Alternative G designates 1,549 acres in the area of upper Russian Gulch and lower Big River to late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1).The plan also calls for increased emphasis on retention and recruitment of snags, LWD, and trees with late seral habitat values. Implementation of the ADFFMP is expected to have a positive impact on each of the concerns listed.

Response to Comment 8
Many measures for the protection and recovery of fisheries and wildlife are built into the ADFFMP programmatically and are applied (a) throughout the Forest or (b) over large areas of the forest without any particular connection to individual projects, such as THPs. One example (a) is the Accelerated Road Management Plan; an example of (b) is the Older Forest Structure Zone. Other programmatic measures for the protection of fisheries and wildlife come to bear more at the project level, such as a THP, but their application is not discretionary. An example of this is various restrictions for WLPZ management that exceed the Forest Practice Rules, or the Hillslope Management practices. In other cases, watershed-wide protections are provided by limiting certain watersheds to uneven-aged management only. Individual projects such as THPs will evaluate conditions within the cumulative effect analysis areas, typically sub-watersheds. These assessments can identify specific issues.

Response to Comment 9
See response to comment E-108.

Response to Comment 10
The second and third goals for the ADFFMP are:

> Goal #2 - FOREST RESTORATION: Work towards active restoration by managing the Forest to promote and enhance forest health and productivity.
>
> Goal #3 - WATERSHED AND ECOLOGICAL PROCESSES: Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities.

The ADFFMP contains provisions regarding the establishment of a JDSF advisory group.

P-176

March 1, 2006

TO:

George Gentry, Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246, Sacramento, CA 94244-2460
<board.public.comments@fire.ca.gov>

FROM:

Lindsey Holm
Environmental Protection Information Center
PO box 147
Eureka, California 95501

RE: **Public Comment on the Jackson State Demonstration Forest Draft Environmental Impact Report**

VIA FAX, EMAIL AND CERTIFIED MAIL

To Whom It May Concern,

The following comments are submitted on behalf of the Environmental Protection Information Center (EPIC). EPIC is a community-based, non-profit organization dedicated to the protection and restoration of the ecological integrity and natural ecosystems of Northwestern California. EPIC maintains offices in Garberville and Eureka, Humboldt County.

Late Seral Forest and the DMP/DEIR

Late Seral Forest (LSF) is defined in the DEIR as "having biological characteristics and functions similar to old growth forests."

I The DEIR's definition of Late Seral Forest is vague and overbroad. The definition directs the reader to "see" the Forest Practice Rules (FPR) definition Late successional Forest Stands and FPR Technical Rule Addendum #2. It is unclear whether the DEIR incorporates--and will rely on--the FPR definitions. If the DEIR is defining LSF only as "…similar to oldgrowth" it casts too wide a net and is an insufficient definition.

The Environmental Protection Information Center – Industrial Forestry Program
P.O. Box 147 • Eureka, CA 95502 • 707.476.8340

1 If, on the other hand, the DEIR is defining LSF as "…similar to old growth" in addition to incorporating the FPR definitions of Late Successional and the FPR Addendum #2, then the criteria a forest stand must meet be defined as LSF need to be clarified. The three definitions are not clear by themselves and do not dovetail easily. This clarification is crucial to the reliability of the Draft Management Plan "having no significant adverse impact" on Marbled Murrelets, since the DMP protections rely almost entirely on current LSF and management to create LSF.

Late Successional Forest Stands

FPR defines Late Successional Forest Stands as:

> Late Succession Forest Stands means stands of dominant and predominant trees that meet the criteria of WHR class 5M, 5D, or 6 with an open, moderate or dense canopy closure classification, often with multiple canopy layers, and are at least 20 acres in size. Functional characteristics of late succession forests include large decadent trees, snags, and large down logs.

These stands are defined thus:

> WHR Class 5M is defined as tree dominated habitats with medium/large trees with DBH larger than 24 in (2 ft) and having moderate canopy closure between 40-59%
>
> WHR Class 5D is defined as tree dominated habitats with medium/large trees with DBH larger than 24 in (2 ft) and having dense canopy closure between 60% and 100%.
>
> WHR Class 6 is defined as tree dominated habitats with multi-layered trees with DBH larger than 24 in (2 ft) which are positioned *over* a distinct layer of size class 4 or 3 trees.
>
> Class 5D must have a dense canopy closure between 60% and 100%. [pg 16 of "introduction and scope" of CWHR from the DFG website]

2 If the FPR definition is incorporated, it contradicts the DFMP/DEIR definition of "…being similar to old growth" in the case of Redwood and Douglas fir forests that reach far beyond 24" DBH in their old growth stage. Since the DEIR relies heavily on the term Late Seral Forest in assessing the DFMP's impacts to Marbled Murrelet and the actions to be implemented to mitigate those impacts, the term "LSF" should actually relate to Marbled Murrelet habitat. The FPR Late Successional Forest definition is not adequate in the context of assessing murrelet habitat because for forests to meet this definition the trees only have to be a minimum of 24" DBH, and it is well established that murrelets nest in old growth trees >32" DBH in this zone. (Hamer and Nelson 1995a).

Late Seral Forest and FPR Technical Rule Addendum #2

The following is a patched together definition of Late Seral Forest from FPR Technical Rule Addendum #2:

The Environmental Protection Information Center – Industrial Forestry Program
P.O. Box 147 • Eureka, CA 95502 • 707.476.8340

> *LSF characteristics* are defined as "mature and over-mature forest stands…[with] structural characteristics…includ[ing] large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence...." [FPR Technical Addendum #2 (C)(4)(f),(g) pg. 37-38]

3 The referenced FPR Addendum #2 is written within the context of cumulative impacts as instruction to those required to address the rule in their logging plans. The LSF part of this addendum only addresses characteristics and continuity of LSF. There is no express definition of LSF and it could only be construed to include a vague definition by way of the instructions. In addition, "Mature", "over-mature", and "decadence" are not defined anywhere in the FPR. This definition is too unclear to be sufficient for the purposes of the DEIR.

Suitable habitat

4 *Suitable habitat* is used frequently in the DEIR within the context of Marbled Murrelet habitat, but the term is never defined or explained. Without this foundational definition, the assessment of Marbled Murrelet habitat in and around Jackson State Demonstration Forest is incomprehensible, the analysis baseless and the conclusions valueless.

5 Page VII.6.6-36 should include old growth forest in the habitat association column. Tables VII.6.6.33e1 through VII.6.6.33f2 are useless in assessing the progression of murrelet habitat because the DEIR does not or explain the criteria used to determine the various levels of habitat suitability listed in the tables.

6 Given, first, that it is well established that murrelets nest in old growth forests, to the extent that old growth is the only forest type that can reasonably be defined as "fully suitable" habitat, and second, that there are currently 459 acres of old growth on JSDF, we found it impossible to believe that there are 15,286 acres of truly fully suitable habitat currently on JSDF as indicated in table VII.6.6.32.

7 The tables, explanations, narrations, assessments and conclusions of what is and isn't, and what will be and will not be, suitable habitat for Marbled Murrelet s on JSDF are all meaningless without clear definitions of the terms used. This is a common problem in assessing murrelet habitat as the methods of evaluation and the body of knowledge on the subject have changed over the years. This is all the more reason to be clear about what habitat exists now and how and when murrelet habitat will be created.

It is especially critical that the DEIR be very clear about murrelet habitat given the impending extinction of the Zone 5 murrelet population described on page VII.6.6-74 and the fact that JDSF has the potential to be the most effective player in recovering the Zone 5 population, if it articulates a clear plan for doing so.

> "As such the large block of publicly owned forestland that is JDSF, in

> conjunction with other parcels of public land in Mendocino County, represent a valuable resource of potential reoccupancy and sustainability for at-risk wildlife."

8 It is an uncontested fact that Marbled Murrelets nest primarily in old growth forests. If the DMP/DEIR defines LSF as 'similar to old growth forests' it needs to be explained *how* these categories are similar, and in what ways they are *not similar.* The DEIR needs to clearly lay out how the DMP will create stands "similar to old growth forests" and how these similar stands (LSF) will, or will not, serve the recovery of the Marbled Murrelet.

> *Recovery* is defined in the DEIR as "The point which the measures provided pursuant to the federal Endangered Species Act (FESA) are no longer necessary to conserve a listed species."

Impacts Assessment

9 The impacts to marbled murrelets described on page VII.6.6-261 are unclear.

10 For the DEIR to adequately address the impacts and mitigation of the projects impacts, the specific mitigation measures proposed under each alternative must be clearly stated. There is no other mention of a proposed increase to the area dedicated to development of late seral forest conditions and especially no current delineation of late seral forests dedicated to Murrelet habitat recruitment. Furthermore, murrelet habitat remains undefined so the proposed mitigation cannot be meaningfully assessed.

Contribution to Recovery of Marbled Murrelet Habitat Management Measure

> "CDF has identified four key areas for assessment of their suitability for current habitat and for future potential Murrelet habitat development and species recovery: Russian Gulch, Lower Big River, Mitchell/Jughandle Creek, and lower Hare Creek."

11 It is true that these areas have "the potential to develop…structural characteristics necessary to provide Murrelet habitat." But this will only become a reality if the stands are allowed to reach that point. The selection harvest allocation areas [covering the above areas] subject to "four to eight harvest entries" described in the "Long Term—100 year Term Project Projection of Future Forest Conditions" section would be unlikely to produce Murrelet habitat.

12 CDF proposal to "conduct an assessment of what areas offer the greatest potential for current and future Marbled Murrelet habitat" is on the right track except that this sort of assessment and analysis must be done in the EIR. Is seems apparent from this proposal that the JDSF staff are not currently prepared to make this assessment. The DFMP must include clear, science-based, substantive and enforceable measures to "contribute to providing additional suitable habitat that is intended to aid recovery of Marbled Murrelet populations".

The Environmental Protection Information Center – Industrial Forestry Program
P.O. Box 147 • Eureka, CA 95502 • 707.476.8340

13 There must be CEQA review of this murrelet assessment as part of the DEIR. The impacts and alternatives that would protect/create more suitable nesting habitat must be assessed. The currently undefined and un-analyzed measures to "contribute to providing additional suitable habitat that is intended to aid recovery of Marbled Murrelet populations" are unclear and unsatisfactory.

14 In the DEIR's discussion of Late Seral/Successional Forests it notes that "The determination of site specific silvicultural applications to achieve these goals [development of LSF conditions] will occur during THP preparation". This is another example of the lack of clarity and apparent lack of commitment to pre-planning or defining the protection measures. Putting these decisions off until the THP stage is like not having a plan at all.

15 This assessment should be limited to areas within 11 miles of the ocean and should not include the old growth areas on the east side of the Forest where power lines and roads transect the groves. The assessment must be based on forest elements meaningful to Marbled Murrelet s and not just based on selectively logged, or to-be logged, late seral forest. The

16 areas must be large, contiguous blocks placed where the forest is already well advanced. Any logging in these Marbled Murrelet areas must be limited to "light" versions of intermediate silviculture, like pre-commercial thinning if the areas are shown to be overgrown.

Old Growth Groves

Old Growth is effectively defined in the DEIR as " any tree over than 145 years old". We consider the DEIR's definition of old growth a wise and practical one, but more need to be done to make the distinction between LSF and old growth.

17 The old growth areas described in the DEIR are very unlikely to be used by murrelets. Their preservation is necessary for other reasons, but they should not be considered a "protection measure" for the species. One exception to this rule is probably the old growth groves in the lower part of Brandon Gulch which is at the edge of the southern murrelet's 11 mile inland range.

JSDF land adjacent to State Park

18 In the discussion about JSDF land adjacent to State Park it is stated that "a buffer zone is designed to protect values associated with the purpose for which the park was created. Only a limited range of uneven-aged silviculture is allowed in these areas." This is yet another example of the un-quantified area to be committed to fulfilling this goal of protection and the lack of disclosure of the exact means by which JDSF intends achieve the protection.

Conclusion

19 This DEIR appears well researched and includes a detailed section on the biology and current research of the Marbled Murrelet that is easy to read and understand. However, site-specific

The Environmental Protection Information Center – Industrial Forestry Program
P.O. Box 147 • Eureka, CA 95502 • 707.476.8340

19 descriptive data is often inadequate or entirely lacking. The DEIR jumps to conclusions which may not be adequately supported by its analysis and disclosure. This makes it extremely difficult for the reviewer to visualize the area in question and evaluate the appropriateness of the author's conclusions and recommendations. For example, there is no definition for "suitable murrelet habitat" and no description of where all this suitable habitat is, or will be located.

As presented, the lack of supporting site characterization makes the DEIR inadequate to justify the proposed DFMP. Please expand the physical description of the features of concern and their settings to allow for proper review.

Sincerely,

Lindsey Holm

The Environmental Protection Information Center – Industrial Forestry Program
P.O. Box 147 • Eureka, CA 95502 • 707.476.8340

Mailed Letter P-176

Response to Comment 1
The shortcomings of the late-successional forest (late-seral forest) definition in the Forest Practice Rules relative to an assessment of Marbled Murrelet habitat condition and extent are clarified on DEIR page VII.6.6-19, DEIR page VII.6.6-78 to -79 (Habitat Extent) and Page VII.6.6-127. Old-growth stands are a subset of Late-Successional Forests that collectively include "mature", "over-mature", and "old-growth" labels of forest stand condition. Late seral (synonymous with Late Successional Forest) condition criteria for the near and long-term are summarized in Table VII.6.3.5 and Table VII.6.3.6.

Marbled Murrelets require tree and limb structure specific characteristics in order to nest successfully. It is presently not possible to determine what proportion of the late-successional forest conditions to be recruited will provide those characteristics but it is expected that the frequency of occurrence of those elements will increase over time.

Response to Comment 2
The Board agrees that the FPR Late Successional Forest definition is overly broad when applied to the habitat requirements of Marbled Murrelet. These issues are described in the referenced DEIR pages in the response to comment 1. Marbled murrelet habitat suitability is determined by a variety of stand, tree, and limb structure specific attributes that are not currently determinable with remotely sensed vegetation data. The late-successional forest definition in the FPR does however provide a starting point for habitat identification as well as a means to relatively evaluate alternatives and potential to recruit Marbled Murrelet habitat over time. Marked increase in the extent of late-successional forest conditions are expected to equate to an improvement in potential Marbled Murrelet habitat. See response to comment #1.

Response to Comment 3
Old-growth and late successional forest characteristics are defined in the DEIR subsection beginning on pages VII.6.3-24 to -26 and Table VII.6.3.5 and Table VII 6.3.6.

Response to Comment 4
Contrary to comment those forest conditions that define Murrelet habitat are described in detail beginning with the Section on Habitat Characteristics DEIR Page VII.6.6-75-83.

Response to Comment 5
Old growth forest is a subcategory of late seral forest, which is listed in the habitat association column. See also response to comment 1. Habitat suitability levels are defined on DEIR page VII.6.6-221 at the beginning of the Table series describing these measures.

Response to Comment 6
The observation by the commenter that Marbled Murrelets nest in old-growth forests and "fully suitable" habitat extent is therefore 459 acres on JDSF is an oversimplification of Marbled Murrelet habitat requirements. Specific limb structure, tree, and stand characteristics that provide suitable Marbled Murrelet habitat are described in DEIR pages VII.6.6-75 through -83. Reasons behind the discounting of current old-growth stand value as murrelet habitat are described on DEIR Page VII.6.6-78-79.

The DEIR recognizes that forest wide acreage estimates of Marbled Murrelet habitat are unlikely to be attained given site and tree specific requirements (DEIR pages VII.6.6-238 through -239.

Response to Comment 7
See response to comment 6 regarding Murrelet habitat requirement definitions. The intent of the DEIR analysis is to provide a relative comparison of possible Marbled Murrelet habitat futures across

alternatives. The degree of over-estimation is not relevant since the definition of possible murrelet habitat remained constant across all alternatives.

The Contribution to Recovery of Marbled Murrelet Habitat recognizes that site specific habitat conditions beyond tree size make an area potentially suitable for Marbled Murrelet. A site-specific evaluation that includes wildlife agencies and other interested parties is part of the management measure to be implemented during the first 18-24 months of DFMP implementation and prior to modification of any stands in the areas identified This effort will improve estimates of habitat extent and condition and potential for Marbled Murrelet habitat recruitment.

Response to Comment 8
The DEIR describes silvicultural prescriptions including no harvest where the objective is the development of late-successional forest conditions DEIR pages VII.6.3-33 through -38. Similarly, silvicultural methods in Special Concern Areas and elsewhere are summarized in DEIR Pages VII.6.3-7-17.

Specific silvicultural prescriptions for the development of Marbled Murrelet habitat have not been developed and are dependent on the findings and deliberations of the team formed to address that issue as described in the Contribution to Recovery of Marbled Murrelet Habitat management measure (DEIR Page VII6.6.118-119). This topic is also highly suitable as a subject for research on JDSF.

Response to Comment 9
Comment noted. See also the response to comment 10.

Response to Comment 10
The DEIR describes in detail those areas proposed for the development of habitat conditions suitable for Marbled Murrelet occupancy (DEIR Page VII.6.6-78-82 and DEIR Page VII.6.6-118-119). The recruitment of late successional forest conditions in general and outside the areas proposed for murrelet emphasis are also described on DEIR Page VII.6.6-121, and Section VII.6.3 Timber Resources (old-growth and late successional protection measures). Marbled Murrelet habitat characteristics are described on DEIR Page VII.6.6-75-78. The RDEIR for Alternative G and the ADFFMP designate a 1,549-acre area of Russian Gulch/Lower Big River for the development of late seral forest characteristics specifically to recruit potential Murrelet habitat over time.

Response to Comment 11
Silvicultural methods, if any, ultimately selected for these areas will be determined as described in the Contribution to Recovery of Marbled Murrelet Habitat management measure DEIR Page VII.6.6-118-119.

Response to Comment 12
Final identification of areas that will be managed for the benefit of Marbled Murrelets, silvicultural prescription to be applied, and other site specific considerations are beyond the scope of a programmatic EIR. For the purposes of alternative development and evaluation, the Board identified those areas most likely to be included in a murrelet habitat strategy based on the best available science and input from the US Fish and Wildlife Service, California Department of Fish and Game and other sources of murrelet expertise. This level of issue resolution is appropriate for a programmatic EIR. The subsequent actions, including development of implementation measures for the Contribution to Recovery of Marbled Murrelet Habitat management measure are subject to later CEQA analysis and public involvement.

Response to Comment 13
CEQA “review” of the murrelet assessment and Contribution to Recovery of Marbled Murrelet Habitat management measure is being conducted at two levels. The first is with the programmatic DEIR and the second as part of individual project planning and implementation. The impacts and alternatives that would protect/create additional habitat are assessed as part of the site-specific CEQA review for individual projects.

Response to Comment 14
The relationship of the programmatic DEIR to future projects is clearly described in DEIR Pages II-10 through -14. Development of site-specific prescriptions to treat stands to enhance development of late-successional conditions requires consideration of specific stand conditions at each site. Thus, they are best developed at the THP level.

Response to Comment 15
Comment noted.

Response to Comment 16
Forest stands considered “old-growth” or “mature” are frequently viewed as closely related points along a continuum of forest development and not a precise state with readily recognized features of development used to define and categorize. Late seral or late successional are terms that include old-growth and may extend to mature conditions. As used in the DEIR, late seral or late successional refers to areas that are being managed to recruit mature and old-growth conditions and that in some cases may have attained one or more of the necessary structural attributes. The differences between these closely related conditions of forest structure and ecological function are summarized on DEIR pages VII.6.3-24 to -26 and DEIR pages VII.6.3-33 to -38.

Response to Comment 17
Factors that discount the value of current old-growth stands on JDSF as suitable Marbled Murrelet habitat are described on DEIR pages VII.6.6-78 through -79.

Response to Comment 18
Disclosure and discussion of the “exact means” by which a buffer adjacent to State Park lands will be designed and implemented is beyond the scope of a programmatic EIR. A variety of management measures are available to achieve this goal that are influenced by site specific factors. These include stand configuration and state of development, levels of public use, topographic considerations etc. Buffer widths adjacent to State Park lands are a minimum of 200 feet as noted in the DEIR page VII.6.3-42 and Forest Practice Rule 913.1(a)(7) and 913.4(a).

Response to Comment 19
Site specific descriptive data as noted above is generally beyond the scope of a programmatic EIR. The purpose of the data and analysis reported in the DEIR is not to “justify the proposed DFMP” but to examine alternatives that would inform the public and decision makers considering the best course of management. The level of “supporting site characterization” considered necessary by the commenter is beyond the scope of the programmatic nature of the DEIR. The DEIR and RDEIR clearly describe the characteristics of suitable Murrelet habitat, areas that may provide suitable Marbled Murrelet habitat, and areas to be retained as old-growth and managed for late successional forest conditions to maintain and enhance Marbled Murrelet habitat over time. Forest characteristics that define Marbled Murrelet habitat suitability are described in detail in the Marbled Murrelet species account.

P-177

RICHARD A. GRASSETTI
GRASSETTI ENVIRONMENTAL CONSULTING
7008 BRISTOL DRIVE
BERKELEY, CA 94705
(510) 849-2354

Mr. George Gentry, Executive Officer
California Department of Forestry and Fire Protection
1416 Ninth Street
P.O. Box 944246
Sacramento, CA 95814

February 28, 2006

SUBJECT: COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE JACKSON STATE DEMONSTRATION FOREST MANAGEMENT PLAN

1-9

Dear Mr. Gentry

Grassetti Environmental Consulting (GECo) was retained by the Dharma Cloud Foundation to conduct a peer review of the Jackson State Demonstration Forest Management Plan Draft Environmental Impact Report (DEIR). These comments represent my independent evaluation of the DEIR. I have over 22 years of experience writing and reviewing environmental impact assessments, have worked on over 200 CEQA documents, and have taught impact assessment at Cal State university, East Bay (formerly Hayward) for over 10 years (see attached qualifications). I have been recognized as an expert on CEQA in the California courts. This letter presents my comments with respect to the adequacy of the DEIR to meet CEQA requirements.

My review indicates that the DEIR is a nearly unreadable and often incomprehensible mélange of data and information that has been neither synthesized nor arranged in such a way as to provide an analytical trail from the project description to impacts to mitigation. As such, it fails to achieve the CEQA mandates of clear impartial analysis and full disclosure to the public and decision-makers. In addition, the deficiencies in project/alternatives description, baseline, impacts assessment, and factual errors/contradictions result in a document that fails entirely to fulfill its required purpose of identifying potentially significant environmental impacts and mitigating them. As such, it also fails to fairly and fully disclose to the public and decision-makers the environmental implications of this project. Therefore, it is my professional opinion that the document's deficiencies are so severe as to require major re-writing and recirculation for renewed public review.

General and specific comments are provided in the attached table. Accompanying letters by Baye, Strittholt, Taylor, and Higgins detail deficiencies in the document's treatment of forestry, fisheries, and other biological resources. Please feel free to contact me at (510) 849-2354 if you have questions regarding these comments.

Sincerely;

Richard Grassetti
Principal

General Deficiencies

The following deficiencies are prevalent throughout the DEIR and render it inadequate on its face to meet CEQA disclosure requirements:

1-9

As detailed in the Specific Comments below, and the accompanying letters from technical experts Baye, , as well as the detailed analysis of forest resource issues presented by statistician Vince Taylor, the 1400+ page document is a disorganized "data dump" of relevant and irrelevant information that mixes setting and impact information with extraneous information that should be in an appendix or excluded from the document completely. It is unreadable even to a CEQA expert with over 22 years of experience. In fact, this is the most disorganized and disjointed document I can remember reviewing. It has redundant and often inconsistent consistent setting and cumulative impacts sections placed in different section of the EIR. It repeatedly fails to address scoping and 2002 EIR comments, and contains erratic shifts in technical level, scientific and regulatory jargon, and general public language). All of these failures and excesses combine to result in a document that fails its basic CEQA purpose: to inform the public and decision-makers, and provide them the opportunity to meaningfully assess the environmental implications of approving the project or alternatives. In the end, this document clearly does not comply with CEQA Guidelines Sections 15140 and 15141, which require that EIRs "be written in plain language so that decision-makers and the public can rapidly understand the documents", and that "the text of Draft EIRs should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages. In short, this length, structure, and content of this document preclude the lay-public and decision-makers from informed decision-making.

Despite (or perhaps because of) its length, the document provides remarkably little actual information on the project area, but rather focuses on describing environmental processes (i.e. biological, hydrological, geomorphologic, and economic processes) and generic background data. Because the information provided is not synthesized, integrated, or comparatively related it becomes nearly useless to the lay-reader.

As discussed in the Specific Comments below, this data-dump deficiency is aggravated by the document's absolute failure to relate setting, impact, and mitigation discussions. In addition, the minimal impacts "analyses" are often just unsupported conclusions.

The document also contains a number of factual errors and contradictions. These are described in the Specific Comments, below and in the accompanying letters from technical experts Baye, Strittholt, Taylor, and Higgins.

Inadequate Project and Alternatives Descriptions

The following deficiencies result in a project and alternatives description that fails to present adequate, stable detail from which to conduct an impact assessment that objectively assesses the project's impacts, and that fails to allow the public and decision-makers to meaningfully discern the differences between the environmental impacts of project alternatives.

10
11
12
13
14
15-16
17
18
19
20
21
22

The Project Description is unclear as to the basic purposes of the Plan and how the Plan is intended to meet those purposes. Is it just a logging plan with some monitoring or are there real experiments that are proposed that drive the specifics of the logging plan? For example, the Project Description for Alt C1 states that, "With limited exception, clearcutting is permitted only for research purposes." (Executive Summary, p.8). Yet the Timber Resources section indicates that 40% of the proposed logging would be clearcutting, and that 20% of the total forest area would be clearcut over the term of the plan. (This acreage may, in fact be even greater, due to CDF's distinctions between a number of forest harvest types that all are essentially clearcutting). Please explain this apparent inconsistency. What's the purpose of the research? Why is such a large area of clearcutting required for this research? How do the logging and research interrelate? Is there research being done on the forest that can't be done on commercial forests? Why isn't the research being focused on sustainable forestry rather than traditional forest practices, the results of which are obvious from the environmental setting information?

It also is unclear if the plan is primarily a mitigation and research plan for past problematic logging practices or really just a blanket timber harvest proposal for the forest. It appears to be both. However, its impacts as a timber harvest proposal are obscured in the document by an emphasis on the mitigation strategies. Unfortunately, as detailed below and in the accompanying Baye, Strittholt, and Higgins letters, many of the mitigation strategies are either unsupported or have proven ineffective in the Forest.

As detailed in the Specific Comments below, and in the attached Strittholt and Taylor comments, the EIR omits any meaningful spatial characterization of each of the alternatives, thereby making a realistic assessment of impacts impossible (see, for example, the Aquatic Resources and Timber Resources discussion (EIR Sections 6.1 and 6.3).

As described in the specific comments below, the Alternatives chapter's descriptions of the Alternatives are insufficiently detailed and are too vaguely worded to permit complete, accurate, or meaningful assessment of potential impacts. Alternatives description is scattered throughout the document, making it hard to understand what's actually being proposed. This lack of detail precludes meaningful review. Specifically, the DEIR's failure to adequately describe the alternatives results in a "grain" (level of detail) of impacts assessments are often so coarse that the EIR (and the reader) is unable to discern differences in impacts amongst alternatives. This is particularly problematic in a document of this length.

Inappropriate Baseline

As summarized below and detailed in the Specific comments herein and in the accompanying expert letters, the DEIR's Setting sections fail to comply with CEQA Guidelines Section 15125 (a) that the EIR must include "a description of the physical environmental conditions in the vicinity of the project at the time the Notice of Preparation is published…from both a local and regional perspective".

Environmental setting typically consists of two components: 1) resource conditions on the ground at the time the DEIR is issued, and 2) existing operations that are contributing to those conditions. The DEIR is inconsistent in its treatment of these conditions and, particularly deficient in its failure to consider the differences

23

between current logging operations and proposed project logging operations. In certain instances, the EIR considers the environmental setting to be past logging practices and not the current (since 2000-2) nearly no-logging practices. The project baseline is also problematic; the EIR generally treats the baseline as past timber harvest activities/methods/approaches, however there has been no timber harvesting over the past 4-6 years. Therefore, the CEQA operational baseline should not be the past, extensive, and environmentally problematic timber harvesting, but rather the current no-harvest scenario.

Many of the studies used to describe the baseline conditions are old, out of date, and do not reflect 2005-6 on-the-ground conditions:

- As detailed in the accompanying Taylor letter, most of the timber inventory that forms the foundation for both the development of Plan/EIR alternatives and the EIR impacts assessment is 17 years old, this despite the fact that CDF has recently conducted an updated inventory. As described in detail in the Taylor comments, the forest inventory is further deficient in that it fails to address timber harvest at a watershed or sub-watershed level. This lack of an adequately grained forest inventory results in a failure to identify sensitive habitats and water quality conditions in the setting, which leads to a corresponding failure of the EIR in identifying project impacts and mitigation measures. As detailed by Taylor, not only is the forest inventory out of date and too coarse to be meaningful, it also includes a number of other significant deficiencies rendering it inappropriate for use as the forest baseline in this EIR.

24

25

26

- As described in the Strittholt letter, the EIR's forest classifications do not reflect on-the-ground conditions. Further, they incorrectly characterize the existing and potential habitat values of various subareas of the Forest. Most importantly, the EIR's classification of the forest fails to identify forests in the 100 to 150-year-old range, which are both needed to provide future old-growth habitat, and which currently provide of the old growth habitat values essential for the survival of threatened species.

27

- As detailed in the specific comments below, as well as in the accompanying Baye and Higgins letters, critical water quality, fisheries, and other species data are similarly out of date. Further complicating the analyses is the fact that critical studies on different, but related, resources (for example fisheries and water quality) are from different time periods, making the EIR's requisite interdisciplinary assessment difficult and of questionable validity.

28

Inadequate Impact Assessments

29

As summarized below and detailed in the Specific Comments below and in the accompanying technical expert letters, the DEIR fails to comply with CEQA Guidelines' Section 15126.2 (a0 requirements that "Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussions should include the relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems….and other aspects of the resource base such as water, historical resources, scenic quality, and public services."

30

The DEIR fails to address important forest-wide issues, particularly pertaining to fish and wildlife issues. The Forest's importance to, and overall project impacts on special status species ranging from the northern spotted owl to salmonid species, are not evaluated in terms of the overall plan. Similarly, mitigations that can only be addressed at the Plan level, such as habitat Conservation Plans, are not evaluated in this document, but rather inappropriately deferred to the THP stage.

31

The project impact assessment fails to assess potential individual or cumulative impacts of the project over the next 5-20 years, many of which may be significant, in fact, more significant than those of the project. Instead, it focuses only on the very long term (30-100 years). The focus on the long-term results in an EIR that just misses many of the project's impacts. For example, sediments associated with logging may increase until the roadways stabilization program is implemented, which, depending on funding, could be up to 10 years. Similarly, the project would harvest many of the older (80-100-year old) existing trees, but obscures the biological impacts of that harvesting by focusing the analyses 10-100-years from now, when current saplings approach late seral stage. This failure to evaluate 5-30-year project impacts both skews project impacts (and the need for mitigation) and fails to identify numerous potentially significant impacts of the projects, ranging from sedimentation and water quality to salmonids and amphibians. CEQA requires the analyses of all project impacts, not just those at the end of the Plan period, which, ironically, are the most speculative.

32

The DEIR repeatedly defers project-site specific studies to the future THP stage, despite containing a detailed list of THP's proposed for the first 5-10 years of the Plan. Although programmatic EIRs may appropriately defer some analyses to future site-specific environmental reviews, this applies only to impacts and project that are speculative.

33

The document's analytical approach is academic and conclusatory, rather than critical. The impact analyses do not take a worst case analytical view, but rather a detached and often overly optimistic view that provides considerable information on processes but generally does not clearly tie the analyses to the conclusions. Many of the impact assessments are conclusatory and not well supported by fact/analysis. The EIR's conclusions appear to have been developed independently of the analyses and often conflict with the text of the analyses.

34

Some of the impacts are "segmented" by different causes and not aggregated as a whole (i.e. sedimentation segmented into roads, recreation, logging, etc.). This results in piecemealed impacts that do not represent the effect of the overall action.

35

Most of the cumulative impacts assessments do not approach cumulative impacts in an additive or synergistic manner, but rather use this analysis to identify project impacts as proportionally minor and therefore not significant cumulatively. This is in direct contravention of the requirements for cumulative impacts analysis in CEQA. In addition, the cumulative impact discussions fail to address the project impacts in combination with past impacts, contrary to CEQA requirements.

36

The DEIR further trivializes project impacts by assuming that compliance with THP's and Forest Practice Rules (FPRs), in combination with Plan guidelines will mitigate project impacts to less than significant levels. This circular reasoning

assumes that plan policies (including THPs and FPRs) will mitigate all Plan impacts. Yet this reasoning is unsupported by evidence in the EIR. In fact, the declining resources under current FPRs and THPs enumerated (i.e. continuing declining fisheries) in various EIR sections indicate that those procedures/practices are inadequate to mitigate the impacts of logging under the Plan.

37

The DEIR's failure to adequately assess or correctly identify project impacts as *potentially significant*, results in a corresponding failure to identify the need for mitigations. Simply stated, because CEQA requires that only significant impacts be mitigated, and the EIR fails to identify numerous potentially significant impacts, it then necessarily fails to mitigate those missing impacts.

Inadequate Mitigations

38

The DEIR fails to comply with CEQA Guidelines Section 15126.4 requirements that "an EIR shall describe feasible measures which could minimize significant adverse effects…" Additionally, as described below and in the Specific Comments section of this letter, the DEIR fails to comply with Guidelines Section 15126.4(a)(1)(B), which stipulates that "Formulation of mitigation measures shall not be deferred until some future time. "

39

Many mitigations in this DEIR simply defer the actual mitigation/necessary study to future site-specific THP's. This deferral of mitigation is inappropriate because this EIR could and should contain programmatic mitigations that would reduce or assure less-than-significant impacts. If impacts are to be considered "less than significant", the mitigations in this document should provide a framework that assures that project impacts will in fact be mitigated to a less than significant level. Absent those details/requirements in this document, the impacts cannot be considered mitigated to less than significant.

40

Many of the Plan's policy and EIR mitigation measures are vague and unenforceable. They frequently consist of future studies, or are couched in terms such as "should be considered", "coordinate with", etc. Simply stated, they just don't assure mitigation and, as such, many impacts considered "less than significant" in the EIR should, in fact, be considered significant and unmitigated.

41

A program EIR is the appropriate, and frequently the only, vehicle for programmatic mitigations, such as Habitat Conservation Plans. This EIR fails to identify any such regional mitigations for impacts of cumulative and Plan logging, despite clear evidence of declining resources (i.e. fisheries, other special status species) to which the project contributes, at least in its first 20 years.

SPECIFIC COMMENTS ON DEIR

	Introduction	
42	The Plan and EIR do not comply with "Allowable cut levels must be derived from pertinent current inventory and growth data." Data used in the EIR are outdated; new inventory supposed to be completed soon. In order to comply with this policy, the Plan and EIR should be revised to include that data. The EIR analyses should be revised to account for the updated data, and the document should be recirculated for public/agency review.	p. II-7, item (C)
43	Project description fails to describe the proposed logging plan/types of logging/annual logging/etc. Also, the duration of the plan is not disclosed in the project description. This information is critical to evaluating environmental impacts of the project.	Section II, general
	Project Information	
44	Section III.5 is a data dump that doesn't provide any CEQA-relevant information. It serves only to confuse the reader, and should be deleted from the EIR.	Section III.5
	Environmental Setting	
45	Environmental Setting Section (Ch V) is redundant and irrelevant to the CEQA analyses. What is its purpose? Additionally, it is not an environmental setting section as described in CEQA Guidelines section 15125. Instead, it is more of a land management setting. It is superfluous and confusing, and should be deleted or integrated into the topic-specific setting sections.	Section V, general
46	The Alternatives section, p. VI-1 states that all alts "are feasible" (paragraph 3), yet the summary says they're not feasible.	p. VI-1
47	The summary table should be revised to include the mitigation measures.	Section I, general
48	The Alternatives Section, p. VI-3, addresses the issue of whether it is JSDF's role to assure species don't go extinct, and concludes that it is not because JDSF is too small to fill that role. However, the EIR fails to acknowledge, either in this section or in the Cumulative Impacts section, that, if project logging activities contribute to their extinction, this would be a cumulatively significant impact.	p. VI-3
	Alternatives	
49	As detailed in the Baye and Strittholt letters, and in specific comments	general

	on the technical analyses below, and as summarized in the General Comments, above, the description of the alternatives is inadequate in both technical and spatial detail to allow the EIR to conduct a meaningful comparison of impacts between the project and alternatives.	
	Aesthetics	
50	Threshold of significance is in error – "In managed forests such as JSDF, timber harvesting is not generally presumed to have a significant adverse effect on aesthetics whereas the same treatment in an unmanaged setting may be significant" (pp. VII.2-12 and13). This is not appropriate per CEQA.	pp. VII.2-12 and13
51	Impact 1 analysis too coarse to be meaningful. Further, it considers short term impacts (2-5) years as not particularly significant (p. 13)…ignoring repeated such "short-term" impacts throughout 45% forest (p.15).	p. VII.2-15
52	Are "Additional protections not described in DFMP but employed by CDF." (p. VII.2-18) included as CEQA mitigations or not? They need to be added as mitigations to assure implementation.	VII.2-18
53	Mitigation 3 – Future CEQA process isn't a mitigation – CEQA allows approval of projects with significant unmitigable impacts.	
54	Visual impacts Less Than Significant "Findings" on pp. VII.2-26-28 are argument/setting but not impacts analysis. In addition, many of the items in the findings are neither required nor incorporated into the plan.	VII.2-26-28
55	Mitigation 4 – this mitigation is too vague and unenforceable to actually mitigate anything.	VII.2-28
	Air Quality	
56	The PM10 analysis (p.V.II.5-10) (impacts in setting section) is only for diesel fuel use (air toxics) and fails to include other logging activities. Inappropriately piecemeals the impact so it's not possible to tell if overall PM10 emissions exceed the 80 lbs/year significance threshold. The importance of this omission is noted on p. VII.5-14 *"The largest source of PM10 emissions on JSDF is from vehicle and equipment travel on unpaved roads…Slash burning represents the second largest source of PM10 emissions…"* Yet emissions from these sources are not calculated in the impacts analysis and, instead, are just assumed to be less than significant. Overall PM10 contributions are likely to exceed the 80 lbs/year threshold. At a minimum, calculations are required to assess this impact in the EIR.	VII.5-14

	Aquatic Resources	
57	As described in the California Regional Water Quality Control Board, North Coast Region's comment letter dated February 9, 2006, the water quality analysis has numerous substantive errors and deficiencies. The RWQCB letter spells out in detail how the water quality analysis makes a series of "best case" assumptions that are unsupported in the EIR or in the Plan itself. As described in that letter, there is no evidence in the Plan that it would, in fact, protect water quality such that the project would not significantly adversely affect aquatic resources. TMDL's are not proposed to be met, and as a result, salmonids may continue to decline as a result of implementation of the Plan. The RWQCB letter also provides evidence that deferring water quality protection to the THP stage has not adequately protected water quality, even in the most recent THPs that were written to be consistent with the Plan's policies.	General
58	The RWQCB's comments are echoed by fisheries biologist Patrick Higgins' comment letter, which flatly contradicts the EIR's Reliance on Forest Practice Rules that form the foundation of the mitigation for timber harvest impacts on aquatic resources under the Plan. There is no disagreement among experts on this fact – as detailed in the Higgins letter, numerous studies have shown that the FPRs fail to mitigate impacts on fisheries and other aquatic resources. The EIR either fails to address these studies, or acknowledges them but then stands their conclusions on their head. This fails the CEQA process entirely.	General
59	As detailed in the Stritthold letter, the EIR fails to include any meaningful watershed assessment, but rather a fragmented and often misinterpreted mélange of studies that are never synthesized or integrated as to their relevance and meaning to the impact assessment.	General
60	As detailed in the Stritthold letter, The EIR also fails to address the project's contribution to stressors on sensitive aquatic species, both individually and in terms of cumulative timber harvesting activities.	General
61	As detailed in the Stritthold letter, the EIR fails to address the importance of JDSF stronghold watersheds to the recovery, survival, or failure of sensitive aquatic species. The impacts of the various alternatives on these strongholds is never described or assessed in the EIR.	General
62	EIR states "*the current condition of aquatic resources was assessed as part of the watershed analysis conducted for JSDF as part of a draft Habitat Conservation Plan (CDF 1999)*". On page VII.6.1-18, it is revealed that the stream inventories were actually done in 1995, 1996, and 1997, with the majority of the studies dating from 1995. The EIR Aquatic Resources assessment is using six to 11-year-old baseline information, which does not reflect current on the ground conditions. The old information describes a baseline that was being heavily impacted by	VII.6.1-2

	logging; the current baseline is likely far less impacted because the Forest has not seen active logging since 2000/2002. In fact, this is explicitly acknowledged in the EIR, pp. VII.6.1-44 and 45: *The rate of timber harvest increased substantially from the mid- 1980's to the mid-1990's in the Noyo River Watershed, when compared with periods for the last 70 years (Figure VII6.1.10. In some sub-basins approximately 80% of the land area has been included in a THP applying a range of harvest prescriptions. Extensive harvests in portions of the Big River watershed to the south of the JDSF occurred from the mid 1980s through the decade of the 1990s.* The degradation of the watersheds both within and outside of JSDF in that period are clearly described. However, the DEIR fails to inform the reader whether this paints an accurate picture of current conditions in the watershed, nearly a decade later. Therefore the Setting discussion appears to be at least incomplete and at most deceiving. Updated baseline information is necessary in order to conduct an accurate assessment of project impacts (change from baseline conditions to post-project conditions).	
63	This chapter has a 98-page setting section and an 11-page impact/mitigation section, including analysis of impacts to six alternatives, or less than two pages of impacts/mitigations per alternative. The setting section is a data dump of all available information on fisheries and associated hydrologic, sediment, and water quality information. There is no indication in the text as to what is important or not important. Further, where varying data sets and conclusions are provided, there is no comparative assessment to allow the reader to understand what's actually being used to determine the EIR's conclusions regarding the sensitivity or importance of the resource, or of the factors affecting the health of the aquatic resources. This is a multi-disciplinary assessment rather than an interdisciplinary assessment.	VII.6.1, general
64	An EIR is intended to inform the public and decision-makers, many of whom are lay people with little technical background. This EIR in general, and the Aquatic Resources section in particular are so heavily laden with untranslated technical jargon that it fails to serve CEQA's public information purposes. For example, the pool habitat and sediment and spawning gravel quality assessments on pp. VII.6.1-21 through 25 are completely indecipherable technical jargon. Similarly, the discussions of fish populations on pp. VII.6.1-76 through 81 are completely indecipherable to a non-fish biologist. The steelhead listing information on pp. VII.6.1-87 through 91 is another form of data dump – much of this information has nothing to do with the study area at all. The lay-reader is left at a complete loss in attempting to understand the meaning and significance of this	VII.6.1, general

	information. This problem of a complete failure to edit the document to remove extraneous information and explain key facts and processes so that a logical trail from setting to impacts to mitigation can be followed by the reader is repeated throughout the section and document. Interestingly, of the entire 98 pages of setting, one paragraph on p. VII.6.1-37 seems to sum up the entire mountain of gibberish: *"In early-seral stages, the immature riparian vegetation (both hardwood and coniferous species) is a low-to-moderate shade source and a poor contributor of large wood. In mid-seral stages, the riparian vegetation is a good shade source and a low-to-moderate contributor of large wood. Most riparian vegetation does not become a good source of large wood until late-seral stages. Although much of the land is currently in early- to mid-seral stages, riparian habitat should improve over time (20-90 years)."* However, the EIR fails to inform the reader what will happen to the fisheries in the interim, i.e. in the next 20 years, which will be the primary focus of the plan. Will the fisheries drop below self-sustaining levels? Will there be any fish left to enjoy the improved conditions in the future? Will certain alternatives avoid 20 years of continued degradation of the resources? This is of real concern because, fisheries stocks have declined precipitously as shown on Table VII.6.1.8, and recognized by the NMFS's 2001 listing of the Coho "*The Central California Coast ESU is presently in danger of extinction*". (DEIR, p. 57). This was echoed by CDFG in 2002, and by the 2000 NOAA Fisheries listing of Northern California steelhead populations as threatened. The DEIR, p. VII.6-71 further acknowledges that "*Chinook salmon continue to exhibit depressed population sizes [and that] spring-run Chinook…may not be extant anywhere in the range of the [Coastal California] ESU.*" Somehow, despite the document's acknowledgement of the fisheries crash, the DEIR concludes, absent any supporting data, that continued widespread logging of the Forest would have no potentially significant impact.	
65	As detailed in the Higgins letter, the EIR mysteriously relies on1996-2001 water temperature data despite the existence of an extensive system of instantaneous water temperature monitors. This fails to describe an important baseline condition at the time of preparation of the EIR, as required by CEQA.	
66	As detailed in the Higgins letter, the EIR uses an incorrect turbidity threshold for salmonids of 40 ntu, while it has been clearly shown that 25ntu is the correct threshold standard. Please revise the impacts assessment using the correct threshold.	
67	The Habitat Suitability Overview on pp. VII.6.1-37 through 53 provides relatively detailed information (albeit outdated) the major	VII.6.1-37 through 53

	tributaries in the Planning Area, however this information, like most of the setting information, is not carried through to the Impacts and Mitigations discussions. Because the specific areas to be harvested under the plan are known (and disclosed elsewhere in the document), it is possible to determine at this time the project logging's impacts on each of these water courses. Therefore it is impermissible to fail to assess this impact in the Plan EIR, and improper to defer those assessments to the THP stage.	
68	Section 6.1.12 describes the project components intended to protect habitat. This information Project Description or Impacts information, not setting. This is an example of the muddled organization of the document, where setting and impact information is frequently mis-located such that the reader is prevented from understanding the differences between baseline conditions and post-project conditions.	Section 6.1.12
69	Sections 6.1.12, 13, and 14 also set forth a host of mitigation included in the plan, which, the EIR concludes, is adequate to protect aquatic resources (the EIR states explicitly that no additional mitigation are required). Yet the Impacts discussion fails to provide any analysis that these protections would actually protect the resources. Rather, the impacts discussions seems to take the position that, because the Plan would be better than the 1995-6 logging methods, that the project impacts would be beneficial. This fails to acknowledge the large-scale logging that would be permitted by the Plan, which may not be beneficial compared to the current no-logging conditions.	Sections 6.1.12, 13, and 14
70	Impacts 1a-e conclude that the project would have less than significant or beneficial impacts on various hydrologic, geomorphic, and debris conditions affecting fisheries. However, there is no analysis as to the effects of the project logging's impacts, in the context of past and existing degradation of fisheries habitat, on actual fish populations.	p. VII.6.1-99 – 104
71	For Impacts 2-4, there is no analysis as to the effects of the project logging's impacts, in the context of past and existing degradation of fisheries habitat, on actual fish populations. The big question of whether the fisheries would continue to decline, and to what extent, remains unanswered. Impact 5, which should explicitly answer that question, basically states that habitat would improve compared with current (or at least 1996) degraded conditions, but concludes with the vague "Some beneficial effects on fish and amphibian populations will result from the cumulative effects of these measures." This "Impacts assessment" fails completely to address the EIR's stated significance criteria, namely whether fish or amphibian populations will drop below self-sustaining levels. Impact 6 has a similarly vague conclusion of beneficial effect, but even that conclusion is based on an extremely tentative conclusion that "These measures will lead to improvement of instream habitat and	pp. VII.6.1-105-111

	may (emphasis added) lead to increased numbers of fish. In none of these "analyses" are the numerous studies described in excruciating detail in the setting section referenced. There is simply no analytical trail to support the conclusions that the project would result in rejuvenation of the depressed fisheries, or protect them from extinction due to project or cumulative (past, present, and reasonably foreseeable) forest management practices.	
	Botanical Resources	
72	The EIR relies almost entirely on CNDDB data for its identification of botanical resources. Doesn't the JDSF have its own species survey data (at a more-detailed stand level)? If so, that information should be incorporated into the EIR.	General
73	The last paragraph on p. VII.6.2-13 states that project impacts on the 100-acres of unique plant communities will be evaluated separately when specific projects are proposed. This is an improper deferral of analysis. To the extent that the plan permits certain activities in those areas, impacts should be determined in this EIR, at least on a general level, and programmatic mitigations identified and adopted that would eliminate potential impacts to these species/habitats.	p. VII.6.2-13;
74 74a	The claims that Impacts 1-5 would be less than significant because of the plan's site and species-specific protection measures is entirely unsupported by fact. The Management Plan calls only for surveys and future development of mitigation for plant species of concern, and has only generic language regarding protection activities in old-growth forests and wetlands. Similarly, the goals and objectives in the plan are so vague as to not provide any mitigation assurance (for example, they are conditioned by terms such as "work towards", minimize", "as feasible"). Nearly all mitigation is deferred to the THPs. As discussed above, programmatic mitigations should be identified and adopted that would eliminate potential impacts to these species/habitats. Absent explicit mitigation measures, the EIR contains no evidence to support its conclusions of no significant impacts to plant species.	VII.6.2-21-24; VII.6.2-25-29
75	The Additional Management Measures (referred to as a Mitigation Measures in the ADEIR) for cumulative botanical impacts rely on vague recommendations for "discouraging" , "monitoring", "future study", and "consultation" to mitigate this impact. These vague terms do not assure mitigation and, therefore, either this impact must be considered significant or the mitigations need to be revised to require specific measures to avoid the project's contribution to cumulatively significant impacts.	VII.6.2-45 & 46
76	This section fails to address the potential impacts on special status plant species, communities, and habitats from the use of herbicides.	VII.6.2, general

	Please add this analysis to the EIR.	
	Timber Resources	
77	The timber resources section fails to provide the information on the age of forest stands. This information is critical to identifying impacts of the project on numerous sensitive species, both in the short- and long-term. Specifically, "mature" forests are not identified, nor are the impacts of removal of those forests in the plan. See the Strittholt letter for additional discussion of this issue.	General
78	The second paragraph notes that new forest inventory information will be available by the end of 2005, and that the Continuous Forest Inventory also is scheduled for completion at this time. Given that the DEIR was released to the public in mid- December, 2005, this information should have been included in the EIR rather than the old data. This is particularly important given Board Policy 0351.4 C, which states that "Allowable cut levels must be derived from pertinent current inventory and growth data." The EIR's failure to use the current forest inventory data results in a Plan and CEQA analysis that fail to comply with this Board Policy.	p. VII.6.3-4
79	The discussion in this chapter indicates that the Department has a clear plan for which areas of the Forest will be harvested, and what sorts of harvest will be applied to each area (i.e. Fourteen Gulch compartment described on p. VII.6.3-11), yet the impact assessments throughout the EIR fail to reflect the specificity of this plan. The impact assessments should be revised to assess site-specific impacts of the plan to the extent that the plan is site-specific. Deferral of analysis and mitigation this analysis to future THP's is not permissible under CEQA. At a minimum, mitigations should be expanded to assure mitigation in all of these areas.	General
80	The criteria used in the evaluation of even-aged stands (see pp. VII.6.3-11-12) are so vague as to not assure that significant adverse impacts would occur. For example, "The amount of regeneration harvesting in an assessment area may need to be constrained in order to reduce the potential for adverse cumulative watershed, habitat, aesthetic, or other environmental impacts" is so vague as to be meaningless; it provides no guidance to implementation of the project, not any assurance of mitigation against cumulative impacts. Please revise thee criteria to provide for mitigation against cumulative impacts, which should be the primary focus of the EIR.	Chapter VII.6.3, general
81	This entire chapter is really part of the project description and should be integrated into Chapter III to allow the reader a full understanding of the project being assessed (prior to reading half of the EIR), and to reduce the redundancy of the document.	Chapter VII.6.3, general
82	Table VII.6.3.4 should be in the Project Information chapter – it clearly indicates what that chapter fails to disclose; that 29% of the entire forest and 40% of the high production area is proposed for	p. VII.6.3-28

	clearcutting.	
83	The Plan includes the use of herbicides on hardwoods, yet the EIR includes no analysis of the potential impacts of the use of herbicides. (See additional comments on the hazards and Hazardous Materials Section)	p. VII.6.3-30
84	Whether or not Impacts 1 and 2 are considered beneficial or adverse depends on the baseline and duration considered in the analyses. Continuing to protect already extant and protected old-growth forests, (as considered beneficial in Impact 1) is not a beneficial impact because those groves already exist and current "no-cut" policies would not be altered by the Plan. Similarly, Impact 2 continues to cut large swaths of the forest and therefore does not benefit the forest compared with current no-cut management. Further, the EIR impacts assessment grossly considers growth over the entire forest and not specific sub-basins, where harvesting may far outstrip growth. The Plan includes enough detail for sub-basin analyses, and these should be included in the EIR as they are key to other impact assessments such as biological resources and water quality. Finally, as discussed in previous comments, the conclusions that the Plan would result in increased late-seral stands and total board feet of standing timber are based on outdated forest inventories and must be updated with current inventory information.	pp. VII.6.3-32 & 33
85	Impact 3 is not a CEQA environmental impact and should be deleted from the EIR – maximum sustained production is an economic, not environmental, consideration and may, in fact, create more environmental impacts than lesser production levels. Please remove this non-environmental "impact" from the EIR.	p. VII.6.3-38
86	Impact 4 is not a CEQA environmental impact and should be deleted from the EIR – use of silvicultural methods is a management goal, not an environmental consideration and may, in fact, create more environmental impacts than lesser production levels. Please remove this non-environmental "impact" from the EIR.	p. VII.6.3-40
	Forest Protection	
87	The first paragraph states that pest management activities is not required under CEQA. This is false; if it is part of the project and may result in environmental impacts (i.e. from use of pesticides), it is required to be assessed. Additionally, the "Impacts" subsection has the wrong focus – instead of focusing on diseases, it should focus on the potential impacts of IPM to the various environmental resources areas. Please revise as	p. VII.6.4-1; sec. VII..6.4, general

	appropriate.	
88	Sub-section 6.4.2 is entirely out of place and results in piecemealed impact assessments. Forest protection measures that are part of the Plan his information should be summarized in the Project Information section and impacts should be evaluated and the discussions integrated into the discussions on the various resource topics represented by the subheadings.	Section VII.6.4.2, general
89	The so-called "mitigations" in this section are not mitigations for project impacts, but rather means to assess or treat various tree pathologies. This section needs to be revised to mitigate the potential impacts that IPM activities may result in (i.e. use of pesticides and herbicides).	Section VII.6.4.3, general
	Wetlands	
90	This section fails to provide any meaningful analysis of the potential impacts of the Plan to wetlands. It includes no maps or descriptions of wetlands within the Forest, nor does it identify or evaluate potential project impacts to those wetlands. Instead it relies upon a vague Plan policy to "manage wetlands in a manner that maintains or restores productivity…." And, rather than evaluating compliance with that goal, just assumes compliance. CEQA requires a trail of evidence supporting conclusions, not just unsupported assertions.	Section VII.6.5, general
	Wildlife	
91	This 270-page wildlife section is a massive data dump where important issues are buried in trivia and semi-random data. Various evaluations of habitat are presented but the reader is provided no means of determining the validity of each approach, or even which approaches/conclusions are ultimately included in the impacts analysis. Despite this bulk of data, no specific impact or mitigations are called out in the text. It's format does not follow that of the rest of the EIR. Impact, setting, and mitigation information is first mashed together and general Plan policies are assumed to mitigate even if they would only "potentially be implements" (see, for example marbled murrelet discussion on bottom of p. 89). Impacts of alternatives are not discussed immediately those of the project, as in other chapters. The Impacts discussions are not numbered and are not tied back to, or supported by the setting discussions. For potentially significant impacts, surveys for species are considered sufficient to mitigate impacts to less than significant levels when, under CEQA case law, surveys do not constitute mitigation and even where the EIR acknowledges significant reductions in habitats (i.e. Cooper's hawk, bald eagle, osprey marbled murrelet, yellow warbler, Vaux's swift, purple martin, etc.) over the next 20 years. In fact, Table VII.6.6.17 clearly shows that numerous special status species, including nearly all carnivores and fur-bearers, would experience major habitat	Section VII.6.6. general

	declines through 2030, some of which would continue far longer into the future. Habitats for some species (i.e. white-tailed kite and northern harrier) would be eliminated entirely. Nowhere does the discussion evaluate the significance of 20-30 years of declining habitats to species already in marked decline or threatened with extinction. This analysis needs to be added to the EIR for each species to comply with CEQA's analytical requirements. The entire section needs to be edited to succinctly describe the wildlife resources and habitats of the forest, and provide relevant information upon which to conduct the impact assessment. This entire chapter is unreadable to the layperson and fails completely to provide. The CEQA-mandated evaluation of potential significant impacts and mitigation measures on these resources.	
92	As detailed in the Strittholt letter, the use of WHR's tends to underestimate project impacts. In nearly all cases, more detailed assessments have shown "a dramatic reduction in habitat potential for most wildlife species" compared with the WRH models.	General
93	The EIR wildlife assessment fails to provide adequate analytical detail to allow the public and decision-makers to compare how the different alternatives' impacts compare spatially; this information is required to identify impacts on specific special-status species.	General
94	The EIR wildlife assessment fails to provide adequate analytical detail regarding the effects of cumulative stressors on specific special-status species. For example, the various subcategories in the Watershed Cumulative Effects discussion are disaggregated and addressed separately, and the impacts are never re-aggregated.	General
95	The assertion that the project would not conflict with any habitat conservation plan or equivalent is not correct. Recovery plans for the various state- and federally listed threatened or endangered species are, in fact, habitat conservation plans. The EIR should be augmented to address the proposed JSDF's Management Plan's compliance with these species' ESA Recovery Plans.	p. VII.6.6-130
	Geology and Soils	
96	As described in the California Regional Water Quality Control Board, North Coast Region's comment letter dated February 9, 2006, the water quality analysis has numerous substantive errors and deficiencies. The RWQCB letter spells out in detail how the sediment analysis makes a series of "best case" assumptions that are unsupported in the EIR or in the Plan itself. As described in that letter, there is no evidence in the Plan that it would, in fact, protect water quality such that the project would comply with TMDL requirements, either individually or cumulatively. The RWQCB letter also provides evidence that deferring sediment protection to the THP stage has not adequately protected water quality, even in the most recent THPs that were written to be consistent with the Plan's policies.	general

97	The statement that harvest-related surface erosion is a temporary impact does not mean that the impact is less than significant. Please define "temporary" in this context and discuss how this sort of temporary impact may be significant.	p. VI.7-8
98	Porter Cologne Act discussion: Items 1 and 2 state that the Basin Plan prohibits discharges deleterious to fish, wildlife, and other beneficial uses. Yet the EIR discloses that ongoing timber harvesting activities in the Forest have contributed to Forest-specific and cumulative degradation of habitats and species contra to these prohibitions. The EIR provides no substantive information/analyses that would lead the reader to believe that such deleterious effects would not continue, albeit at lesser levels. In order to assess the project's compliance with these regulations, please provide calculations indicating whether the Plan would result in or contribute to exceedances of TMDL's.	p. VII.7-27
99	Hillslope management policies in the Plan consist of field review and consultation with geologists. Consultation and review do not provide mitigation because there are no actual requirements for avoiding or mitigating impacts to unstable slopes from timber harvest activities. Therefore these policies cannot be shown to mitigate project impacts.	p.VII.7-30
100	Impacts 4 and 5: See above – 'modern forest management practices' referred to on p. 37 have still resulted in massive fisheries declines due in large part to water quality/sedimentation issues resulting from landsliding and erosion. Further, landslides still result from timber harvesting and associated road-cutting. The impact refers to people and structures but fails to address the water quality implications of landslides. The Plan adds consultation with geologists to these practices, but no actual on-the-ground mitigation/avoidance is required. Therefore this impact is still significant.	p.VII.7-36 - 41
	Hazards and Hazardous Materials	
101	Last paragraph: Studies have shown that the greatest water quality contamination and health hazard impacts are not from the glyphosate itself, but rather from the quantities of adjuvants and surfactants, which are added to the glyphosate herbicide mixture in larger quantities and have greater toxicities to humans. Please describe and evaluate the environmental and human health effects of the all components of the glyphosate herbicide mixtures, as well as any other known herbicide mixtures that may be applied in this forest. The EIR acknowledges (p. 8-11) that the low herbicide uses cited in the document would be substantially increased with the proposed Plan, therefore the EIR should assess the potential impacts of the anticipated quantities of herbicide use.	p. VII.8-11
102	First full paragraph states that "Because DPR is the CEQA Lead Agency, this determination [of no environmental impact of a pesticide] is binding on all state agencies, including CDF." The EIR further explains that DPR would be responsible for responding to any	p. VII.8-15

	comments on herbicide use. This is patently false and misrepresents CEQA's analytical requirements. The cited CEQA sections (Statutes section 21080.1 and Guidelines section 15050) do not state, imply, or otherwise indicate that all state agencies must make the same findings for a specific project in a specific area as the DPR made for statewide general application of herbicides. The EIR fails to provide any actual analytical evidence that herbicide application associated with the Plan would not result in any significant impacts. In fact, the EIR fails even to identify the general quantities of herbicides to be used. It does not identify adjuvants and/or surfactants to be used in the Forest. There is simply no analysis; instead the EIR relies on legal arguments that are unsupported in the statutes. The DPR's CEQA findings did not consider specific sensitive resources or surfactant formulations and cannot logically be applied to all specific application sites in the State. The State itself has recognized this and prepared numerous EIRs on the projects involving large-scale use of herbicides, all of which include actual analyses of the potential impacts of the herbicides (for example the *SF Bay Estuary Invasive Spartina Project EIR*, and the *Egeria Densa Control Program EIR*). Please revise the EIR to include an actual analysis of herbicide use and recirculate for public and agency comment.	
103	See above; the EIR is fundamentally lacking any actual analysis of pesticide use. Further, the reference to a 2001 PALCO THP where CDF made similar findings is peculiar. CDF seems to citing itself to say that its (clearly erroneous) interpretation of CEQA is correct. This entire impact discussion is nothing more than legalistic argument unsupported by fact or statute.	Impact 3; p. VII.8-20 through 22
	Heritage Resources	
104	This section muddles impacts in with the setting section, blurring the distinction between setting and impacts (see, for example, p. VII.9-15, 2nd paragraph, p. VII.9-193rd paragraph).	Section VIII.9, general
105	If the Cat barn is to be torn down as part of the Plan, that would be a significant unmitigable impact under CEQA (see League for Protection of Oakland's Architectural Resources v. City of Oakland, et. al., Feb 10, 1997). Please revise the EIR impact section accordingly.	p. VII.9-19
106	Roadway development is known to adversely affect cultural resources (p. 32) and, as noted on the bottom of p. 33, road-building proposed in the Plan could still adversely affect these resources despite the management plan policies. Therefore, the EIR should still consider this impact to be potentially significant.	p. VII.9-33
107	Per settled case law, Mitigation Measure 1's requirements of documentation and data recovery of historic buildings that may be affected by THP activities would not mitigate the impacts below the significance level(see League for Protection of Oakland's Architectural Resources v. City of Oakland, et. al., Feb 10, 1997).	p. VII.9-43

	Therefore this impact is significant and not mitigable. Please revise this impact accordingly.	
108	Mitigations 3, 4, 8, 13, and 14 also do not guarantee any actual mitigation of potentially significant impacts to less than significant levels in that they rely primarily on future studies, consultation, and training, and not avoidance or on-the ground mitigation.	pp. VII.9-43-52
	Water Quality	
109	As described in the California Regional Water Quality Control Board, North Coast Region's comment letter dated February 9, 2006, the water quality analysis has numerous substantive errors and deficiencies. The RWQCB letter spells out in detail how the water quality analysis makes a series of "best case" assumptions that are unsupported in the EIR or in the Plan itself. As described in that letter, there is no evidence in the Plan that it would, in fact, protect water quality such that the project would not significantly adversely affect aquatic resources. TMDL's are not proposed to be met, and as a result, salmonids may continue to decline as a result of implementation of the Plan. The RWQCB letter also provides evidence that deferring water quality protection to the THP stage has not adequately protected water quality, even in the most recent THPs that were written to be consistent with the Plan's policies. These deficiencies is significant to the extent that the impact assessment needs to be completely redone and recirculated to provide decision-makers and the public with meaningful information regarding the project.	general
110	Please identify the numerical TMDL's for the project's Noyo and Big River watershed. Please describe how current conditions compare to these TMDL's. The EIR Water Quality Impacts section should then compare project water quality conditions with these TMDL's to determine significance.	p. VII.10-7; Section VII.10, general
111	First bullet point: Increased sediment occurs for 10-11 years. This is not a short-term impact, particularly given the life cycles of salmonids. Please revise text and analyses accordingly.	p. VII.10-9
112	Similarly, nitrate levels can rise 3-5 times for periods of 3-5 years. Please reconsider the significance of this "short-term" impact in light of life cycles of salmonids.	p. VII.10-11
113	Please provide a detailed evaluation of anticipated Plan water quality compliance with each of the waste discharge prohibitions and water quality objectives identified on pp. VII.10-15 & 16. The water quality impact assessment should be revised to reflect project compliance/non-compliance with these criteria. This approach is consistent with the significance criteria identified on p. VII.10-20.	p. VII.10-15
114	Impact 1: The EIR provides no quantitative evidence that past water	p. VII.10-21

	quality problems and violations of water quality standards will not be violated under the Plan. Instead the EIR claims that "long-term potential sediment delivery in these already sediment-impaired waterbodies will be reduced…" (p. 23). This sidesteps the issue as to whether or not the Plan will comply with applicable water quality criteria, the knowledge of which is essential to identifying the environmentally superior alternative, as well as the significance of the Plan's own impacts. To remedy this deficiency, please conduct a quantitative model that permits the reader to determine whether the Plan will result in compliance with TMDL's and other water quality criteria in the Basin Plan for each 10-year plan period.	through 25
115	Impact 6: Please discuss the potential water quality impacts of the Plan's proposed use of herbicides on water quality.	p. VII.10-27 & 28
116	Please provide evidence supporting the conclusion that the proposed 200-foot neighbor buffer would actually mitigate all potential land use impacts. Please provide evidence that the California Department of Parks and Recreation and Mendocino County agree that this buffer is adequate. This comment also applies to Impact 3, Cumulative Impacts.	p. VII.11-10 & 13
	Land Use Planning	
117	The Thresholds of Significance need to be augmented to address actual land use conflicts, such as conflicts with the adjacent parks.	p. VII.11-11
118	Please add a discussion of potential conflicts with adjacent State Parks uses to the Impact 2 discussion/analysis.	p. VII.11-11 &12
	Noise	
119	Impact 1: The Noise impacts assessment is devoid of any analysis. What would the noise levels be at the nearest residence? At the adjacent State Park lands? Mitigation 1 inappropriately defers all noise mitigation to future THPs. Therefore the EIR reader is informed of neither the impact or mitigation. Please add detailed impacts analyses and mitigation requirements to guide THP site-specific impact and mitigation assessment (i.e. limitations on hours of work, limitations on equipment use near sensitive human or animal receptors).	p. VII.12-12
120	Impact 2: The Vibration impacts assessment is devoid of any analysis. What would the vibration levels be at the nearest residence? Mitigation 2 inappropriately defers all noise mitigation to future rock quarry permits.	p. VII.12-12

	Therefore the EIR reader is informed of neither the impact or mitigation. Please add detailed impacts analyses and mitigation requirements to guide site-specific impact and mitigation assessment (i.e. limitations on hours of work, limitations on equipment use near sensitive human or animal receptors).	
121	Impact 3: Temporary impacts can be significant (see Berkeley Keep Jets Over the Bay v. Board of Port Commissioners case). Please provide an analysis of potential temporary noise impacts on both human and sensitive special status animal species.	p. VII.12-13
122	Impact 4: This is a conclusion supported by zero analysis. Please provide an noise assessment showing if/how well the Plan's 200-foot buffers mitigate noise impacts on sensitive species and humans. Please note that the "mitigation" for helicopter flight noise' only requires "consideration" of flight characteristics. Consideration is not mitigation.	p. VII.12-13
123	Mitigation 3 (Impact 6) is not actual mitigation but rather just deferral of mitigation to the project reviews. Please provide actual mitigation as described in comments on Impact 1, above.	p. VII.12-15
	Public Services and Recreation	
124	Please update the discussion of the Big River Interim Management Plan, which should have been complete at the date of release of the DEIR.	p. VII.14-14
125	Please add the following threshold of significance: If the DFMP would conflict with the use of existing nearby or adjacent recreation resources.	p. VII.14-21
126	Please describe why decommissioning of Road 200/loss of access to waterfall Grove is not considered a significant impact to recreational resources. What is the basis for the conclusion that Impact 2a is "less than significant"?	p. VII.14-23
127	Please add an analysis of the project's potential conflicts with recreational uses/enjoyment of the adjacent State Parks.	p. VII.14-24
	Transportation and Traffic	
128	The truck trip generation analysis is an impermissible plan-to-plan assessment. Rather than comparing truck trips under the proposed Plan with the current Plan, project trips should be compared with current conditions, which involve minimal timber harvest/trucking. The project would generate on the order of 8,000 truck trips/year, or about 53 trucks/day, which equates to about 106 one-way trips/day. Please assess the potential for impacts to roadways, including congestions/delays and wear, of these truck trips.	p. VII.15-3

129	The traffic chapter fails to include any cumulative traffic impacts analysis. Chapter VIII, Cumulative Impacts also fails to provide any quantitative assessment of cumulative traffic impacts. Please add this.	p. VII.15-10
	Cumulative Effects	
130	Cumulative impacts assessment is split up between this chapter and some, but not all, of chapter VII. This scattering of information makes identification of the cumulative impacts difficult and confusing. For document readability, the EIR should be edited so that the cumulative impacts assessment is in one chapter or the other.	Ch VIII, Cumulative, general
131	Tables VIII.9 and VIII.10 clearly show that detailed information is available regarding the proposed timber management (harvesting) activities under the Plan over the next 10 years. Because this information is known, the impacts of these specific harvest on specific habitats, species, fisheries, water quality, noise receptors, roadways, and land use conflicts, should be disclosed in this EIR. These THP's should be overlain on sensitive resources maps to determine which, if any, sensitive resources may be affected in the next ten years. Mitigation measures should be included in this document that address the major impacts of these known THP's.	Ch VIII, Cumulative, general
132	As described in the Higgins letter, CDF does not use timber harvest data to qualify cumulative impacts, but rather relies on an unsupported assumption that all of those impacts are fully mitigated. Because of the past heavy cutting on the Forest, even moderate harvesting in the future would contribute to cumulatively significant impacts. The extent of cut on other lands and the previous intensive management on JDSF suggests that only thinning from below, full cable-suspension selective logging, and "light-touch" forestry over the next 20 years would limit cumulative impacts of timber harvesting to a less-than-significant level.	General
133	First paragraph concludes that the project "would result in beneficial temperatures over time". This is deceptive in that it fails to describe the 5-10-year impact of proposed THP's on stream temperatures. Because the proposed THP's are known, this analysis must be include in the EIR. Assessment of the 5-10 year harvesting impacts also is important because of the life cycles of the already threatened salmonid runs. Please add this assessment to the EIR.	p. VIII.45
134	First full paragraph claims that the project would reduce nutrient loadings compared with existing/past logging. Is this true compared with current minimal logging levels?	p. VIII-46
135	The discussion of large woody debris is not a cumulative impacts assessment. It is just a rehash of measures included in the Plan to reduce this impacts, followed by a vague statement that LWD would increase over time. Please revise so that the reader can discern the level of impact of the Plan plus past and current activities on LWD.	pp. VIII-46-50

	What is the level of impact from the known THP's over the next 10 years? How might this affect threatened or endangered fish species during that period?	
136	The discussion of sediment effects on water quality is not a cumulative impacts assessment. It is just a rehash of measures included in the Plan to reduce this impacts, followed by vague statements that background sediment production would not be increased, and that timber harvest activity sediment production "would be held to a minimum", and that "it is concluded that timber management under alternatives C2 through F will result in a decrease in the current level of adverse sediment cumulative impacts over time". Please revise so that the reader can discern the level of impact of the Plan plus past and current activities on sediment/water quality. What is the level of impact from the known THP's over the next 10 years? Will cumulative sediment production meet TMDL's? How might this affect threatened or endangered fish species during that period?	pp. VIII-50-60
137	The Hazardous Materials discussion contains no actual analysis and instead refers back to the Section VII.8. text, which includes no actual analysis of the impacts of herbicides/pesticides, just legal argument as to why no such analysis is required. The Cumulative Impacts discussion then discusses how forestry use of herbicides/pesticides is a small percentage of county-wide use of those products. This approach to cumulative impact assessment is entirely counter to the basic concept of cumulative impacts, which is that many small contributors to an impact may result in an ultimately significant impact– instead of saying that the project contribution is small, therefore the impact is not significant, the assessment should calculate what the impact of the project plus other existing and planned herbicide uses are.	pp. VIII-60, 61
		pp. VIII-85-89
	Other CEQA Analyses	
138	Unavoidable Impacts: Please revise this section in light of the above comments.	p. IX-1

RICHARD GRASSETTI QUALIFICATIONS

Richard Grassetti

PRINCIPAL

Expertise

- CEQA/NEPA Environmental Assessment
- Project Management
- Geologic and Hydrologic Analysis

Principal Professiona l Responsibilities

Mr. Grassetti is an environmental planner with over 19 years of experience in environmental impact analysis, hydrologic and geologic assessment, project management, and regulatory compliance. He is a recognized expert on California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) processes, and has served as an expert witness on CEQA and planning issues. Mr. Grassetti regularly conducts peer review and QC/QA for all types of environmental impact analyses, and works frequently with public agencies, citizens groups, and applicants. He has managed the preparation of over 50 CEQA and NEPA documents, as well as numerous local agency planning and permitting documents. Mr. Grassetti has prepared over 200 hydrologic, geologic, and other technical analyses for CEQA and NEPA documents. He has analyzed the environmental impacts of a wide range of projects including residential developments, waste management projects, mixed-use developments, infrastructure improvements, energy development, military base reuse projects, and recreational facilities throughout the western U.S. In addition to his consulting practice, Mr. Grassetti is an adjunct professor at California State University, Hayward, where he teaches courses on environmental impact assessment, among others.

Professional Services

- Management and preparation of all types of environmental impact assessment and documentation for public agencies, applicants, citizens groups, and attorneys
- Peer review of environmental documents for technical adequacy and regulatory compliance
- Expert witness services
- Assisting clients in CEQA and NEPA process compliance

- Preparation of hydrologic and geologic analyses for EIRs and EISs
- Preparation of project feasibility, opportunities, and constraints analyses, and mitigation monitoring and reporting plans

Education

University of Oregon, Eugene, Department of Geography, M.A., Geography (Emphasis on Fluvial Geomorphology and Water Resources Planning), 1981.

University of California, Berkeley, Department of Geography, B.A., Physical Geography, 1978.

Professional Experience

1992-Present	Principal, GECo Environmental Consulting, Berkeley, CA
1994-Present	Adjunct Professor, Department of Geography and Environmental Studies, California State University, Hayward, CA
1988-1992	Environmental Group Co-Manager/ Senior Project Manager, LSA Associates, Inc. Richmond, CA
1987-1988	Independent Environmental Consultant, Berkeley, CA
1986-1987	Environmental/Urban Planner, City of Richmond, CA
1982-1986	Senior Technical Associate - Hydrology and Geology - Environmental Science Associates, Inc. San Francisco, CA
1979-1981	Graduate Teaching Fellow, Department of Geography, University of Oregon, Eugene, OR
1978	Intern, California Division of Mines and Geology, San Francisco, CA

Professional Affiliations and

Member and Past Chapter Director, Association of Environmental Professionals, San Francisco Bay Chapter

Certifications

Member, International Association for Impact Assessment

Publications and Presentations

Grassetti, R. *Round Up The Usual Suspects: Common Deficiencies in US and California Environmental Impact assessments.* Paper Presented at International Association for Impact Assessment Conference, Vancouver, Canada. May 2004.

Grassetti, R. *Understanding Environmental Impact Assessment – A Layperson's Guide to Environmental Impact Documents and Processes.* (in press).

Grassetti, R. *Developing a Citizens Handbook for Impact Assessment.* Paper Presented at International Association for Impact Assessment Conference, Marrakech, Morocco. June 2003

Grassetti, R. *CEQA and Sustainability.* Paper Presented at Association of Environmental Professionals Conference, Palm Springs, California. April 2002.

Grassetti, R. and M. Kent. *Certifying Green Development, an Incentive-Based Application of Environmental Impact Assessment*. Paper Presented at International Association for Impact Assessment Conference, Cartagena, Colombia. May 2001

Grassetti, Richard. *Report from the Headwaters: Promises and Failures of Strategic Environmental Assessment in Preserving California's Ancient Redwoods.* Paper Presented at International Association for Impact Assessment Conference, Glasgow, Scotland. June 1999.

Grassetti, R. A., N. Dennis, and R. Odland. *An Analytical Framework for Sustainable Development in EIA in the USA.* Paper Presented at International Association for Impact Assessment Conference, Christchurch, New Zealand. April 1998.

Grassetti, R. A. *Ethics, Public Policy, and the Environmental Professional.* Presentation at the Association of Environmental Professionals Annual Conference, San Diego. May 1992.

Grassetti, R. A. *Regulation and Development of Urban Area Wetlands in the United States: The San Francisco Bay Area Case Study*. Water Quality Bulletin, United Nations/World Health Organization Collaborating Centre on Surface and Ground Water Quality. April 1989.

Grassetti, R. A. *Cumulative Impacts Analysis, An Overview*. Journal of Pesticide Reform. Fall 1986.

1986, 1987. Guest Lecturer, Environmental Studies Program, University of California, Berkeley.

REPRESENTATIVE PROJECT EXPERIENCE

A. PREPARATION OF CEQA/NEPA TECHNICAL ANALYSES/DOCUMENTS

Baxter Creek Restoration Project CEQA Consulting. Mr. Grassetti assisted City of El Cerrito staff in the preparation of an Initial Study for the proposed Baxter Creek Restoration Project. Client: City of El Cerrito.

Fallon Villages CEQA Consulting. Mr. Grassetti prepared draft EIR sections end provided CEQA guidance for an 1100-acre planned development in Dublin. Major issues included land use, traffic, traffic, and biological resources. Client: Braddock and Logan Services.

Pelandale-McHenry Specific Plan. Mr. Grassetti prepared the Specific Plan for an 80-acre residential/commercial development in Modesto. Major issues included land use, traffic, and provision of adequate infrastructure. Client: Meritage Homes.

Monte Cresta Roadway Extension Initial Study. Mr. Grassetti prepared an Initial Study/Negative declaration for a roadway extension in San Juan Hills area of the City of Belmont. Major issues included slope stability and growth inducement. Client: City of Belmont.

Bethel Island Water Supply Project. Mr. Grassetti prepared and Initial Study for a proposed new water supply system for the community of Bethel Island in Contra Costa County. Major issues included growth inducement, archaeological resources, and biological resources. Client: Bethel Island Municipal Improvement District.

Invasive Spartina Control Project EIR/EIS and Addendum. Mr. Grassetti prepared the programmatic EIR/EIS on a plan to control invasive cordgrasses throughout the San Francisco Bay. Major issues included endangered species, visual resources, water quality, and human health and safety. Mr. Grassetti subsequently prepared an addendum for the addition of a new herbicide to the Spartina Control Program. Client: California State Coastal Commission.

Aptos Sanitary Sewer Replacement Project Initial Study. Mr. Grassetti prepared an Initial Study for the replacement of a storm-damaged sanitary sewer pipeline in Santa Cruz County. Major issues included cultural resources and biological resources. Client: Harris and Associates.

Eastern Dublin Specific Plan Supplemental EIR. Mr. Grassetti prepared a Supplemental EIR for an 1100-acre mixed-use project in the City of Dublin. Major issues included traffic, biological resources, public services, noise, and air quality. Clients: Shea Homes and Braddock and Logan Services.

Consolidated Forward Landfill Project EIR Update. Mr. Grassetti prepared an EIR for the expansion and consolidation of the Forward Landfill and the Austin Road Landfill

near Stockton, CA. Major issues include toxics, water quality, traffic, biological resources, and air quality. Client: San Joaquin County Community Development Department.

Austin Road Landfill Expansion Project EIR Update. Mr. Grassetti prepared an Initial Study and Supplemental EIR updating a 1994 EIR for the expansion of the Austin Road Landfill near Stockton, CA. Major issues include water quality, traffic, biological resources, and air quality. Client: San Joaquin County Community Development Department.

Central Contra Costa Household Hazardous Waste Facility Studies: Mr. Grassetti assisted Central Contra Costa Sanitary District staff in the preparation of a Planning Study and subsequent CEQA Initial Study on feasibility, siting, and environmental issues associated with the development of a Household Hazardous Waste collection program and facility in Central Contra Costa County. Client: Central Contra Costa Sanitary District.

Southwest Richmond Flood Control Project IS. Mr. Grassetti prepared the Initial Study and Mitigated Negative Declaration for a proposed flood control project in the City of Richmond. Client: City of Richmond.

Wickland Oil Martinez Tank Farm Expansion Project EIR Management. Mr. Grassetti served as an extension of City of Martinez Planning Department staff to manage all aspects of the preparation of the CEQA review for a 2,000,000 barrel expansion at Wickland's Martinez oil storage terminal. We prepared the NOP, RFP, assisted in consultant selection, and managed the consultant preparing the EIR on this project. Client: City of Martinez.

Wayside Road Sewer Expansion Initial Study. Mr. Grassetti prepared an Initial Study and Mitigated Negative Declaration for a proposed new sewer system in the Wayside Road area of Portola Valley. Client: West Bay Sanitary District

Los Trancos Woods Sewer Expansion Initial Study. Mr. Grassetti prepared an Initial Study and Mitigated Negative Declaration for a proposed new sewer system in the Los Trancos Woods area of Portola Valley. Client: West Bay Sanitary District

Arastradero Road Sewer Expansion Initial Study. Mr. Grassetti prepared an Initial Study and Mitigated Negative Declaration for a proposed new sewer system in the Arastradero Road area of Portola Valley. Client: West Bay Sanitary District

Lower Orinda Pumping Station Initial Study/Negative Declaration. Mr. Grassetti prepared an Initial Study/Negative Declaration for renovating or relocating a wastewater pumping plant in Orinda, CA. Client: Central Contra Costa Sanitary District.

Shell Martinez Breakout Tanks Project Initial Study. Mr. Grassetti prepared an Initial Study for two proposed new waste water storage tanks at Shell's Martinez Manufacturing

Complex. Major issues included air quality, odors, and visual impacts. Client: City of Martinez.

Shell Martinez Biotreater Facility Initial Study. Mr. Grassetti prepared the Initial Study/Negative Declaration for a proposed new biotreater facility for Shell's Martinez Manufacturing Complex waste water treatment plant. Major issues included water quality, wetlands, growth-inducement, and cumulative impacts. Client: City of Martinez.

Vallejo Solar Power Plant Initial Study. Mr. Grassetti prepared a CEQA Initial Study/Negative declaration for a proposed photovoltaic array intended to power a water pumping plant in the City of Vallejo. Major issues included land use compatibility and visual quality. Client: City of Vallejo.

Ranch on Silver Creek CEQA Consulting. Mr. Grassetti prepared the Mitigation Monitoring and Reporting Program and other CEQA compliance tasks for a large residential/golf course project in San Jose. Client: Sycamore Associates.

Morgan Hill Ranch Initial Study Analyses. Mr. Grassetti prepared the Hydrology, Geology, and Hazardous Materials analyses for the Morgan Hill Ranch Mixed Use Project Initial Study. Client: Wagstaff and Associates.

East Bay MUD Water Conservation Study. Mr. Grassetti conducted the field portion of a major water conservation survey for the East Bay MUD service area. Client: Water Resource Engineering.

East Bay MUD Pipeline CEQA Analyses. Mr. Grassetti prepared technical analyses for two EIRs regarding proposed new East Bay MUD pipeline in Sacramento, San Joaquin, and Calaveras Counties. Client: Uribe & Associates.

Sunnyvale Landfill Power Plant CEQA Initial Study. Mr. Grassetti prepared an Initial Study for a proposed landfill gas-fueled power plant at the Sunnyvale Landfill in Santa Clara County. Recommendations for mitigation and further environmental review were prepared. Client: 3E Engineering.

Fremont Redevelopment Project Hydrologic Analysis. Mr. Grassetti prepared the hydrology section for an environmental impact report for four redevelopment projects in Fremont. Client: Wagstaff and Associates.

Ostrom Road Landfill Hydrologic Analysis. Mr. Grassetti prepared the hydrology section for an environmental impact report on the proposed vertical expansion of an existing Class II landfill in Yuba County. Client: ESA Associates.

Pinole Portion of the Bay Trail Hydrologic, Geologic, and CEQA QA/QC Analyses. Mr. Grassetti prepared the hydrologic and geologic analyses for a CEQA Initial Study on

a half-mile segment of the Bay Trail in the City of Pinole. Mr. Grassetti also provided CEQA process consulting services on this project. Client: Placemakers.

Kennedy Park Master Plan Hydrologic and CEQA QA/QC Analyses. Mr. Grassetti prepared the hydrologic analyses for an environmental impact report on a proposed park master plan in the City of Napa. Client: Placemakers.

U.S. Navy Bay Area Base Closure and Re-Use Environmental Studies. Mr. Grassetti assisted in the NEPA/CEQA review process for US Navy Base Closures and Re-Use for numerous bases throughout the San Francisco Bay Area. Work tasks include CEQA compliance overview, internal peer review, quality control reviews, and preparation of technical analyses.

B. PEER REVIEW CEQA/NEPA COMPLIANCE, AND EXPERT WITNESS CONSULTING

Los Angeles Airport Arrival Enhancement Project Environmental Assessment NEPA Peer Review. Mr. Grassetti prepared a peer review and expert declarations regarding the adequacy of the NEPA Environmental Assessment for rerouting of flight paths for aircraft arriving at Los Angeles International Airport. Major issues included adequacy of assessment of noise effects on traditional cultural practices of the Morongo Band of Mission Indians. Client: Law Offices of Alexander & Karshmer.

Metropolitan Oakland International Airport Development Plan Environmental Impact Report CEQA Review. Mr. Grassetti performed a critical review and assisted in the preparation of comments and ultimately successful litigation regarding the proposed expansion of Metropolitan Oakland International Airport. Major issues included noise, cumulative impacts, and alternatives selection/analyses. Client: Law Office of John Shordike.

Oakland Creek Protection Ordinance Litigation. Mr. Grassetti is providing ongoing expert CEQA and Creek Protection Ordinance consulting for litigation regarding failure to enforce the City of Oakland's Creek Protection Ordinance. Client: North Hills Phoenix Association.

San Francisco International Airport Environmental Liaison Office Consulting. Mr. Grassetti conducted various internal peer review tasks associated with environmental studies being prepared for SFIA's proposed runway expansion. Client: LSA Associates, Inc.

El Cerrito Lumber Yard CEQA Peer Review. Mr. Grassetti conducted an internal peer review for an Initial Study on a controversial parcel in the City of El Cerrito. Client: City of El Cerrito.

Sausalito Marina CEQA Critique. Mr. Grassetti prepared a peer review and critique of an EIR for a proposed new marina in Sausalito. Client: Confidential

Sausalito Police and Fire Station CEQA Critique. Mr. Grassetti prepared a peer review and critique of an EIR for a proposed new public safety building in Sausalito. Client: Confidential

Napa Verison Tower CEQA Critique. Mr. Grassetti conducted a peer review and critique for a cellular telephone tower in the City of Napa. Client: Confidential.

West Bay Sanitary District CEQA Assistance. Mr. Grassetti presented a short-course on successful CEQA compliance for staff of the West Bay Sanitary District in Menlo Park, CA. Client: West Bay Sanitary District.

Morongo Mining Projects Environmental Reviews. Mr. Grassetti provided CEQA, NEPA, and technical consulting to the Morongo Band of Mission Indians regarding two aggregate mines adjacent to their reservation in Riverside County, CA. Client: Law Office of Alexander & Karshmer.

Napa Skateboard Park Peer Review. Mr. Grassetti conducted a peer review and critique for a neighborhood association on a proposed skateboard park in the City of Napa. Client: Confidential.

Headwaters Forest Project EIR/EIS Review. Mr. Grassetti conducted an expert review of the CEQA and NEPA adequacy and technical validity of EIR/EIS on the Headwaters Forest Habitat Conservation Plan, Sustained Yield Plan, and land purchase. Clients: Environmental Law Foundation; Environmental Protection and Information Center, and Sierra Club.

Global Photon Fiber-Optic Cable EIR Peer Review. Mr. Grassetti assisted in a third-party peer review of an EIR on a proposed offshore fiber-optics cable. Client: Tetra Tech, Inc., and California State Lands Commission.

Coachella Valley Water Management Plan CEQA Peer Review. Mr. Grassetti assisted a consortium of Coachella Valley Indian Tribes in reviewing CEQA documents on the Coachella Valley Water Management Plan. Client: Consortium of Coachella Valley Tribes.

Salton Sea Enhanced Evaporation System Initial Study/Environmental Assessment Peer Review. Mr. Grassetti reviewed the draft IS/EA for a spray project to evaporate excess return flow water from the Salton Sea. Client: Morongo Band of Mission Indians.

Santa Rosa Home Depot CEQA Peer Review: Mr. Grassetti conducted a peer review and provided expert testimony regarding the adequacy of the Environmental Impact

Report and associated technical studies for a proposed Home Depot shopping center in Santa Rosa. Client: Redwood Empire Merchants Association.

Mitsubishi Mine CEQA Litigation Review. Mr. Grassetti conducted a review of legal briefs regarding the adequacy of CEQA analyses for a proposed mine expansion in San Bernardino County. Client: Law Offices of Thomas Mauriello.

Alamo Gate Permitting Review. Mr. Grassetti performed a critical review and prepared expert testimony and correspondence regarding the adequacy of CEQA and land use permitting and studies for a proposed gate on Las Trampas Road which would preclude vehicular access to a regional park staging area. Client: Las Trampas Trails Advocates.

Cambria Condominiums Environmental and Planning Review. Mr. Grassetti prepared expert reviews of the potential environmental effects and Local Coastal Plan compliance of a proposed condominium development in Cambria, San Luis Obispo County. Client: Law Office of Vern Kalshan.

Mariposa County Planning Policy Reviews. Mr. Grassetti conducted a review of proposed alterations to the Mariposa County General Plan for CEQA compliance. Client: Dr. Barton Brown.

Gregory Canyon Landfill Environmental Processing Review. Mr. Grassetti was retained to review the environmental permitting and CEQA analyses for the proposed Gregory Canyon Landfill in northern San Diego County. Procedural issues include landfill siting requirements and CEQA process compliance. Technical issues include cultural resources, hydrology, endangered species, traffic, and health and safety. Client: Law Offices of Alexander & Karshmer and Pala Band of Mission Indians.

Otay Ranch Development CEQA Review. Mr. Grassetti prepared an expert review of the Environmental Impact Report for the 23,000-acre Otay Ranch project in San Diego County in connection with ongoing litigation. Major issues were CEQA compliance, compliance with the California planning process, biological impacts, cumulative impacts, and alternatives. Client: Law Offices of Charles Stevens Crandall.

Punta Estrella Chip Mill Environmental Report Compliance Review. Mr. Grassetti prepared a review of a proponents environmental report for a proposed wood chip mill in Costa Rica to determine compliance of documentation with U.S. environmental standards and policies. Major compliance issues included US Clean Air Act and Clean Water Act standards, NEPA standards, and adequacy of overall impacts analysis. Client: Scientific Certification Systems.

Carroll Canyon Burn Facility CEQA Compliance Review. Mr. Grassetti prepared a CEQA process review for a proposed Negative Declaration on a planned contaminated-earth burning facility in the City of San Diego. Client: Law Offices of William Mackersie.

Monterey Bay Marine Lab CEQA Compliance Review: Mr. Grassetti assisted attorneys in review of a CEQA Negative Declaration, NEPA Environmental Assessment, and associated documents for the relocation of the Monterey Bay Marine Laboratory. Issues included the effectiveness of mitigation to cultural and biological resources, the appropriateness of the Negative Declaration versus an EIR, and other CEQA issues. Client: Law Offices of Alexander & Karshmer.

Monterey Ground Water Ordinances CEQA Compliance Review. Mr. Grassetti provided expert CEQA consulting services to attorneys regarding the appropriateness of Monterey County's CEQA processing of proposed ground water ordinances. Client: Salinas Valley Water Coalition.

Jamestown Whistlestop CEQA Adequacy Review. Mr. Grassetti performed an expert review and assisted in successful litigation regarding an Initial Study for a proposed mini mall in Jamestown, Tuolumne County. Client: Law Offices of Thomas Mauriello.

Sunrise Hills Environmental Impact Report Peer Review. Mr. Grassetti performed a critical review of the applicability of the EIR for a proposed 200-unit residential development in Sonora, Tuolumne County. Major issues include grading, erosion, water quality, biological impacts, and visual quality. Client: Sylva Corporation.

Sonora Crossroads Shopping Center Environmental Impact Report Review. Mr. Grassetti performed a review of an EIR for a major new shopping center in Sonora, Tuolumne County. Major issues included geologic and hydrologic impacts. Findings were presented to the Sonora City Council, and pre-litigation assistance was provided. Client: Citizens for Well Planned Development.

Blue Oaks Residential Development CEQA Studies Review and Critique. Mr. Grassetti performed several tasks related to a proposed residential development in western Tuolumne County. Tasks included review of County CEQA procedure, review of Initial Study, review of Draft EIR, and coordination with attorneys. Client: Western Tuolumne County Citizens Action Group.

Yosemite Junction Project CEQA Review. Mr. Grassetti prepared a review and critique of a proposed Negative Declaration for a 40-unit outlet mall in Tuolumne County, California. The Negative Declaration was subsequently denied and the project application rescinded. Client: Sylva Corporation.

Sonora Mining Corporation CEQA Review/Expert Witness Services. Mr. Grassetti conducted a review and critique of CEQA compliance for the proposed expansion of Sonora Mining Corporation's Jamestown Gold Mine in Tuolumne County, California. Client: Law Office of Alexander Henson.

Save Our Forests and Rangelands Expert Review and Witness Services. Mr. Grassetti provided expert review, consulting services, and expert witness testimony on CEQA issues for a successful legal challenge to an EIR and Area Plan for 200,000 acres in the

Central Mountain Sub-region of San Diego County. Client: Law Offices of Milberg, Weiss, Bershad, Specthrie, & Lerach.

San Diego County Land Use Planning, Consulting and Expert Witness Services. Mr. Grassetti provided an expert declaration and several comment letters and background analyses on the proposed amendments the San Diego County General Plan regarding agricultural preserve and water management policies. Clients: Law Offices of Charles Stevens Crandall; Save Our Forests and Rangelands.

Letter P-177

Response to Cover Letter Comment - The commenter's general conclusion in the cover letter, that the DEIR is inadequate and requires re-writing and recirculation, is supported by the more specific comments that follow.

The Board will respond to each of those specific comments and in so doing respond to this general comment as well. This document has been many years in the making and includes the input of professionals, relies upon scientific studies and peer reviewed research. The document exceeds the minimum EIR requirements described in CCR §§15120 – 15131 and the Board has complied with all of CEQA's procedural requirements (CCR §§15080 – 15089). None of the conditions requiring the recirculation of a DEIR as described in CCR §15088.5 exist.

Response to General Comment #1 - The commenter states that the DEIR is "unreadable" and "disorganized", is a "data dump", and contains "irrelevant" and "extraneous" information.

Given the complexity of issues raised in earlier comment and scoping efforts and the level of scrutiny that actions at JDSF draw the Board believes their disclosure responsibilities under CEQA required them to clearly lay before the public and agencies all of the information available to them in reaching a decision to either approve or disapprove the DFMP. This required an interpretation of the hundreds of studies and research articles addressing coastal forest management, descriptions of the dozens of listed species that would potentially be affected, the status of watersheds, the forests and other resources, a wealth of historical information about the forest, an explanation of the environmental processes involved, the numerous Board policies and Forest Practice Rules that guide State Forest management, and numerous other state and federal environmental laws that the Board must consider in their decision. The Board believes that the public as well as other agencies expected a document that reflected a high level of disclosure, analysis and expertise; much more than could be accomplished in a 150 to 300 page document recommended by the commenter.

Response to General Comment #2-The commenter states that the document "mixes setting and impact information".

While no example of this is provided, the Board believes that comment may be refer to the tiering, or nesting, of the Environmental Setting that was done in this document to enhance clarity and relevance. This approach is described in Section V-1 (page V-1) which states that this section provides an "overview" of the environmental setting and that more detailed settings are described in the resource specific sections (Section VII) and in the Cumulative Effects Section (Section VIII). While this approach leads to some redundancy and related information being found in more than one location, its intent was to better focus the reader on the specific resource under discussion.

Response to General Comment # 3 - The commenter also states that the "cumulative impacts sections are placed in different section (sic) of the EIR".

As with the Environmental Setting described above, the cumulative impacts section was nested within the document such that the reader could focus on the cumulative impacts associated with a single resource (Section VII) and could focus on the interactions between the cumulative effects of multiple resources in another section (Section VIII). This was done intentionally to enhance clarity and readability and not to cause confusion.

Response to General Comment #4 - The commenter states that the document "repeatedly fails to address scoping and 2002 EIR comments".

The Board has taken into consideration the comments that were received by the Department and the Board during earlier scoping efforts in the crafting of this EIR. For example, the DEIR considers two new alternatives as a direct result of public input. Alternative F looks at potential new management direction for JDSF as a result of SB 1648 (Chesbro) and input from the Sierra Club during the Board

scoping process. And the Board's Alternative C2 includes additional mitigations and management constraints on the DFMP as a result of public input on the 2002 EIR prepared by the Department. Following the close of public comment on the 2005 DEIR, the Board developed the new Alternative G in large part in response to the comments received on the DEIR and the alternatives contained therein.

Response to General Comment #5 - The commenter believes that the technical, scientific and regulatory "jargon" used in the DEIR violates CCR §15140 and its requirement that EIRs be written in "plain language".

The Board has strived to create a document that is clear to the public and that contains a minimum of unnecessary discussion. However, this document does address many highly technical subjects and as such relies on many highly specific terms. While the authors could have eliminated more of the information to better achieve the "plain language" goal, they would have done so with a consequent loss in precision and an increase in ambiguity. It was the Board's intention to reach a balance. Knowing that the interested public was generally familiar with many of the complex issues involved the Board felt it reasonable to not oversimplify. Where technical usage was unavoidable the extensive list of Acronyms and Abbreviations and Glossary of Terms found in the Appendices was available.

Response to General Comment #6 - The commenter believes that the DEIR's page length violates CCR §15141.

The "*Discussion*" following this CEQA Guidelines section clearly identifies these page limits as being "recommended", not absolute. Given the history of this project – the public involvement, past litigation, controversy, etc. – the Board believes that the public and other agencies expected a level of disclosure, analysis and discussion which resulted in a document larger than what is recommended in the Guidelines.

Response to General Comment #7 - The commenter states that "the document provides remarkably little actual information on the project area, but rather focuses on describing environmental processes… and generic background data. Because the information provided is not synthesized, integrated, or comparatively related it becomes nearly useless to the lay-reader".

The Board agrees that the document relies upon significant amounts of historic and research data as well as describes the numerous environmental processes that effect management decision and outcomes; however, the Board does not believe that this has supplanted meaningful analysis. For example, the Wildlife and Wildlife Habitat Section (VII-6.6) at 240 pages, devotes 10 pages to an analysis of the proposed project's impacts and 110 pages to a quantitative comparison of the alternatives. Without the preceding 100 plus pages of background materials on the status of the listed species and the condition of the habitat, both on a local and regional basis, the reader would be without a perspective for understanding the analytical results. The Board believes that the public was better served through their inclusion in the document.

Response to General Comment #8 - The commenter states that the document fails "to relate setting, impact and mitigation discussions" and that the "minimal impacts "analyses" are often just unsupported conclusions".

Without specific examples the Board is unable to address this comment other than to say that it recognizes the need to create those linkages and believes it has done so in this document.

Response to General Comment #9 - The commenter states that the document "contains a number of factual errors and contradictions".

The Board thanks the commenter and other reviewers cited for drawing attention to these items. Each will be addressed, and if found necessary, corrected in the final EIR.

INADEQUATE PROJECT AND ALTERNATIVES DESCRIPTIONS

Response to Comment 10
The purpose of the DFMP is explained in detail on page 1 of the Plan and summarized on page III-1 of the DEIR. The DFMP's goals and objectives are described in detail in Appendix II of the Plan and are reiterated in DEIR Sections I.4 and III.2. A described in the Plan the purposes are: 1). Guide the integrated use and protection of the Forest's resources; 2). Meet requirements of legislation and Board policy, and; 3). Address local regional and statewide concerns. These purposes are guided by state legislation, Board Policy and forest management planning.

Response to Comment 11
The DFMP is not a logging plan. As explained above the DFMP has multiple purposes, goals and objectives. Timber management and demonstration, as implemented through logging, is one aspect of the DFMP. As described in Chapter 4 of the DFMP JDSF has an extensive research program. Some research requires logging; however, there are other projects that do not involve logging such as investigating the forest's fire history and researching the movement of LWD in watercourses. Conversely, timber harvesting will take place that does not have a direct research link. Table 5 of the DFMP describes the desired future forest structure conditions. The goal for management on JDSF is to move the Forest toward these conditions. It is not feasible to create these conditions through research studies alone. Many timber harvesting operations will therefore not have a direct research link, but rather will be implemented to create the variety of forest structure conditions necessary to remain relevant as a managed research forest. Where mitigation is required, either in the DFMP or DEIR, monitoring is also required to ensure compliance and effectiveness. CEQA requires the adoption of a Mitigation Monitoring and Report Plan (PRC §21081.6) as described on page IX-2 of the DEIR that covers all projects implemented under the Plan, not just monitoring associated with logging.

Response to Comment 12
The apparent inconsistency may arise due to misconception:

1) The commenter may believe that a number of forest harvest types which are presented as different silvicultural systems (presumably those that create openings in a stand) are all essentially clearcutting. Unlike clearcutting, the different silvicultural systems are distinguished by a variety of different amounts and spatial configurations of the original stand after harvest. They have very different effects on the environment, including forest structure, micro-climate and wildlife habitat.

2) The commenter may believe that all of the acres assigned to even-aged management will be harvested during the term of the plan. These acres do not represent stands that are scheduled for harvest in the short term. They represent the sum total of all acres, of varying stages of development, that are being cultivated using a particular silvicultural system. In forestry, where a crop of trees can take a century or longer to grow to where they are ready for harvest, only a small minority of the acreage assigned to an even-aged silvicultural system will be harvested in any given year. Many of these stands are young and as such are decades away from being harvested.

The Management Plan states that up to 26 percent of JDSF will be managed under even-aged silvicultural systems (Table 5). Chapter 3 states that a maximum of about one percent of JDSF may be clearcut harvested in any one decade. These statements are not inconsistent.

Response to Comment 13
The purpose of research on clearcutting is the same as that of all other silvicultural methods, namely to increase the knowledge of this silvicultural method, its application, and the potential environmental effects.

Response to Comment 14
The area of the Forest dedicated to clearcutting is in fact miniscule compared to the other silvicultural methods. The area dedicated to clearcutting, at most 500 acres per decade, is much less than its importance as one of the most prevalent forest management techniques within the redwood region.

Response to Comment 15
Logging can be tied to a specific research project such as the Caspar Creek study, which investigates effects of timber harvest on streamflow and soil. Logging can also be done to create and maintain managed forest conditions that are necessary to support research. Given the amount of acres that have to be treated each year to achieve the forest structure goals in Table 7 in the management plan, research projects alone cannot be the only vehicle for timber harvest on JDSF. In any given year, a majority of the silvicultural treatments will probably not be directly associated with a specific research project. Rather, they will be aimed at creating the diversity of forest structure conditions necessary to meet the Forest's mandate as a managed research forest as opposed to an ecological reserve.

Response to Comment 16
Despite the fact that there are no shortages of clearcut study sites to choose from outside JDSF, commercial forests typically do not have the funding, institutional mechanisms, infrastructure, and staff required to plan and implement research projects through to completion, nor the desire to share the results with competitors and the general public. Shifting management directions often preclude long-term studies on private forest lands. Forest research requires long time commitments and stability in management in order to ensure that the investment in the research can bear fruit. JDSF remains one of the few forested areas within the redwood region and the State where this research is possible[1].

Response to Comment 17
The research on JDSF is focused on sustainable forestry practices, including those with potential to improve long-term forest management and protection.

Response to Comment 18
The plan appropriately includes a strong restoration and mitigation emphasis, as well as a proposal for future management of forest stands as dictated by statute and Board policy. JDSF is one of a few well stocked large tracts of redwood forest in Mendocino county that is not in a depleted condition. Past logging practices on JDSF created the current forest conditions, and as such they are not problematic. The Department acquired the forest in a largely depleted condition in the 1940s. JDSF did not grow into its current forest condition despite the Department's past management; management created the current condition.

Response to Comment 19
Many of the management or mitigation measures adopted by the Board have never been specified in previous management plans for JDSF, having been newly established for the ADFFMP or developed in recent years, and shown to be effective. Though often related to well-known and proven strategies that have been applied in the past within the Forest and elsewhere, most of the measures have been specifically proposed for this management plan. The Board believes that the elements of the plan related to future timber harvest are well organized and plainly presented.

[1] O'Hara, Kevin. Professor of Silviculture, University of California, Berkeley. Letter to the Board of Forestry and Fire Protection, dated March 23, 2007.

See responses to comments below and responses to the cited comment letters from Peter Baye (mailed DEIR comment letter P-214), James Strittholt (e-mailed DEIR comment letter E-25), and Patrick Higgins (e-mailed DEIR comment letter E-26). In addition to the significant project information incorporated into the DEIR, the project is also further described in the DFMP. The final proposed form of the project is detailed in the RDEIR and the ADFFMP. The proposed project comprises significantly more than just timber harvesting. As proposed in Alternative C1, the project also includes fisheries habitat improvement, late seral forest restoration, a research and demonstration program, a recreation program, a monitoring and adaptive management program, and a miscellaneous forests products sale program, among other elements. The proposed project in the ADFFMP also would provide a substantial increase in the amount of forest to be restored to late seral conditions and to be managed to develop older forest conditions, including a 6,800-acre older forest structure zone.

Mitigation strategies obscure nothing; they make clear where potential significant adverse environmental pacts are identified and the manner in which these impacts are proposed to be lessened to a less-than-significant level.

Response to Comment 20
The assessment area is the same for all alternatives. For watershed resources, for example, the assessment area includes the entire Noyo and Big River watershed area, including the short-run coastal watersheds between the two larger river systems. Additional information that extends beyond the assessment area, is provided as the environmental setting.

Response to Comment 21
The commenter is correct that descriptions of the alternatives can be found in various locations within the DEIR; the Executive Summary, Section VI, and Table VI.1. This was done to provide the reader with various levels of detail that they might find appropriate for their level of interest. The most detailed description of each alternative is provided in Table VI.1 where the comparison is made between the alternatives, management approaches and the various resource elements.

The Board believes that a sufficient level of detail has been provided about each alternative considering that the DEIR is programmatic, analyzing the future activities that may occur under the DFMP over the next five to ten years. By their very nature, programmatic EIRs and management plans are “course” and oftentimes provide only general policy and management direction. This Plan and DEIR provide much more. Additional specificity and detail will be provided once projects tiering to this Plan and DEIR are proposed.

INAPPROPRIATE BASELINE

Response to Comment 22
The temporary curtailment of timber operations at JDSF invalidates the environmental setting and baseline conditions relied upon by the Board in determining whether its adoption of the DFMP results in significant impacts. The environmental setting and baseline conditions are reflected in the status of the environment and the various resource elements; not whether or not operations are occurring. In determining the baseline condition it is irrelevant whether logging, gravel quarrying or sub-division development is occurring; it is the status of each resource element that determines the environmental setting. Where changes in operations occur (increased, decreased, or curtailed) that in some way affect a resource, the change will be reflected in the status of that resource. If the cessation of timber operations has resulted in changes to water quality then the determination as to whether the approval of the project results in impacts will be based upon a comparison with that new baseline condition; not whether the most recent timber operations occurred last week or five years in the past.

Over the years there have been many fluctuations in the level of harvest at JDSF; from no annual harvest (late 1940s and early 2000s), to a few million board feet per year, to over 40 million board feet in a few years. This variability is attributed to changing market conditions, forest staffing, interest in bidding on sales, as well as litigation. In addition, timber operations cease every winter. However,

the cessation of timber operations at JDSF, seasonally or longer, does not equate to "no management"; research projects carry on, campgrounds are utilized, crews maintain roads. The Board's baseline for approving the DFMP takes into consideration the effects of past logging as well as ongoing management activities as determined by the status of the individual resource elements.

Response to Comment 23
A 16 years old inventory is not outside of normal standards in forestry, where trees can take a century or longer to grow to maturity. The inventory used to support the management plan/EIR is current in the sense that it accurately captures the current resource conditions. It is approaching the end of its useful life span, but careful updates for growth and harvest have preserved its accuracy. Short-term updates of an inventory is an accepted industry practice. A new resources inventory was installed in 2005. In addition, the Continuous Forest Inventory (CFI) plot system was remeasured during 2005. The CFI was initiated in 1959, and has been periodically remeasured. This is one of the longest standing forest growth data sets within the redwood region. Both sets of 2005 measurements corroborate the inventory used to support this management plan/EIR. JDSF, by virtue of being a research forest, constantly collects and updates resource information data. If the EIR were to be continually revised to incorporate the latest resource inventory data, it would never be completed.

Response to Comment 24
This comment implies that a lack of inventory data at the planning watershed level represents a failure to meet the minimum obligations under CEQA and to provide a basis for informed decision making and public participation in the development of the Management Plan. The EIR is a programmatic document that provides sufficient information with which to perform an analysis of potential impacts associated with the management plan. Habitat types are clearly provided in spatial format. In addition, future projects will tier to the EIR. Environmental analysis will be performed for those projects. In the case of timber harvest plans, a more detailed inventory is generally performed for the project. The appropriate level of detail of inventory data for analysis depends on the objective of the analysis. The management plan/EIR is a forest wide planning effort, consequently the proper scale of data and analysis is the entire forest and adjacent ownerships.

Response to Comment 25
The level of detail ("grain") of the forest inventory exceeds standards in the industry. The data were aggregated to the level of detail commensurate with the objectives for this particular project.

Response to Comment 26
Without a more specific description of the perceived deficiencies, a meaningful response is not possible. Mr. Taylor's concerns have been addressed in detail in the responses to his DEIR comment letters P-184 and P-185. The Board believes the inventory used to support the management plan/EIR is fully adequate.

Response to Comment 27
The Board believes that forest stands are accurately identified and used in the analysis of impacts of the proposed project. Structural characteristics are a more reliable characteristic of habitat values than age. Silviculture on JDSF and elsewhere in recent years has gravitated away from clearcutting to create stands with a simple, well-defined age structure, toward more complex harvesting systems that create irregular stands with multiple age classes. In these irregular stands, the age construct can have questionable value. While it is always possible to calculate the average age of any forests and stands, the age parameter is often an unreliable diagnostic for the evaluation of old-growth habitat values.

A large portion of JDSF consists of uneven-aged stands. These stands typically arise from selection harvests, in which individual trees or small groups of trees are harvested at a time. Regeneration of young trees in these small canopy gaps create a stand that eventually consists of a variety of different size and age class cohorts. It would not be very meaningful to average the ages of old-growth trees with poles and saplings in such a stand to arrive at an average stand age.

Even-aged stands are subject to similar difficulties. Residual individual old-growth trees are spread throughout the Forest outside of old-growth groves, and intermingled with second growth stands. Residual mature second growth trees are routinely left after harvest entries to provide wildlife habitat as well as shade and shelter for the next generation of trees emerging in the understory. Substantial cohorts of younger trees often appear under a relatively open canopy of mature trees as a result of natural seedfall. In these and many other scenarios, a simple arithmetic average age would not be useful as a measure of habitat values. Alternative more complex age definitions can be used, but no agreed upon technical standard exists for how to measure age in irregular stands.

See also the response to comment 77.

Response to Comment 28
The DEIR and RDEIR relied upon the best available information for all of its analyses. "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters" (CCR §15204). An EIR "need not be exhaustive" in its review of impacts and should be focused on "what is reasonably feasible" (CCR §15151). Conducting new research or "normalizing" existing data sets is not reasonable or feasible given the broad geographic scope of the project and the low likelihood of severe impacts.

See also response to comment 62, below. See also response to Patrick Higgins letter of comment on the DEIR (e-mailed comment letter E-26), particularly the responses to comments 17 and 19. See also response to Peter Baye letter of comment on the DEIR (mailed comment letter P-214).

The Board recognizes that results from numerous research studies cited in the comprehensive RDEIR were from widely ranging time periods. Study results were reported that provided insight into how past practices impacted watershed related resources (since they shed light on how the proposed timber operations will potentially impact aquatic and terrestrial resources), and some of these studies are older than others. The best available information for these purposes was used. It is important to note that more information exists for JDSF and the JDSF assessment area than for most areas in the Coast Range of northwestern California. It is also important to recognize that just because a scientifically valid study is older, it does not mean that the study's results are invalid or unimportant. Several integrative analyses are provided in the DEIR to look at in-stream fisheries habitat and water quality issues together. See section VIII.7.1 and Model 1: GIS Evaluation of Cumulative Watershed Effects and Recovery Potential and Model 2: Fish and Game In-Stream Channel Surveys and Ecological Management Decision Support System.

The DEIR also utilizes considerable amounts of research on logging impacts to water quality and aquatic resources that been conducted on JDSF in the Caspar Creek watershed study: see DEIR sections VII.6.1 (Aquatic Resources), VII.7 (Geology and Soils), VII.10 (Hydrology and Water Quality), and section VIII (Cumulative Effects). This research does integrate the impacts on several resources over one time period. The Caspar Creek study has been ongoing since 1962 and is one of the most comprehensive, long-term watershed studies in the United States (Ziemer and Ryan 2000). Results from logging impacts on the North Fork of Caspar Creek are all from the same time period and provide an excellent example of how interdisciplinary assessment can successfully occur when a properly funded long-term watershed study is undertaken. The Board believes that the studies summarized in this section, and in particular the results from the Caspar Creek watershed study, provide a firm basis projecting the expected level of impacts from the proposed alternative in the RDEIR. Results from the Caspar Creek study have been reported on in over 150 scientific papers that are available on the internet (http://www.fs.fed.us/psw/topics/water/caspar/caspubs.shtml). These papers include study results on changes in peak flows, sediment yield, hillslope erosion, fisheries, and macroinvertebrate communities. New study results are posted as they are available, with entries for papers completed in 2007 available.

INADEQUATE IMPACT ASSESSMENTS

Response to Comment 29
The Board believes it has fully complied with CCR §15126.2(a), but without specific examples is unable to provide a more detailed response.

Response to Comment 30
The DEIR and DFMP have extensive discussion on fish and wildlife species, including specifically the NSO and coho salmon, in their respective sections of the document (Section VII.6). Without more specifics, the Board is unsure what the commenter finds lacking. The DEIR includes programmatic mitigation for the impacts identified with adopting the DFMP; however, there are no HCPs associated with this project as neither the Board nor the Department are seeking an incidental take permit (federal ESA section 10(a)) from a federal wildlife agency.

Response to Comment 31
There are benefits of long-term planning and cumulative effects analysis that come with developing a management plan and analyzing its implementation in a programmatic EIR. Both management plans and PEIRs allow a lead agency to consider the broad policy and long-term consequences of their actions. These are areas that are often overlooked by lead agencies that instead focus on the short-term through the routine review and approval of individual projects. It is the Board's opinion that this Plan and EIR appropriately focuses on where the forest will be in the mid-term as well as long-term as a result of the proposed management. The EIR provides an analyses of the impacts associated with that outcome and provides the necessary mitigation to address the known impacts. The site specific effects associated with individual projects are best addressed at the project level. DEIR Section II-6.2 (page II-10) and Table II-1 describe the CEQA compliance that is necessary for subsequent site specific projects that tier to this programmatic EIR.

Response to Comment 32
The commenter uses the term "studies", indicating large scale, possibly property-wide research intended to identify problems or develop solutions; however, in the context of this comment the Board interprets this to mean "surveys" that are routinely conducted prior to approval of individual projects. The Board is of the opinion that surveys designed to identify sensitive resources within a project area are appropriately "deferred" until the specific project has been defined and project planning and analysis has begun. Certain surveys are "time sensitive" and may only be conducted within a limited period of time prior to project approval and implementation (i.e., NSO surveys) while others are so extensive in scope (e.g., property-wide archaeological or botanical surveys) as to be infeasible without considerable resources. Where these surveys have not been completed, impacts would indeed be "speculative" and not something that could be addressed in a programmatic EIR or the DFMP. However, the Board has identified a number of potential impacts associated with approval of the DFMP and has developed measures to reduce those impacts programmatically (e.g., snag and LWD dependent species and Road Management Plan). Future timber harvesting plans and other potential projects will include a detailed analysis of potential impacts, tiered to the EIR.

The DFMP includes a short-term harvest schedule (DFMP page 56, and amended in RDEIR Table II.3) that lists proposed harvest units and identifies the general silvicultural treatments to be applied. While these proposed THPs are considered in a general way by the Board in developing this EIR they have not been reviewed at the level of detail that would occur under the THP process. These THPs are somewhat speculative, require the approval of other agencies (CAL FIRE, CDFG, RWQCB) and are subject to a detailed, project-specific planning, assessment, and review process. Additional information and surveys results collected at the time of THP development will be used in identifying site specific impacts and mitigation; a level of detail that is infeasible in this EIR, as well as speculative, due to the preliminary nature of project-specific information. In the event that these THPs are ultimately reviewed by the Department's forest practice program, they will be subject to the requirements found in the final management plan and programmatic mitigations identified in the final EIR, as well as project-specific mitigation proposed by the Forest staff or required during the project review process.

Response to Comment 33
The Board is somewhat uncertain as to the use of the word "academic" in the context of the comment, and assumes that the intended meaning is "merely theoretical; having no direct practical application," (Webster's New World Dictionary, Third College Edition). While appropriate theoretical underpinnings of science are relied on in the DEIR, the DEIR's analyses are anything but theoretical. They rely on large amounts of data specifically collected on JDSF, within the larger JDSF cumulative effects assessment area, or within the larger region. Tested, empirically derived models are used in many cases to analyze the data and predict outcomes (e.g., use of the California Wildlife Habitats Relationship System, the FRAGSTATS model, SEDMODL2, SHALSTAB). Results are practically applied to help determine the potential effects of implementing a range of proposed management alternatives on a real piece of forestland.

The comment does not include specific examples of where the DEIR is conclusory, where conclusions are not tied to or supported by facts or analyses, or where conclusions appear to be developed independent of analyses or conflict with the analyses.

"Worst case analytical review" is not a term found in the CEQA statute or guidelines. CEQA does not require lead agencies to consider the effects of extreme events or scenarios that are too speculative; nor does it require consideration of the consequences of illegal activities. The Board has considered the environmental impacts of project related activities that are above the minimum or baseline level. The ADFFMP was developed with the intent of protecting the various forest resources and therefore contains management measures intended to prevent worst case scenarios from occurring. And where the DEIR identifies areas where impacts, either individually or cumulatively, are significant (i.e., worst case scenarios) mitigations are required to reduce those occurrences. The Alternatives, A through G, provide a broad range in the levels of management activity that might occur at JDSF, and could be considered a comparison of best- and worst-case scenarios. They include everything; from no timber harvesting (Alternative A) to 31 MMBF annually (Alternative C1); no evenaged management (Alternative E) to 40 percent evenaged management (Alternative B). In addition, the analysis that occurred in the development of the DEIR, as well as the analysis that typically occurs in the development of specific projects, includes an anticipation of the considerable variability that can occur. For example, the ADFFMP and the FPRs require watercourse culvert sizing that accommodates 100 year storm events; well in excess of the average storm and the standards utilized in non-forested settings. In addition, the DEIR anticipates the "arrival" of Marbled Murrelets to stands within and adjacent to JDSF (a worst case scenario if not anticipated and "take" were to occur) and requires a number of measures to avoid the potential for impacts, including protecting existing suitable habitat, managing designated areas to advance the development of late successional forest conditions, and conducting surveys prior to commencing management activities in areas near Marbled Murrelet habitat. The DEIR approach for assessing potential impacts is far from the "detached and often overly optimistic view" characterized by the commenter.

Response to Comment 34
The analysis addresses individual and cumulative impacts in a complementary manner. It is critical to understand both, since one must examine and understand the individual pieces to understand the whole or the cumulative effect.

Individual impacts can be significant by themselves or can combine to produce cumulative impacts on a single resource in close proximity by successive or adjacent activities (such as soil compaction) or on one or more remote resources (such as water quality where two or more streams come together). The referenced examination of sediment in the DEIR is a good example of how these effects were thoroughly examined and addressed. Effects related to specific resource types are described in individual sections of the analysis, while cumulative effects on different resource types are addressed in terms of combined effects over time and space, such as sediment budgets, as described in Section 7.2.5 and Appendix 11 of the DEIR. Portions of the cumulative effects discussion rely substantially on references to the more specific sections to avoid unnecessary repetition in an already voluminous document.

As stated on DEIR page VIII-2, “A substantial amount of cumulative impact assessment has already been presented in section VII Resource Specific Analysis. The purpose of this section is to introduce additional information that is relevant specifically to cumulative effects and to synthesize and recap, rather than repeat in detail, information that is found in other parts of this EIR. Therefore, the following discussion of cumulative impacts relies in part on the more detailed descriptions that are included in other sections of this EIR.” Because activities proposed in the Management Plan and DEIR have impacts on values associated with specific resources, it is most appropriate to organize these documents around the affected resource types, rather than splitting a multitude of effects on each resource into impact groups, as implied in Comment 34. Organizing by specific resources and values allows us to identify and provide appropriate mitigation for on-site impacts that can be individually treated, while taking a more holistic approach to determining and mitigating for cumulative impacts from complex interactions.

Response to Comment 35

The DEIR uses a systematic approach to address cumulative effects. It identifies past, present, and reasonably foreseeable future projects. It thoroughly identifies the types of impacts these projects can cause and the manner in which they can accumulate over space and time. Given natural variability and the complexity of natural processes, specific production functions typically are not available to quantitatively tie specific project to specific levels of impacts. However, a substantial amount of data are available that indicate what environmental conditions are currently and how those current conditions compare to regulatory target values, thresholds of impact to specific species (e.g., water temperatures and salmonid species survival), and reference values from undisturbed environments. Quantitative information on historical environmental conditions is much more limited. The DEIR presents and discusses these data on environmental conditions, including how current conditions are reflective of past management activity and how reasonably foreseeable probable future projects are anticipated to affect these conditions. While analytical tools are not always available to make a quantitative linkage between future projects and effects on the environment, at minimum a qualitative linkage is made.

Cumulative effects analysis is required when the project may contribute to effects caused by other projects. In analyzing cumulative effects, it is important not only to evaluate the total effects of all projects and programs, where possible, but also the relative contribution of the proposed project to the cumulative effects. Although an analysis may indicate that cumulative effects may be significant at the scale of a project or a region, the lead agency is nonetheless only responsible for mitigating for the portion of the effect to which it contributes.

For example, aquatic habitat changes associated with timber harvest and road conditions on JDSF, prior to mitigations, have the potential to contribute to the larger scale aquatic habitat changes that have occurred regionally or locally, the additive effects of ocean conditions, or the influence of agricultural practices, etc., on salmonid populations. The DEIR demonstrates that JDSF’s relative contribution to these larger scale impacts is minimal, be they positive or negative. While the cumulative effects of all these activities is significant, contribution of the activities discussed under the programmatic DEIR and forest management plan to these cumulative effects is small and thus mitigation obligations of the program, taken as a whole, are small,

No data currently exist to tease out the relative quantitative magnitude of individual and numerous historic impacts on the aquatic environment and the resources supported, either from a local or a regional scale. The net result of past impacts is however readily apparent on the landscape as are salmonid population estimates and trends. Consequently, the baseline against which cumulative impacts must be assessed is representative of a system that has been markedly impacted historically and continues to recover or regress incrementally with current land uses.

The DEIR used BioView, a spatial wildlife habitat relationships model, to examine at a large scale and in a quantitative fashion the temporal and spatial implications of forest management on habitat quality for a suite of species of special concern. These analyses were carried out on lands within the

cumulative effects assessment area of which only a portion (about 23 percent) is JDSF. Timber harvest projections on JDSF, on adjacent ownerships (to the degree they could be determined or estimated), as well as those on lands placed in reserve or modified management status, on adjacent ownerships, and other descriptors of expected change in forest conditions were used to inform the BioView analysis.

There are a number of quantitative as well as qualitative elements found in the cumulative impacts assessment for the Marbled Murrelet. Recent literature as well as public comment has noted the importance of not only large, moss-covered limbs as a suitable nest substrate for this species. No data are available to ascertain the current frequency of occurrence of this desired structural attribute nor is information available to determine quantitatively the impact of past forest practices on present day occurrence. It does appear however that large limb structure is influenced by multiple environmental and management variables. There is somewhat greater certainty, however, that limb moss is found most frequently in close proximity to coastal climatic influences. This knowledge was used in a conceptual model along with other relevant information to identify likely Murrelet habitat management areas and potential for cumulative effects to potential Murrelet habitat on the western edge of the forest. That information crossed a number of resource areas including past timber harvest, condition of existing stands, and the potential for recreational disturbance. The implications of the latter included an undesirable increase in corvid population density or human disturbance to future murrelet nesting habitat.

Several quantitative models were used to examine watershed cumulative effects, including the road sediment model, SEDMODL2 (see DEIR section VII.7.2.4), and the hydrology model, Delta Q (see DEIR Appendix 10). The EMDS model used to evaluate in-stream habitat quality has both quantitative and qualitative components (see DEIR pages VIII-73 to -74).

Response to Comment 36
The Board does not simply assume that THPs, the FPRs, or the DFMP will mitigate impacts to a level of less than significant; the DEIR analysis demonstrates that these elements, along with other state and federal environmental laws ensure that impacts will be mitigated through a variety of means. The THP process is not a simple application of the FPRs but rather incorporates detailed planning by a registered professional forester, a cumulative impacts analysis, multidisciplinary review that includes participation by agency experts and the public, and on-the-ground review team agency preharvest inspections, thereby ensuring all project-specific timber harvesting impacts will be identified and mitigation developed. This is a level of site-specific review that cannot occur at the programmatic level.

The DEIR does not conclude that use of the standard FPRs alone will mitigate all cumulative impacts. In addition to the standard FPRs, mitigation for cumulative impacts is provided by requirements included in the Draft Management Plan and the Road Management Plan, that will be implemented both as stand-alone projects and as part of future THPs, and by site-specific requirements identified as part of the THP review process.

In addition, the DEIR has identified particular practices and sensitive resources where impacts may occur that are not addressed by the standard application of the FPRs. The DEIR requires additional mitigation to lessen those impacts. For example, the DEIR identifies a potential for impacts to snag and LWD dependant species as a result of implementing the DFMP. As such, a measure is required, that is in addition to the standard FPRs, to mitigate this impact (Page VII.6.6-131). Even where no significant impacts are identified, the Board has required additional Management Measures in certain instances to ensure protection of sensitive resources (i.e., Section VII.6.2.7, Additional Management Measures for Botanical Resources).

Response to Comment 37
The commenter is correct that the lead agency is under no obligation to identify or require mitigation where the DEIR has not identified significant effects to the environment (CCR § 15126.4(a)(3)). However, in several cases the Board has chosen to adopt “Additionsl Management Measures” to

better implement Board policies, contribute to recovery, or to further ensure that impacts do not result, despite finding no evidence of a significant impact (i.e., Section VII.6.2.7, Additional Management Measures for Botanical Resources).

INADEQUATE MITIGATIONS

Response to Comment 38
Without specific examples the Board is unable to fully address this comment other than to say that the Board has not identified any significant impacts associated with the DFMP or ADFFMP that are left unmitigated, nor has it deferred the mitigation of those impacts to a later date. The Board has developed numerous programmatic level mitigation measures to reduce the identified impacts associated with implementing the ADFFMP. Where as yet unidentified additional impact potentials are encountered on specific projects, new site-specific mitigation will be developed.

Response to Comment 39
The DEIR, being a programmatic EIR, recognizes that much of the mitigation required when implementing an individual project will be dependent on the specific circumstances associated with the individual projects. Therefore there is some reliance on the fact that impacts associated with timber harvesting that may potentially occur will be further mitigated through the application of the Forest Practice Rules and the THP impacts assessment and multidisciplinary review processes. This is both required and enforceable mitigation. The DEIR requires additional programmatic level mitigation to lessen those potential impacts. For example, the DEIR identifies additional potential to lessen the level of impact to snag and LWD dependant species as a result of implementing the DFMP. As such, mitigation was established, that is in addition to the standard FPRs, which mitigates this impact (Page VII.6.6-131). The mitigation for snags that was adopted through the EIR process serves to ensure that significant impacts will not occur. Even where no potential impacts are identified, the DEIR requires Additional Management Measures in certain instances to ensure a high level of protection of sensitive resources (i.e., Section VII.6.2.7, Additional Management Measures for Botanical Resources).

One of the principle objectives of the analysis performed for the DEIR is to assess potential impacts associated with a programmatic management direction or proposal, in addition to an analysis of several alternatives. Further assessment occurs at the project level, producing a tiered assessment of potential environmental effects.

In addition to certifying the final EIR and adopting the Final FMP, the Board must also adopt a Mitigation Monitoring and Reporting Plan (MMRP) (PRC 21081.6). The MMRP provides the "framework" that ensures impacts are mitigated though application of the specified measures identified in the EIR.

Response to Comment 40
Without specific examples the Board is unable to address this comment other than to say that it recognizes the need to develop mitigation measures that are both clear and enforceable and believes it has done so in this document. In that this is a programmatic EIR for the approval of a plan, it is appropriate to require mitigation that results in changes in the way the Plan is carried out. Developing new information through studies supports an adaptive management approach, thus making the Plan responsive to changes in the environment and improvements in forest management science. While "studies", "considering" and "coordinating" are not mitigation, in-and-of-themselves, requiring future project proponents to take these steps will result in decisions which are based on better information than would be possible otherwise.

Response to Comment 41
The Board agrees that programmatic EIRs are appropriate for the consideration of mitigations such as those developed in HCPs. However, the DEIR and ADFFMP have not identified any species requiring incidental take permits pursuant to section 10(a) of the federal Endangered Species Act, triggering the requirement to develop and seek Fish and Wildlife Service or National Marine Fisheries

Service approval of an HCP. All listed species will be protected from "take". All potential impacts to federal and state listed species have been fully mitigated in either the Plan or DEIR. In addition, the Board in its approval of the ADFFMP, cannot be held responsible for the development of regional mitigations for impacts that are not associated with that approval. While the Board recognizes the decline that has occurred regionally in the resources the commenter cites, the activities which will occur at JDSF as a result of adopting this Plan will not contribute to that decline. In fact, many of the provisions of the ADFFMP and mitigations required in the DEIR will assist in the recovery and restoration of some of those resources.

Introduction

Response to Comment 42
The inventory used to support the management plan/EIR is current in the sense that it accurately captures the current resource conditions. It is approaching the end of its useful life span, but careful updates for growth and harvest have preserved its accuracy. Short-term updates of an inventory is an accepted industry practice. A new resources inventory was installed in 2005. In addition, the CFI plot system was remeasured during 2005. Both corroborate the inventory used to support this management plan/EIR. JDSF, by virtue of being a research forest, constantly collects and updates resource information data. If the EIR were to be continually revised to incorporate the latest resource inventory data, it would never be completed. The Board has determined the inventory used to support the management plan/EIR is fully adequate.

Response to Comment 43
The Project Description, including information about proposed logging, is presented in DEIR Section III, Project Information, and more specifically in Section III.3 Project Description. Section II referenced by the commenter provides the reader with more general introductory and background information and was not intended to provide the level of detail found in a Project Description or the Draft Forest Management Plan itself.

Project Information

Response to Comment 44
Section III.5 is included in this DEIR in compliance with CEQA Guidelines Sections 15124(c) and 15131 and is intended to provide the reader with a general understanding of the social and economic forces at work in the Redwood and North Coast regions and the part that JDSF plays in the area. By their very nature, these types of analysis are data intensive and require a careful balancing on the part of the Board in determining the appropriate level of quantitative information for inclusion in the document. The Board chose to err on the side of full disclosure, presenting as much pertinent information to the reader as possible. But to characterize the full disclosure as a “data dump” is an inaccurate portrayal of this section as there is considerable analysis, discussion and data interpretation that occurs as well.

Environmental Setting

Response to Comment 45
The Environmental Setting is a required element in a DEIR (CCR §15125) and must include a description of the physical environmental conditions that exist in the vicinity of the proposed project. The environmental setting must also be described from both a local and regional perspective. Section V describes the existing conditions in and around JDSF in terms of: land use; climate; topography and geology; vegetation; wildlife; aquatic resources; recreation and other uses; as well as land ownership and management. The Board believes that land management—both past and current—is an important element in describing and understanding the environmental setting and is therefore included in this section. As described in the Introduction to Section V, the Board in crafting the DEIR has done as the commenter suggests by including and expanding upon the environmental setting in each of the respective resource specific sections. The nesting of levels of specificity was adopted in order to reduce redundancy and enhance the relevance of the material for the reader.

Response to Comment 46
The Board erred in using the term "infeasible" in describing the project alternatives that were not immediately implementable due to inconsistencies with Board Policy or requiring new legislation as described on page VI-14 and as highlighted (shaded) in Table VI-1. The RDEIR clarified that the alternatives are feasible, but would require some legislative or policy changes prior to their implementation in whole. See also response to comment 1 in DEIR comment letter P-171 from Paul Carroll.

Response to Comment 47
Table I-2 identifies the project's potential significant effects, identifies alternatives that avoid those effects and briefly describes mitigations that reduce or eliminate the effect. This is consistent with CCR § 15123(b)(1). To include a detailed description of the mitigation in this table would significantly complicate and lengthen the table in addition to being redundant. For more details the reader is directed to the mitigation developed for the specific resources found in Section VII of the DEIR.

Response to Comment 48
The Board agrees that any activities carried out under that ADFFMP, including logging, that contributes to a species extinction would be significant effect, cumulatively or otherwise. However, the DEIR and RDEIR have not identified any effects associated with adopting Alternative C1 of Alternative G that would lead to a finding that extinction of any species is likely to occur. The proposed alternative, Alternative G, provides additional management direction to create habitat with older forest structure, and allocates additional late seral develop area specifically for the purpose of future development of habitat for the marbled murrelet.

Alternatives

Response to Comment 49
As described in Section II of the DEIR, this is a programmatic EIR that evaluates and analyzes the potential effects that may occur as a result of implementing the ADFFMP. The ADFFMP, for the most part, provides only general policy and management direction and proposes few site specific projects. By their vary nature, programmatic EIRs are general and lack the site specific technical and spatial detail that might be found in a project level EIR. As such, the project alternatives are general as well and reflect only broad changes in JDSF forest management policy and practice that mitigate or avoid impacts from implementing the plan. The technical and spatial detail the commenter is looking for will come with specific project proposals that tier to the final plan approved, and final EIR certified, by the Board.

Aesthetics

Response to Comment 50
Thresholds of significance are established by a lead agency to determine the significance of environmental effects that arise as the result of carrying out a project. Effects are generally measured as the difference in the effects that occur under the baseline condition, or "no project" alternative, and the proposed project. It is the lead agency's responsibility to determine when an effect crosses the threshold between less than significant and significant. The setting of that threshold is a complicated process—more of an art than a science –and relies on a variety of factors. In the case of aesthetic resources at JDSF, those factors are described in the DEIR on page VII.2-12 and include a project's visibility, integrity and uniqueness of the resource, and the magnitude of change. Where the project is not readily visible, the resource is not unique or lacks integrity or the change is minor the lead agency may find that the project does not create a significant impact. And, in the case where the existing baseline condition as described in the Environmental Setting is such that the proposed project would not differ significantly from what is already present the project's effects may be less than significant as well. In the case of timber harvesting and aesthetics the Board has concluded that forest management in a managed landscape would not automatically exceed an aesthetic threshold, whereas similar activities in an unmanaged, or pristine, environment may exceed

a threshold, depending upon the specifics of the management activity. This approach for setting thresholds is not in error nor inappropriate under CEQA.

Response to Comment 51
By their vary nature, programmatic EIRs require a general, or "coarse", analysis, identify broad classes of impacts and develop mitigation measures that can be applied widely. Site specific impact analysis will occur on a project-by-project basis (see DEIR section II-6.1, page II-10).

The ADFFMP and DEIR consider immediate, short and long term impacts, as well as cumulative impacts to aesthetic resources. The ADFFMP includes specific measures to avoid and minimize visual impacts along roads or trails, recreational facilities and old growth groves (DEIR page VII.2-17). The DEIR proposes additional mitigation that lessens the immediate and short term visual impacts associated with even-aged management (DEIR Mitigation 1; page VII.2-15). Mitigation 1 and 2 provide an added level of consideration and mitigation for short and long term aesthetic effects from timber management on Special Treatment areas. Potential cumulative aesthetics effects are addressed with Mitigation 4.

The DFMP states that no more than 29% (ADFFMP page 50) of the forest will receive even-aged management. Furthermore, those treatments will be applied incrementally over a 60 to 150 year rotation, where harvested stands will grow and develop concurrently with management activities in other stands. Forest stands harvested under an even-aged management system are far from static. In fact, many of the stands that have been recognized as being aesthetically pleasing to Forest recreationalists are the direct result of even-aged management applied by the Caspar Lumber Company decades ago. The implementation of Mitigation 1 and Mitigation 4 along with the dispersal of these treatments over space and time will ensure that neither short-term nor cumulative impacts to scenic vistas will occur.

Response to Comment 52
The "additional protections" identified in the DEIR are examples of the measures that the Department has employed in the past to lessen the visual impacts associated with THPs and are not included as required mitigation in this DEIR. Whether these measures would be used in the future will depend on the results of the site specific analysis that occurs in the preparation of a THP. That analysis is a required in Mitigation 2 for THPs that are within or adjacent to Special Treatment Areas or buffers. These measures may be applied or adjusted where appropriate to protect visual resources.

Response to Comment 53
As is common practice in programmatic EIRs, DEIR Mitigation 3 makes it clear that future development projects that may cause light and glare will undergo an independent CEQA review. While a lead agency may approve a project that has unmitigable impacts it may only do so if it has certified an EIR and after making a statement of overriding considerations. However, Mitigation 3 specifies that the potential for impacts be assessed and prevented.

Response to Comment 54
The only Findings on page VII.2-26-28 is for Cumulative Impact 1, where the impact was found to be less than significant once mitigation was applied. This mitigation is required and will be incorporated into the Plan.

Response to Comment 55
As is common practice in programmatic EIRs, this mitigation describes the process that will be followed in the development of future THPs to avoid cumulative aesthetic effects. The mitigation is neither vague nor unenforceable as it mandates the circumstances where the measure is to be applied, describes the evaluation process that the Registered Professional Forester will conduct in order to reach a determination and requires that one or more of the specific mitigations be applied where cumulative aesthetic effects are found to occur.

Response to Comment 56
DEIR page VII.5.14 adequately addresses the types of emission sources and causes of the emissions (e.g., timber harvest or recreation activities). As discussed on page VII.5-15, measured PM 10 emissions exceeded the Federal 24-hour or annual average PM10 standards twice since 1999; both attributed to summer wildfires. Mendocino County is in non-attainment for the State PM 10 standard, which is stricter. The primary reason for non-attainment in the measurement station areas (Willits and Ukiah), is smoke accumulation from winter wood heating of homes, and particulates from vehicle exhaust and road dust, coming from highly urbanized concentrations using unpaved roads. Both cities are also located in valleys prone to summer air inversions.

On page VII.5-14, it is stated PM10 emissions from activities in the JDSF would be the lowest when historically the PM-10 monitoring stations in the North Coast have measured the highest ambient PM 10 concentrations. Sources of PM10 emissions on the forest are not calculated because there is almost no probability of JDSF contributing to produce a significant effect upon the seasonal air quality pollution in Mendocino County.

As described on page VII.5-13, PM 10 emissions on JDSF from slash burning are not significant because:

- Slash from roadside vegetation maintenance is burned in small widely distributed piles, in winter or spring when air quality is best.
- Most of the slash from timber sales is made available for public firewood collection. Any burn piles generated are re-distributed into small piles and burned as described above.
- All burning is in compliance with the MCAQMD open burning regulations. Open burning is not allowed on days when it could adversely affect air quality.
- The Mendocino Unit bans open burning, generally all summer between July and Nov. The purpose of the ban is fire prevention, but the rule is also beneficial to air quality standards.
- As described on page VII.5-12, PM10 emissions resulting from vehicle use on dry roads can result from three sources: logging traffic, recreation traffic, and administration/management vehicles.
- Logging is subject to the California Forest Practices Act, which requires mitigation of dust control by wetting the road. (Fire prevention measures are also listed and enforced, mitigating the potential for smoke emissions from wildfire.)
- All vehicles, including heavy equipment, are subject to the California Air Quality emissions standards. Heavy equipment used in logging operations is not concentrated in one area, minimizing the potential of accumulated emissions. Any emissions coming from equipment occur in areas generally remote from the urban interface.

- Recreation and Administrative traffic on dry unpaved roads is controlled in several ways, eliminating much of the dust:

    - The major and most well-traveled roads in the forest are already surfaced with rock, minimizing dust emission. When available, JDSF obtains Cal Trans-produced asphalt grindings to add a temporary surface to heavily trafficked roads.
    - Prior to logging operations, the forest may require (in the sale contract) an application of “lignin” or other dust-control measure to designated surface roads as additional mitigation for traffic-related dust from logging.
    - The forest is developing a “road plan” to rock and/or pave other popular recreation roads to minimize dust, especially in critical areas near streams and fish habitat.
    - Recreation traffic to and from campgrounds is speed controlled--a 5mph speed limit is posted and enforced.
    - The forest maintains post harvest-required rolling dips and waterbars, which have a side benefit to control vehicle speed and minimize dust from traffic.

Aquatic Resources

Response to Comment 57
The Board does not believe that the characterization reflects the position of the North Coast Regional Water Quality Control Board (NCRWQCB) letter (Agency Comment Letter A-1). See the NCRWQCB letter and the response to its comments in section III of the FEIR. See in particular the responses to NCRWQCB comments 1-8.

Response to Comment 58
The DFMP and DEIR rely only in part on the Forest Practice Rules and the timber harvesting plan review process to address harvest impacts on aquatic resources. The cited studies are not wholly applicable. See the response to the referenced comment letter of Patrick Higgins (see e-mailed comment letter E-26 in Section IV). The Board response to the Higgins comment letter (see response to comments 4 and 13) and response to the Paul Carroll comment letter (see mailed comment letter P-171 in Section IV) (see response to comments 11-14)

Response to Comment 59
See the response to the cited comment letter from James Strittholt (see e-mailed comment letter E-25 in section IV). See specifically the responses to comments 25-35.

Response to Comment 60
See the response to the cited comment letter from James Strittholt (see e-mailed comment letter E-25 in section IV). See specifically the responses to comments 25-33.

Response to Comment 61
See the response to the cited comment letter from James Strittholt (see e-mailed comment letter E-25 in section IV). See specifically the response to comment 7.

The DEIR and RDEIR assessed potential project impacts on all watersheds and concluded that that management of JDSF, as proposed under the ADFFMP, would result in continued recovery of aquatic habitat within the Forest. This habitat is expected to contribute to the recovery of salmonid populations.

Response to Comment 62
The cited watershed analysis information that is incorporated into the DEIR is only part or the information used to assess aquatic resources. The DEIR used the most recent information that was reasonably available "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters" (CCR §15204). An EIR "need not be exhaustive" in its review of impacts and should be focused on "what is reasonably feasible" (CCR §15151). Conducting new research or "normalizing" existing data sets is not reasonable or feasible given the broad geographic scope of the project and the low likelihood of sever impacts. For example, water temperature information (a key factor for aquatic resources) was as recent as the summer of 2003 (the critical time for water temperature for fish). In-stream fish habitat surveys also were as recent as 2003. Mendocino Redwood Company's 2002 watershed analysis of the Big River watershed also provided information on conditions for aquatic resources. Given that the Notice of Preparation (the benchmark for establishing the environmental setting (CCR §15125(a))) for the DEIR was released in January of 2004, this information is reasonably current.

See also the response to comment 28.

Response to Comment 63
The Board recognizes that the Aquatics section includes an abundance of information covering a wide range of aquatic habitat topics. However, this material is supplied to give the reader complete background information necessary to understand current fisheries status regionally, in Mendocino County, and within JDSF. The information provided includes the results of past monitoring work, and how past practices have impacted sensitive habitat conditions within the assessment area. With this

comprehensive dataset, it is possible to reasonably project what the impact will be from the proposed project, as well as potential impacts for the other alternatives.

The Board believes that the DEIR provides both multidisciplinary and interdisciplinary assessment. See, for example, DEIR Cumulative Effects section VIII.7.1. Several integrative analyses are provided there to look at in-stream fisheries habitat and water quality issues together: Model 1: GIS Evaluation of Cumulative Watershed Effects and Recovery Potential and Model 2: Fish and Game In-Stream Channel Surveys and Ecological Management Decision Support System.

See also the response to comment 25 in the letter of comment from James Strittholt (DEIR electronic comment letter E-25).

Response to Comment 64.
The wide range of background information, varying at times in its detail or spatial comprehensiveness, is reflective of the pool of information that was reasonably available for use in the DEIR. Taken as a whole, however, this information provides a robust picture of the aquatic resource conditions on JDSF, the larger watershed cumulative effects assessment area, and the broader regional setting. One intention of the DEIR was to provide the reader with a regional context that could then be applied specifically to considerations of JDSF. Threatened and endangered salmonids are of significant public concern. The section is arranged to examine the topics of habitat, populations, and the regulatory environment first at a regional scale, and then at the local scale of the JDSF ownership and adjacent ownerships. For example, section 6.1.2 provides a regional overview of aquatic habitat conditions. This section is followed by section 6.1.3, which describes aquatic conditions within the JDSF ownership and by section 6.1.4 which examines aquatic conditions on adjacent watersheds and downstream areas. Similarly, section 6.1.6 examines salmonid population status in a regional context. This section is followed by section 6.1.7 that examines fish distribution and status on JDSF proper. Finally, section 6.1.11 describes elements of the state and federal regulatory environment that guide JDSF management. This section is followed by section 6.1.12 , which describes specific regulatory and other specific management measures already incorporated in the JDSF management plan. Addressing aquatic resource setting issues at multiple scales for a programmatic EIR is clearly complex. That complexity was recognized early on and the DEIR aquatic resources section organized to minimize reader confusion. See also response to Comment 1.

Different portions of the DEIR vary in their technical complexity, and some sections may be more challenging than others for the less technical reader. However, much of the DEIR is written at a level reasonable for the less technical reader. In particular, the summary impact tables at the end of each resource analysis chapter are written in a very accessible fashion. These tables provide the key kind of summary information (how do the various alternatives differ in their potential environmental impacts) that the less technical reader is most likely to find interesting.

The paragraph quoted from page VII.6.1-37 of the DEIR touches on only two (stream temperature and large woody debris recruitment role of riparian vegetation) of the many impact areas addressed in the DEIR (these include sediment, streambank stability, in-stream habitat characteristics, and aquatic macroinvertebrates). It is not intended to be a comprehensive summary of potential impacts to riparian functions. Further, the limited quote misses the full context of the paragraph from which it is lifted:

> Much of the riparian landscape on JDSF is not yet providing full riparian function. Seral stage classification provides a general indication of riparian conditions and quality. Two percent of the riparian vegetation found in JDSF is made up of young open forest and 34 percent is mid-seral forest. Where some level of disturbance has occurred in riparian areas, there would be an extended period required to attain fully functioning conditions. For example, in early-seral stages, the immature riparian vegetation (both hardwood and coniferous species) is a low-to-moderate shade source and a poor contributor of large wood. In mid-seral stages, the riparian vegetation is a good shade source and a low-to-moderate contributor of large wood.

> Most riparian vegetation does not become a good source of large wood until the late-seral stages. Although much of the land is currently in early- to mid-seral stages, riparian habitat should improve over time (20 to 90 years). (DEIR page VII.6.1-37)

Thus, only 2 percent of JDSF riparian vegetation is made up of early forest stages that provide lower riparian habitat quality. Thirty-four percent is in mid-seral forest that provides a good shade source and a low-to-moderate source of large wood. Other portions of JDSF provide higher levels of shade and large woody debris value. The ADFFMP is specifically designed to improve the riparian vegetation in Class I and II Watercourse and Lake Protection Zones over time, including minimizing disturbance and facilitating the development of late seral forest conditions over time. The 90-year period mentioned in the paragraph is not intended to suggest that riparian vegetation will be reduced over the next two decades. Rather, it is meant to indicate that riparian vegetation that is currently in the mid-seral stages will take 90 years or more to grow into the more advanced seral conditions that will provide even higher levels of shade and large woody debris. The end result of the implementation of the ADFFMP will be the improvement of riparian vegetation over time, resulting in the improvement of in-stream habitat for salmonids. By improving habitat conditions, the Plan will contribute to the enhancement of salmonid populations. However, due to influences on salmonid populations outside of JDSF and the influence of ocean conditions on salmonid populations, the analysis is unable to definitively determine how salmonid populations themselves will change. See also the response to comment 70.

Response to Comment 65
See the response to the referenced comment letter of Patrick Higgins (see e-mailed comment letter E-26 in Section IV); see specifically the responses to comments 17 and 19.

Response to Comment 66
See the response to the referenced comment letter of Patrick Higgins (see e-mailed comment letter E-26 in Section IV); see specifically the response to comment 21.

Response to Comment 67
The Habitat Suitability Overview concentrates on those lands outside of JDSF but within the larger watershed based assessment area including those watersheds that “receive” aquatic conditions largely influenced by JDSF forest conditions (water temperature, sediment load etc.). As such they are a key input to an evaluation of cumulative and programmatic level impacts and provide important contextual information where stream conditions outside of JDSF can help explain certain aquatic conditions on JDSF including stream temperature, sediment levels, salmonid distribution, and large woody debris loading as an artifact of historic practices. DEIR Sections 6.1.11 through 6.1.14 pages VII.6.1-90 through VII.6.1-98 are pertinent to an evaluation of impact and are prelude to Section 6.1.16 Project Impacts.

The EIR is programmatic and not designed to evaluate in detail the impacts from individual forest management operations. Knowledge of the general location of a future THP provides insufficient information to assess project impact to a specific watercourse. During development of a THP and associated environmental analysis, a large number of project-specific variables are addressed that influence potential impacts to the watercourse. These include slope characteristics, near-stream forest conditions, ultimate watercourse and lake protection zone (WLPZ) width, harvest prescription, follow-up silvicultural and fuels treatments, and influence of site specific mitigation measures. On the programmatic level of the DEIR, the analysis does not anticipate significant adverse effects on peak flow or water temperature. Any water quality impacts are likely to be temporary; chronic sediment sources such as forest roads are expected to decrease over time with implementation of the accelerated road management plan. In addition, the most severe impacts to water courses from logging are from historic land management and are well documented in the EIR. Near and in-stream habitat conditions are expected to continue to improve with the application of the Accelerated Road Management Plan, other management measures, and project-specific mitigations.

Response to Comment 68
The Aquatic Resources Section (VII.6.1) was arranged purposefully to respond to judicial direction to explicitly improve upon the setting description with additional information of a regional context. The Section is arranged to examine the topics of habitat, populations, and the regulatory environment first at a regional scale, and then at the local scale of the JDSF ownership and adjacent ownerships. For example, Section 6.1.2 provides a regional overview of aquatic habitat conditions followed by Section 6.1.3 describing aquatic conditions within the JDSF ownership and by Section 6.1.4 which examines aquatic conditions on adjacent watersheds and downstream areas. Similarly, Section 6.1.6 examines salmonid population status in a regional context, followed by Section 6.1.7 that examines fish distribution and status within JDSF. Finally, Section 6.1.11 describes elements of the state and federal regulatory environment that guide JDSF management followed by Section 6.1.12 that describes specific regulatory and other site specific management measures already incorporated in the JDSF management plan. Addressing aquatic resource setting issues at multiple scales for a programmatic EIR is clearly complex. That complexity was recognized early on and the DEIR aquatic resources section organized to minimize reader confusion.

Response to Comment 69
The DEIR and RDEIR provide a comparison between the Plan (Alternative C1 and G) and "the current no-logging conditions" (Alternative A). While there has been a lull in logging, it is a temporary condition and therefore is only reflected in part under Alternative A which describes a curtailment of most forms of forest management in the long-term.

Regarding placement of Section 6.1.12 and 6.1.13 see response to Comment #68.

Section 6.1.14 describes additional management measures to promote recovery of aquatic resources for specific DEIR alternatives which will be additional or new to the ADFFMP. These measures were developed as a result of alternative analysis in the present programmatic DEIR and include an Accelerated Road Management Plan, and Large Woody Debris Survey, Recruitment, and Placement.

Section 6.1.16 Project Impacts provides a summary of analyses and findings regarding expected impacts of alternatives, including the no action alternative. Section 6.1.17 provides a comparison of alternative impact on various measures in markedly more detail, including the no action alternative. The no action (the commenter's "no logging" alternative) alternative also carries with it the potential for environmental impact in that existing road maintenance and/or abandonment would be decreased markedly from other alternatives. The likely result would be an increase in road sediment inputs to the stream system (See Table VII.6.1.12). Supporting analysis and literature review of the status and importance of certain measures such as sediment, temperature, and large woody debris are described in the regional and local setting sections referenced in response to comment 68.

The commenter is concerned that insufficient analysis was conducted in support of findings of impact extent and magnitude. The present DEIR is a programmatic document that will guide the identification of site specific projects and an additional level of environmental review. The programmatic DEIR meets its analytical and disclosure responsibility under CEQA. "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters" (CCR §15204). An EIR "need not be exhaustive" in its review of impacts and should be focused on "what is reasonably feasible" (CCR §15151). Conducting new research or "normalizing" existing data sets is not reasonable or feasible given the broad geographic scope of the project and the low likelihood of sever impacts.

Response to Comment 70
There are many determinants of fish populations, only a few of which are potentially influenced by logging activities. Logging does not typically directly affect fish populations (e.g., directly killing fish); rather it affects fish populations through modification of their habitat. As thoroughly discussed in the DEIR, the potential habitat effects of logging include sedimentation of streams, increases in stream temperatures through canopy removal, reducing the availability of large woody debris that provides in-stream habitat structure and meters sediment, altering nutrient levels, or affecting water flow. The

DEIR thoroughly examines the fisheries habitat effects of past and present projects, including both those that may have negative impacts (such as streamside roads) and those that may have positive effects (e.g., projects to reduce sediment from roads or to place large woody debris in streams. The DEIR also thoroughly examines the potential impacts to fisheries habitat from reasonably foreseeable probable future projects, including timber harvesting on JDSF and other ownerships within the cumulative effects assessment area. As noted in the comment, the DEIR found that "the project would have less than significant or beneficial impacts on various hydrologic, geomorphic, and debris conditions affecting fisheries." By having less than significant or beneficial effects on these habitat factors affecting fisheries, the proposed project will have less than significant or beneficial effects on fish populations.

Based on the extensive literature review provided in the Aquatics chapter of the DEIR and RDEIR, the discussion of the measures in ADFFMP that will address hydrologic, geomorphic, debris, and other factors concerning aquatic habitat, the DEIR and RDEIR support the conclusion that the resulting with reduced sediment input to streams, as well as increased shading and large wood input, improved habitat conditions will be produced for state and federally listed anadromous fish species. For example, the RDEIR explains in considerable detail how implementation of the Road Management Plan will reduce long-term sediment entry in to JDSF watercourses. Additionally, riparian prescriptions will be implemented as part of the preferred alternative that will produce late seral habitat, which will greatly improve stream shading and long-term large wood recruitment. How these improved habitat conditions will translate into improved fish population numbers and biomass is clearly dependent on factors beyond those related to timber operations on JDSF. These factors include short-term ocean conditions (such as El Niños) and longer term shifts in ocean climate (such as the Pacific Decadal Oscillation), as well as changes in ocean harvest (fishing) rates. These influences contribute to year-to-year variability, as well as longer term fluctuations in population levels. These factors are beyond the scope of the DEIR and RDEIR.

Response to Comment 71
It is not necessary for the Project Impacts Section (6.1.16) to reiterate the setting or impact findings described in other sections of the DEIR. Aquatic impacts associated with the removal or alteration of riparian vegetation, as one example, are similar whether they arise from "logging" or other forms of land use. In this sense, the DEIR evaluated the habitat conditions likely to result from all land uses collectively rather than individually. Data are not consistently available to determine "whether the fisheries would continue to decline, and to what extent,…" in the quantitative fashion suggested by the comment. Impacts on self-sustaining levels of fish and amphibians were evaluated based on measurable criteria of habitat condition. The habitat elements that are directly influenced by management activities were not determined to be limiting after application of identified management and mitigation measures. In fact, the management plan has been developed such that habitat conditions and water quality for fish and amphibians were judged to be improving over time.

The word "**may"** (emphasis added) was purposefully selected. It is not readily determinable if improvements in stream habitat result in an increase in fish numbers or an increase in fish use of a previously degraded stream reach. In addition, it is not readily determinable what environmental factors and their relative proportion of impact are responsible for the increase or decrease in an anadromous fish population. The number of environmental variables influencing populations and independent of stream habitat condition is large and includes ocean conditions, commercial fish harvest, predation and disease, and others. It is for these reasons that the Board chose to evaluate impact based on quantitative measures of stream habitat condition rather than quantitative measures of fish and amphibian population levels in the DEIR.

Botanical Resources

Response to Comment 72
JDSF has relied both on CNDDB and its own data for botanical information. New occurrences of CNPS 1 &2 listed species have been reported to CNDDB by JDSF for the last five years. A draft

quality forest floristic list for JDSF has been compiled, including surveys in some THP areas. Information pertinent to the analysis has been included in the EIR.

Response to Comment 73
The details associated with potential future projects is speculative at this time. Therefore, a detailed assessment of potential for impacts to occur would be premature. However, mitigation and evaluation processes have been adopted that will protect resources of concern. Should any projects be proposed that have potential to impact unique plant communities, site-specific effects would be evaluated and mitigations developed.

Because the plant communities involved are not wide spread at JDSF, future projects in the unique plant communities will not tier solely off the plant list in Table VII.6.2.1. Developing current, unique, community based-scoping lists would be necessary if and when any projects are proposed in unique plant communities.

Chaparral and alkali soil grassland are minor plant communities with limited distribution on JDSF. These communities are not rare regionally, nor have they been recognized for special status.

Response to Comment 74
This comment includes several elements that have been addressed previously.

Regarding surveys for plant species of concern, the text of the DFMP and DEIR have been amended to clarify that the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000) will be followed for THPs and large projects. As a result, floristic surveys will be conducted. This addresses the Department of Fish and Game's concerns that these survey techniques would provide better quality data.

Most future projects are of a speculative nature at the current time. The DEIR includes provision for protection of Species of Special Concern. For example, on page VII.6.2-21, it is stated, "JDSF will provide site- and species-specific protection measures that contribute to maintenance or improvement of long-term conservation of population viability of these plant species." "Management activities will be altered if necessary, including avoidance of plant populations, to prevent significant negative effects to habitat." In addition, under "Mitigation Development" on page VII.6.2 -23 the DEIR states "Upon determination that a proposed action is likely to result in a significant adverse effect, mitigation measures proposed to substantially lessen or avoid the impact will be include in project-associated documentation."

Both species-specific and site-specific mitigation measures should be based upon plant biology, the specific situation at a given occurrence, and the types of potential effects associated with the project. Predetermined mitigation measures may be found to be inadequate or even counter productive in specific situations. Project-specific mitigation measures that utilize the most recent information for individual species are likely to be the most effective means of protecting plants and their habitats.

Protection of "old growth forests" is discussed in detail. Pages VII.6.2-24 to 26 of the DEIR describes specific protection measures.

Wetland related information can be found in the EIR section specifically entitled "Wetlands" and in related sections including; Aquatic Resources, Botanical Resources, Wildlife and Wildlife Habitat, Geology and Soils, Hydrology and Water Quality. Hillslope springs and seeps are recognized as wetland areas and afforded the same protection as Class II watercourses.

Goals and objectives in the DEIR are based on those found in the DFMP, but include modifications made by the Board. The DFMP's intent is to establish direction for management (page iii). In some aspects the direction is quite specific, while for other aspects, it is more goal oriented. The Goals and Objectives provide a level of guidance that supplements the guidance found in legislation and Board policies.

Response to Comment 74a
Most potential impacts will be prevented by avoidance and maintenance of site-specific conditions that support rare plants. Please see responses above and DEIR pages VII.6.2-21 through -23. The conclusions regarding significance for both plant communities (pages VII.6.2-25 through -26) and for species of concern (page sVII.6.2-26 through -42) are supported in the text.

Response to Comment 75
The commenter has noted a change in EIR text for specific measures from the administrative draft to the formal December 2005 draft. The terminology has been amended. As noted in the text, these measures were not generated by the need to prevent significant impacts, but to provide additional protection. The two issues addressed in these management measures are complex and there are no simple, proven mitigations. For example, the control of invasive weeds that impact rare plants requires an evaluation of multiple factors, including the biology of the specific invasive weed, the biology of the rare plant species, site conditions, feasible treatment options, and the ecological effects of treatment verses impact to a rare plant occurrence. Site-specific analysis would be necessary to develop appropriate projects and protection measures.

The determination regarding significant impacts special status plants and Mushroom Corners are listed from pages V11.6.2-29 to -45.

Response to Comment 76
Significant impacts to rare plants associated with the use of herbicides are not expected to occur (VII.8-21). Herbicide use within harvest areas tends to be infrequent (once or twice in 80 to 120 years, if at all) and the treated areas separated by time and space, which greatly reduces the potential for cumulative effects to occur. In addition, herbicide use is highly targeted, which reduces the volume of herbicide used and avoids application to non-target species.

The EIR provides a brief list of situations where herbicides may be used. One of these is for successful reforestation, when the control of hardwoods may be important. As provided, floristic survey in harvest areas would identify rare plant occurrences, so that they could be easily avoided during any post-harvest herbicide treatment. In the eastern, drier parts of the forest, hardwoods are present at higher than natural densities as a result of past management practices and repeated fires. In order to establish a more natural, historic species mix and forest environment, some level of hardwood control may be desirable. Herbicide treatment would be targeted and limited to the extent necessary to re-establish an appropriate mix of species. Manual treatments, specifically chain saw cutting, could also be utilized to target specific species. Rare plants are likely to benefit from an increase in potential habitat area, and would be protected during reforestation efforts.

Timber Resources

Response to Comment 77
The Board disagrees with the assertion that age information is critical to identifying impacts of the project on numerous sensitive species. Stands of trees are commonly uneven-aged; they contain trees of a range of age classes. The age construct loses much of its meaning for such stands. Even stands that are classified as even-aged often have substantial cohorts of different age classes, reflecting disturbance events and periodic regeneration through the life of the stand. Further, habitat is as much if not more defined by other external parameters such as the size and shape of stands and their juxtaposition on the landscape, than it is by stand age.

A more reliable indicator of stand characteristics for habitat suitability purposes, which was used in this analysis, is stand structure. Habitat is primarily defined by structural characteristics rather than age. Because it is known what types of tree and stand structural characteristics constitute suitable habitat, it is possible to reliably evaluate habitat suitability of stands based on these structural characteristics. The Board believes this approach enables the most accurate evaluation method for determining any impacts of the project on sensitive species.

Response to Comment 78
These two new inventory efforts were completed in 2005, well after completion of the DEIR. As a research forest, JDSF continuously collects and updates resource information data. If the EIR were to be continually revised to incorporate the latest resource inventory data, it would never be completed. The 2005 forest resource inventory corroborates the results of the inventory used as a basis for this EIR. Recent inventory estimates remain consistent with prior estimates.

The inventory used to support the Management Plan and EIR is current in the sense that it accurately captures the current resource conditions. It is approaching the end of its useful life span, but careful updates for growth and harvest have preserved its accuracy. The inventory was projected to the present by use of the growth program CRYPTOS. Using a simulation model for short-term updates of an inventory is an accepted industry practice. In addition, the CFI plot system has been measured on a periodic basis, producing an estimate of periodic annual growth and a check upon forest-wide inventory. Two new inventory projects, an intensive inventory consisting of approximately 5,000 plots, and a CFI remeasurement, both support the inventory data used in this EIR.

Response to Comment 79
The statement was made in the context of discussing different silvicultural methods, and where these could favorably be applied. This does not constitute a site-specific plan. The objectives of the analysis remain at the Forest wide level. Consequently the analysis is at the non-site specific forest wide level. The Board believes this is the most accurate analysis approach given best available current data.

Response to Comment 80
The comment refers to a set of meaningful criteria intended for silvicultural treatment selection by knowledgeable professional foresters, in combination with a breadth of knowledge of site-specific local conditions. It would be inappropriate to try to prescribe project implementation guidelines for every conceivable situation. Guidance to project implementation is described elsewhere.

Response to Comment 81.
This chapter is an essential part of the project analysis.

Response to Comment 82
Clearcutting is very different from even-aged management. Clearcutting refers to the final harvest of a stand when it reaches rotation age. Even-aged management in contrast, refers more generally to a silvicultural system where stands are cultivated over time to develop one or two age classes. Only a small fraction of the acreage assigned to this silvicultural system will reach rotation age and be harvested in any given year. The remaining acres will remain unharvested in various development stages ranging from regeneration through young stands and up to maturity.

Unlike clearcutting, the different evenaged silvicultural systems proposed at JDSF leave a variety of different amounts and spatial configurations of the original stand untouched on the site after harvest. Each of these different evenaged silvicultural systems have very different effects on the environment, including forest structure, micro-climate and wildlife habitat. The information in Table VII.6.3.4 logically belongs in the Timber Management section.

Response to Comment 83
The potential impacts of the use of herbicides are addressed in DEIR section VII.6.3-16 and refers the reader to VII.8 and Appendix 13. The RDEIR Alternative G placed further limitations on herbicide use. The Management Plan includes the following in Chapter 3: “Adjusting imbalance in conifer/hardwood stocking levels by utilizing herbicides will be limited to specific reforestation situations on the east side of the Forest. In specific areas toward the east end of the forest, high tanoak stocking levels are capable of preventing native conifer establishment and growth. Herbicides may be used to decrease native hardwood stocking levels only when other options: are prohibitively expensive, dramatically increase fuel loading, are overly damaging to conifer regeneration, or are not likely to be successful.” This direction makes it clear that selective treatment of hardwoods by

herbicides would be limited in scope and highly unlikely to result in the effects postulated by the commenter. Because herbicide use for hardwood density adjustment will be limited, dispersed in space and time, utilize selective directed application techniques and subject to regulatory and site specific evaluation, detailed analysis was not necessary for this programmatic document.

Response to Comment 84
In addition to protecting existing old-growth groves, the plan proposes to enhance and expand existing groves through cultivating recruitment areas around the groves and limited harvest areas to enhance habitat values.

Late seral habitat components can be cultivated faster through judicious application of silvicultural treatments than through a purely no cut policy. Current management of stands with late seral/successional is not no cut. Retaining stands with existing late seral/successional characteristics is just one way to achieve the goals of the plan. Another way is to actively recruit such stands from stands that do not currently meet the definition of late seral/successional.

The commenter feels that the plan should include analyses at the sub-basin level because they are in his opinion key to impact assessments such as biological resources and water quality. The appropriate level of spatial resolution of the analysis depends on the analysis objectives. The Management Plan/EIR is a forest wide planning effort, consequently the proper scale of data and analysis is the entire forest and adjacent ownerships.

Response to Comment 85
Impact 3 is in fact a CEQA environmental impact. The section identifies the impact not as maximum sustained production (MSP) in and of itself, but rather environmental effects relating to MSP. Because MSP is a direct measure of the level of harvest intensity over time and the resulting forest structure, it is a highly relevant environmental impact.

Response to Comment 86
The section identifies Impact 4 not as application of silvicultural methods in and of itself, rather environmental effects relating to the application of silvicultural methods. Because silvicultural methods is a direct measure of the type of management applied over time and the resulting forest structure, it is a highly relevant environmental impact.

Forest Protection

Response to Comment 87
The typical EIR focuses on a resource-by-resource analysis of a project's effects. The Board, recognizing that pest outbreaks are an important factor in driving management decisions, chose to include a discussion on Forest Protection. In that "Forest Protection" itself is not a resource this was an atypical approach and therefore warranted the "not necessarily required by CEQA" statement in the EIR. The Department's response to pest outbreaks, not unlike its response to fires or floods, triggers actions that are not purely speculative and therefore part of the project. In this case, the Integrated Pest Management Program (IPM), a component of the DFMP, will be implemented in the event of pest problems and may result in treatments potentially impacting various resources. The Board chose to consolidate that analysis in this section rather than scattering it in the various resource sections.

At the same time the Board recognized that the pest outbreaks themselves can have resource impacts, both direct and indirect, that are similar to project impacts and may interact with project impacts cumulatively. Therefore this section includes a series of management measures and Best Management Practices that reduce the potential for disease induced impacts.

DIER section 6.4, Forest Protection, includes a detailed discussion of pest management activities' regulatory content for various pathogens that have the potential to affect JDSF. The regulatory setting is complex and can include Federal quarantine zones, surveys and limits on types of material that

could be removed from the State Forest (DEIR pages VII.6.4-7 to 13). The Board is not proposing changes in the pest (pathogen) management requirements that are a product of these regulatory processes. The information in section VII.6.4 is of value for understanding the setting, but is not directly affected by the proposals in the Management Plan.

The Impacts section focus is appropriate. The impact statement reveals that plant disease and insect outbreaks are “localized and sporadic occurrence”. Thus the application of any IPM management activities would be similar, localized and sporadic. It also reveals that “Sanitation/Salvage or other timber harvest operations” would be the most likely response to a significant pest or disease outbreak on the Forest. Harvest operations would be considered a management activity of the Forest, and as such would be subject to all of the protection measures included in the Forest Management Plan. Furthermore, if the operations are a commercial operation, the activity would be subject to the Forest Practice Rules and the timber harvesting plan review process. The impacts section clearly recognizes that management impacts will be evaluated if IPM is undertaken. Specific projects are speculative at this time given the known insect and diseases at JDSF. There is no need to revise this section.

Response to Comment 88
DEIR sub-section VII.6.4.2 is appropriate. (See response to comment 87). It discusses the potential effects of pest and diseases on various resource areas, as well as the effects that certain treatments of pests and diseases could have on various resources. Given the uncertainty of an infestation occurring and that integrated pest management would trigger a treatment; the context is appropriate. It recognizes “The presence of pests and plant diseases can occasionally cause numerous secondary impacts upon the botanical, timber, wildlife, and soils resources of JDSF, in addition to the primary loss of tree growth and tree mortality. Forest pest and plant disease management activities may have additional impacts upon these biological resources” (page VII.6.4-15). The inclusion of this section sets forth possible concerns should any future management of pests be undertaken. This section is cautious, listing problems that are not tied to a specific proposal. Its inclusion reflects the Board’s interest in careful evaluation of any future proposals.

This information in sub-section 6.4.2 is not piecemealing. Piecemealing is the practice of dividing a larger project or activity into smaller components with more limited potential for significant effects thereby creating the impression that the larger project does not have effects. In fact, the Board has done just the opposite in recognizing the linkage between the DFMP and IPM and analyzing the impacts that might arise. It is immaterial exactly where that disclosure occurs in the EIR. Given the complexity of the biophysical circumstances of JDSF and the broad range of management activities contemplated under the management plan, it is impossible to consider all things in one area of the DEIR. The most likely treatment of an infestation is salvage, i.e., harvest of dead, dying, or diseased trees. Harvest of trees is a key proposed action in the EIR, thus each resource section has addressed this issue. The subsection provides a context relative to salvage activities that can be considered for site specific projects, should they occur.

Response to Comment 89
The intent of this section is two fold: to acknowledge the activities that may arise from implementing IPM under the DFMP in response to pest problems and to identify the impacts to specific resources associated with pest outbreaks (see Response to Comment 87). The “mitigations” the commenter references are BMPs and management measures designed to lessen the latter and are not identified as mitigations. Any mitigations associated with the former, the treatments proposed under the IPM are addressed in each of the resource areas of this chapter. For example, if the IPM treatment requires the removal of diseased trees the DFMP and the mitigations associated with timber harvesting will reduce the related potential impacts. The Hazards Section addresses the measures required to mitigate the effects of pesticide use in the event that the IPM recommends chemical treatments. There is no need to repeat those mitigations in this section.

Response to Comment 90
Consideration of issues closely related to wetlands can be found in the section specifically dealing with wetlands, and in other areas of the DEIR, including; Aquatic Resources, Botanical Resources,

Wildlife and Wildlife Habitat, Geology and Soils, Hydrology and Water Quality. Wetlands lie at the interface between aquatic and terrestrial environments.

Given the limited extent of survey for wetlands on the forest, no specific map of wetlands currently exists. Again, since this is a programmatic EIR, certain rare or unmapped resources can only be addressed on a project-by-project basis and this document can only describe the required protocols to be followed in the event that project level surveys and analysis identify a potential impact. For all projects, including timber harvesting, a thorough examination of project areas will occur during the planning phase. Wetlands will be identified, properly located, and protected as the result of the planning effort. The identification and mapping of aquatic features is a key THP preparation process.

Wildlife

Response to Comment 91
The large amount of information provided was determined necessary to document the need for management measures incorporated into the plan, to support the impact analysis for the plan, and especially to support the cumulative impacts analysis that was required as a result of previous legal challenges.

Relatively few mitigation measures were identified because management actions to protect, enhance, and monitor wildlife species were incorporated as management actions into the plan (i.e., the proposed action). The BOF considers its approach of developing a plan that incorporates wildlife needs up-front on an equal basis with other resources, rather than dealing with potential wildlife impacts as an afterthought through mitigation measures. These management measures are spelled out clearly at a program level in the plan and the EIR. Where the measures were later determined to be deficient in addressing certain impacts, additional mitigation measures were added (e.g., for additional snag retention and monitoring; DEIR P. VII.6.6-131).

The Recovery Plan measures identified in the Setting as “potentially implemented by JDSF” (page VII6.6-89) should have been characterized as “potentially implementable”. The intent of this section was simply to list Recovery Plans that may be applicable to JDSF, so that the public could judge the performance of the plan in assisting in recovery. The Setting section would not be a place to identify measures that the plan had incorporated. Many of these recovery measures are specifically incorporated into the plan, as specified in the Timber Resources section (VII.6.3) and as noted in the wildlife section on Pp. VII6.6-113-114, 121, and 127.

Surveys are not relied upon as mitigation in the plan. Rather, they are components of the plan’s management measures and mitigation actions that will be used at the project level to determine when other specified protection and habitat management measures are to be applied. Surveys also are to be used to monitor effectiveness of specific management actions and cumulative impacts, and provide an information source for future planning.

The characterization of the plan’s stated effects on the Cooper’s Hawk, Bald Eagle, Osprey, Marbled Murrelet, Yellow Warbler, Vaux’s Swift, and Purple Martin is incorrect. The DEIR does not characterize changes in habitat suitability for these species as significant for a variety of reasons. First, as noted in the plan, the CWHR analysis does not characterize all habitat effects of the plan. Rather it provides a general evaluation of potential habitat suitability based on vegetation age and density classes created under each alternative. A number of these species depend on special habitat elements, including riparian habitats that were not considered in the CWHR analysis. Specifically, habitat suitability for the Osprey, Vaux’s Swift, and Purple Martin are determined more by the availability of large snags for nesting than by habitat density and the sizes of overstory trees (notwithstanding long-term relationships between tree sizes and subsequent snag sizes). Similarly, exclusion of riparian habitats from the CWHR analysis makes the results of the analysis only partially relevant to species that make extensive use of these areas (or for whom the habitats are highly suitable), including the Yellow Warbler, Osprey, Cooper’s Hawk, and Bald Eagle,.

Another important reason for not equating the CWHR modeling results to direct effects on species is that habitat suitability does not always equate to population effects on species. In particular, for the Bald Eagle, a decline in the availability of suitable forest habitat within JDSF under plan management will not result in changes in the occurrence or abundance because the species is more likely limited by the availability of suitable aquatic foraging habitat (i.e., reservoirs and estuaries). The impact evaluations in the DEIR recognized the multiplicity of factors (in addition to the quality and quantity of habitats on JDSF) that affect outcomes for the species as the basis for the conclusions reached regarding significance.

The characterization that the DEIR analysis "clearly shows that numerous special status species, including nearly all carnivores and fur-bearers, would experience major habitat declines through 2030" is incorrect. For example, for the proposed alternative, of 19 special status species considered as having the greatest potential to be affected by DEIR alternatives, habitat suitability as measured by CWHR would decrease by greater than 10% for 8 species by 2030 and for only 4 species by 2060 (summarized from Table VII.6.6.23).

All of the special-status species for which habitat suitability under the CWHR analysis would decrease by greater than 10% share at least one of 4 characteristics:

1. they primarily occupy or would favor aquatic and riparian habitats that were not included in the CWHR analysis (western pond turtle, yellow-legged frog, red-legged frog, Yellow Warbler, marten);
2. they favor open habitats and range extensively over large areas (Golden Eagle, Peregrine Falcon, Bald Eagle);
3. are absent or occur only marginally because coastal forest habitats are not preferred (Golden Eagle, Bald Eagle, Goshawk, Marten); or
4. they are primarily associated with snag conditions rather than certain vegetation types or age classes or density classes within certain types (Purple Martin).

As noted in the setting section (DEIR Pages VII.6.6-47-48 and 50) the Golden Eagle, Peregrine Falcon are species that occur in low densities compared to other habitats and geographic areas of the State. These species and several other raptors (Northern Harrier, Short-eared Owl, White-tailed Kite, and Merlin) tend to be more common in open nonforested habitats, rather than forested areas. They likely are more common now than historically at JDSF and surrounding lands due to past timber harvest and forest clearing for residential and agricultural uses. Changes in habitat suitability for these species would occur in response to reductions in the extent of timber harvest (especially by even-aged approaches) and resulting loss of disturbed open habitats. The effects of these habitat changes in an area of marginal habitat that is of little importance to these species' populations will have little long-term conservation effect on these species as a whole. Therefore, the impacts to habitat conditions are considered less than significant under CEQA.

The Goshawk also rarely occurs at JDSF, with few records; the species is more typical of drier, higher elevation forest to the east and in the Sierra Nevada. The decline in Goshawk habitat capability under the proposed project and several other alternatives is a result of the reduction in extent of open foraging habitat and general decrease in extent of mature montane hardwood conifer habitat,as a result of succession to late-successional conifer forest.

As noted in the DEIR, only two species of furbearers are considered special-status species, the fisher and marten. The fisher and marten were included in the CWHR analysis at the request of the California Department of Fish and Game despite the fact that they have never been recorded at JDSF or in adjacent ownerships. The decline in habitat capability for the marten and fisher is a result of reduction in extent of the older montane hardwood conifer 4 and redwood 6 habitat types, but importantly, the CWHR assessment does not consider the abundant acres of habitat that will be protected and enhanced in and adjacent to riparian areas, which are important habitats to both the martin and the fisher (see DEIR Page VII.6.6-108). Finally, the marten and fisher have never been

recorded at JDSF and colonization and occupancy of the area seems unlikely over the short-term (see DEIR page VII.6.6-110). Therefore the marten and fisher are unlikely to be significantly affected by actions under the plan.

All of the other furbearers are primarily associated with open herbaceous areas and shrublands (e.g., ermine, long-tailed weasel, raccoon, striped skunk, gray fox, bobcat, mountain lion), or oak dominated habitats (ringtail, mountain lion, coyote). Declines in theses species reflect habitat changes that will result from management changes to reduce the application of even-aged silvicultural management of forest stands that produce open conditions and natural succession that will reduce the extent of the older montane hardwood conifer habitat type.

The apparent declines in habitat capability for the western pond turtle reflects the species' preference for open habitats adjacent to waterways. The habitat changes identified in the CWHR analysis, however, reflect maturation of younger, open stands located away from riparian habitat (because riparian habitat was not included in the CWHR analysis because its' acreage would be relatively stable across Alternatives). Overall habitat capability and occurrence and abundance of the pond turtle, however, is much more dependent on aquatic habitat characteristics, especially presence of lotic (slow water) habitats and aquatic woody debris, which would be enhanced over time through application of riparian enhancement prescriptions. Overall effects of upland habitat changes and the plan as a whole are not considered significant for the western pond turtle.

The rationale for not addressing other potential special-status species in the DEIR is presented in the table inserted at the end of this response to comments. This table is to be added to the EIR. None of these species are expected to be significantly affected by management actions under any alternatives, due to absence from the area, relative abundance of the species (due to recovery from past declines), and adequacy of existing regulatory protections in the FPRs.

Response to Comment 92
The CWHR system was designed to conservatively estimate potential effects of habitat changes on species. Thus, it is more likely to overstate than understate effects of habitat impacts. The contention that most assessments have shown greater effects on habitat than are predicted by CWHR is not supported.

Response to Comment 93
A spatial analysis was designed and performed explicitly for those species that were considered most sensitive to potential habitat fragmentation issues. These species, the rationale for their selection, and the methods and results of the analysis are presented on DEIR Pages VII.6.6-216-240.

Response to Comment 94
This comment is nonspecific and thus difficult to address. The impact analysis for special-status species (DEIR Pages VII6.6-122-130) integrates all relevant information for each species and makes a determination regarding significance of effects.

Response to Comment 95
A Habitat Conservation Plan (HCP) is a specific requirement of a permit to authorize take of a federal threatened or endangered species under Section 10(a) of the federal Endangered Species Act (ESA). No HCP has been prepared or approved for a listed species JDSF or on adjacent lands that could potentially be affected by JDSF actions. Therefore, the JDSF plan does not conflict with an HCP.

A Recovery Plan is a federal plan adopted consistent with Section 4 of the federal Endangered Species Act to guide the actions of federal agencies in assisting in the recovery of a listed species. Recovery plans do not apply to non-federal entities (i.e., state and local agencies and private interests). Therefore, by definition, it is not possible for a state action to "conflict" with a Recovery Plan.

Non-federal actions can be evaluated as to the extent to which they further or are consistent with the goals of a federal recovery plan. The BOF has incorporated measures into all alternatives that protect and enhance habitat for listed species that have recovery plans, including the Marbled Murrelet, Northern Spotted Owl, and coho salmon. Thus, JDSF actions are expected to contribute to the recovery or these species where possible, and at a minimum, to not create outcomes that are inconsistent with the goals of federal Recovery Plans.

Geology and Soils

Response to Comment 96
The JDSF management plan protects water quality and reduces sediment delivery significantly during THP preparation in many ways. In terms of sediment production, new road construction is concentrated along ridge tops with few to no watercourse crossings. Ridge top roads use little to no fill and roads are crowned or outsloped distributing water runoff. In addition, with each THP, segments of older deemed at high risk for producing and delivery of sediment are decommissioned or abandoned as part of the THP. As found in resent research (Bawcom, 2005), most sediment delivering landslides originate along old cut/fill roads constructed midslope or lower and at culvert crossings. By completing the proposed road inventory and treating at risk roads with each THP and additional roads not associated with THPs, sediment reduction is substantial and does protect water quality in this way.

Response to Comment 97
Harvest related surface erosion, can be significant if it becomes a chronic source and is not prevented from entering watercourses in the absence of effective buffer. Redwood, and tanoak, and many other brush species are sprouting species, and vegetation rapidly re-establishes itself in harvested areas. Additional sediment from harvesting usually occurs the following winter season before vegetation has filled in or where newly compacted surfaces, roads, skid trails, may have fine sediment that can move downslope with the first rainfall. Chronic sediment sources are established along debris slides scars within steep streamside slopes and along old roads with thick fill and sidecast slopes that fail. However, streamside slope debris slide sediment sources occur naturally and contribute needed gravels and large woody debris to the stream system, so all sediment sources are not considered to have a negative effect.

Response to Comment 98
The EIR clearly explains that historic timber harvesting and other land uses within the assessment area have had a significant impact upon the fishery and other beneficial uses of water. The EIR includes a detailed assessment of the potential for significant and cumulative impacts to occur, based upon proposed management of the Forest under current and planned standards. As planned and mitigated, operations conducted under the management plan are not expected to result in significant impacts, nor are they expected to create discharges deleterious to fish, wildlife, and other beneficial uses. The commenter erroneously suggests that the science related to TMDL standards has advanced to the point where the level of sediment delivery from all sources can be quantified with any degree of certainty. This is not the case.

Individual TMDL Implementation Plans will not be generated for these North Coast watersheds. Rather, Water Board staff has determined that sediment waste discharge reduction and attainment of water quality standards can be more effectively achieved without amending the Basin Plan and by addressing all sediment impaired water bodies in the North Coast Region through the “TMDL Implementation Policy for Sediment Impaired Receiving Waters (Resolution No. R1-2004-0087).” This policy will be followed, as is stated in the DEIR.

The amount of sediment delivery that will occur related to timber operations depends on several factors, including proper implementation of the Forest Practice Rules (FPR) and additional plan/Management Plan measures; the size, intensity and duration of stressing storm events following timber operations; legacy impacts remaining from first and second entry operations, etc. Due to these factors, it is impossible to accurately predict how much sediment will be generated from a suite

of timber operations occurring over the Forest. It is generally accepted in the watershed literature that soil erosion rates and the effectiveness of erosion control efforts vary greatly and are highly dependent on weather conditions. It is illogical to calculate an exact number for sediment generation, when sediment production is highly variable over space and time. The Department's monitoring work (Cafferata and Munn 2002, Brandow et al. 2006) has shown that when properly implemented, the FPRs are effective in preventing hillslope erosion features from occurring.

The roughly estimated Noyo TMDL background loading is 370 tons/mi^2/yr, and over 40 years of sediment monitoring in the South Fork of Caspar Creek has found a long term average of 393 tons/mi^2/yr (Keppeler et al. 2007), while the 5000 yr+ rate is ~695 tons/mi^2/yr (Ferrier et al. 2005). With improved practices, it is logical to assume that the long-term sediment rate in the South Fork and other JDSF watershed locations should decline, and not exceed the TMDL maximum set at 470 tons/mi^2/yr..

Response to Comment 99
Field review and consultation with geologists includes conclusions and recommendations for timber harvesting near unstable slopes. These include a detailed analysis of on ground conditions and the use and application of the Forest Practice Rules that do restrict activities near or on unstable slopes. There are actual requirements both in the Forest Practices act and by the standard of practice for geologists who are licensed in the State of California. Therefore, the mitigations proposed and accepted in THPs do in fact mitigate project impacts.

Response to Comment 100
There is no evidence to suggest that modern forest practices have resulted in massive fisheries declines. The Department of Fish and Game and others continue to monitor the fishery in an attempt to discern population and habitat trends. The analysis performed for the EIR suggests that the aquatic habitat is in a state of recovery, and that the recovery is likely to continue due to improved management practices and active restoration projects.

Landsliding and erosion studies are ongoing. Bawcom (2007) inventoried all clearcuts on the state forest completed between 1980 and 1995 (note: clearcutting has not been used on the state forest since 1995). Most slope failures were found to be related to old roadways, not the timber harvest per se.

Project planning includes consultation with a certified engineering geologist, which often results in specific mitigation to maintain slope stability and improve the level of protection for slopes. The Road Management Plan is expected to improve conditions for the fishery by improving road construction standards, increasing road maintenance activity, and reducing road grade and road fill in locations with potential to erode.

Response to Comment 101
Appendix 13 identifies the five herbicides that are anticipated to be used on the Forest during the implementation of the Management Plan. The uses, toxicity, and potential impacts of these herbicides on animals and humans are briefly discussed. Surfactants, such as the glyphosate surfactant POEA and its toxicity, also are briefly discussed (see response to comment 35 in the DEIR comment letter P-214 from Peter Baye).

Past and possible future Glyphosate mixes at JDSF use smaller concentrations of surfactants than the active ingredient. It is well understood that some surfactants and active ingredients can have more toxic effects on organisms than Glyphosate alone. This information is noted in DEIR Appendix 13, page 3. Not all Glyphosate applications will require the specific surfactant that has hazard problems for aquatic organisms. In site specific projects analysis, the appropriate surfactant can be identified to protect aquatic or other resources. The DEIR details how additional analysis will be required for site specific projects (Page II-12 to -15).

DIER page VII.13-18 provides an explanation of the Department's responsibilities for identifying potential impacts associated with herbicide application. When specific information has been presented by commenters, for example concerns about POEA, the Board has examined the information to determine if any of it was significant new information (see DEIR electronic comment letter E-28, submitted by Californians for Alternatives to Toxics, responses to comment 90 and other comments). The Board concluded that no significant new information was provided.

Herbicide use will not be substantially increased. The exact wording regarding future herbicide use in the DEIR (page VII.8-10 to -11) is: "The low level of herbicide use on the Forest in recent years is indicative of the low level of management activity in general, in addition to the request for reduced herbicide use from the public. When management activity levels on the Forest increase following the implementation of the DFMP, herbicide use levels may increase above those of the past several years. However, it is not anticipated that herbicide use will increase to the levels of the early to mid 1990s."

The RDEIR included additional limitations on use, and predicted herbicide use under Alternative G would be less than under Alternative C1 (RDEIR page III-105). The Administrative Draft Final Forest Management Plan includes a sequence of evaluation factors that will limit use and reduce the potential for adverse effects. The commenter's assumption that the increase in herbicide use on JDSF would be "substantial" is speculative and not consistent with the expected management under the ADFFMP.

Indicative of current herbicide use levels, DEIR page VII.8-10 identifies that only 20 pounds (active ingredient basis) of herbicides were applied on JDSF over a four-year period beginning in 2000. Definitive estimates of future herbicide use are not possible at this time, and given the significant limitations on herbicide use established in the RDEIR and ADFFMP, this information is unnecessary for an informed decision at the level of a programmatic EIR. The analysis conducted for the DEIR and REIR considers the potential for significant and cumulative effects. The anticipated level of impact associated with each area of management, and associated with each of the alternatives considered, is included at the end of each resource subject analysis. By implementing Integrated Weed Management principles and the limitations described in the finalized plan, the Board is confident that vegetation management will be more efficient and effective, usage of herbicides will be low, and that significant impacts related to invasive plants and control methods can be avoided, as demonstrated by the analysis in the DEIR and RDEIR. These findings are further supported by the responses to DEIR electronic comment letter E-28, submitted by Californians for Alternatives to Toxics, found herein.

Response to Comment 102

The DEIR includes the following:

> CDF will consult with DPR and the county agricultural commissioner about the submitted information both to obtain the evaluation by the agencies with their expertise and to alert them about the issues. DPR could respond to the information with a decision to reevaluate the registration of the herbicide or it could advise CDF that the information is repetitive of what was evaluated during the registration decision.

This represents consultation by the lead agency, a fundamental precept of CEQA, in order to obtain expert opinion.

Regarding the comment on the DEIR and the role of DPR, the paragraph in quote in full states:

> When posting for public comment its proposed decision to register a new pesticide product and in approving the Public Notice for registration of a pesticide, DPR makes a finding as to whether the pesticide would cause a

> significant effect on the environment. Because DPR is the CEQA lead agency, this determination is binding on all State agencies, including CDF (PRC § 21080.1, 14 CCR § 15050). Accordingly, if a registered herbicide will be used in accordance with the directions and restrictions on the pesticide product label and any other restrictions established by DPR, CDF is required to find that the use will not have a significant effect on the environment unless there is new information showing significant or potentially significant effects not analyzed by DPR.

The last paragraph from the same page in the DEIR adds this information:

> Where herbicide use is proposed for use under the DFMP CDF will review the herbicide's intended use and its possible environmental effects. CDF will determine whether the proposed use would be consistent with the label and the registration limitations and whether DPR's lead agency determination of significance will still apply. CDF will also check for significant new information showing changes in circumstances or available information that would require new environmental analysis. Significant new information should be referred to DPR for that department's analysis as part of its ongoing evaluation program. CDF will look for simple and practical ways to avoid or mitigate potential new significant effects on the environment.

The DPR lead agency status does not relieve CAL FIRE from conducting the appropriate site-specific analysis before undertaking any weed management activities. The Board agrees that each proposed project should be evaluated carefully to ensure protection of sensitive resources. JDSF will conduct CEQA-appropriate project level analysis for all uses of herbicides. The DEIR and RDEIR provide a description of the range of control methods to be used and identify the weed species that are anticipated to potentially require treatment. The DEIR also identifies the herbicides that are anticipated to be used, where herbicides are decided to be the best treatment approach (see Appendix 13). Beyond the specific management direction and programmatic level of assessment provided in the DEIR and RDEIR, the environmental analysis is best conducted at the project level, given the great variability in project purposes and site-specific conditions. Within this programmatic context, the assessment in the DEIR and RDEIR documents did not find that the proposed actions, as mitigated, would result in a significant potential environmental impact

The necessity of project specific evaluation is recognized. For example CALFIRE would not revisit the extensive toxicological review that DPR conducts, but would determine if the proposed use was appropriate given environmental or other site concerns. Surfactants or other adjuvant would be included in this review. Appendix 13 of the DEIR provides general descriptions of herbicides considered for use on Jackson Demonstration State Forest that includes information on potential risks (potential for groundwater contamination, effects of contact with skin, eyes or when ingested, etc.).

The proposed project does not contemplate "large-scale use" of herbicides. The *Spartina* EIS/EIR cited by the commenter includes recognition that DPR and the Agriculture Commissioners regulate pesticide use (http://www.spartina.org/project_documents/eis_final.htm : Section 5.0 ENVIRONMENTAL COMPLIANCE). This EIS/EIR is not directly comparable to the EIR for the JDSF Management Plan, given the great difference in scope of the two programs. The narrow purpose of the *Spartina* control program is "to arrest and reverse the spread of invasive nonnative cordgrass species in the Estuary to preserve and restore the ecological integrity of the Estuary's intertidal habitats and estuarine ecosystem," (*Spartina* EIS/EIR, page S-1). The JDSF EIR, on the other hand, addresses a very broad program of management for a diverse redwood/Douglas-fir forest. The preferred alternative (Alternative 1) for the *Spartina* program includes the use of herbicides as one of the key treatments for achieving program objectives. Under the JDSF management plan, the use of herbicides is only one small element of the overall forest management program. Given the substantially different nature of these two programs, including the *Spartina* program's direct application of herbicides to intertidal and estuarine systems, it is not unusual that the *Spartina*

EIR/EIS might have included a more detailed analysis of herbicide impact potentials. The *Spartina* EIR/EIS concluded that the alternative that included the use of herbicides (Alternative 1) was environmentally superior to the alternative that did not (Alternative 2) (*Spartina* EIS/EIR, page S-6).

There will be differences in the content of a CEQA document where the main objective is management of an invasive weed (commenter characterizes as large-scale herbicide use) versus the programmatic EIR providing a framework for a decade span of management of a forest. The herbicide information provided in the DEIR and ADFFMP is adequate for the consideration of potential effects at the programmatic management planning level.

See the response to comment 101 regarding the herbicides, adjuvants, and surfactants anticipated to be used under the ADFFMP. The comment provides no evidence that the herbicide usage proposed in the management plan would lead to significant adverse environmental impacts.

Response to Comment 103
See response to comment 102.

It is not unreasonable for the Board to rely on previous herbicide-related environmental assessment conducted by the department or by another major forest landowner in an HCP for which an EIR/EIS was prepared. CEQA encourages (CCR § 15148), incorporation by reference (CCR §15150), and tiering (CCR §15152) from previously prepared EIRs and specifically states that a “lead agency may use an earlier EIR prepared in connection with an earlier project to apply to a later project, if the circumstances of the projects are essentially the same” (CCR §15153). Clearly the analysis and findings in a THP, the functional equivalent of an EIR (PRC §21080.5) with regard to the use of herbicides in the management of a redwood forest environment in Humboldt County “are essentially the same” as the project at hand.

Heritage Resources

Response to Comment 104
The project setting, potentially significant environmental impacts, and mitigation measures were discussed in distinctive, separate sections throughout most of this DEIR, but complete separation was not chosen in every instance. Occasionally, within the Heritage Resources chapter, it was necessary to discuss past survey and mitigation work as part of the project setting since programs to identify and protect heritage resources at JDSF have been in place since 1979.

The second paragraph of page VII.9-15 is a discussion of the regional setting discussing the Mendocino Woodlands property, its designation as a National Historical Landmark, and the fact that the Department and DPR have met to discuss the possibility of a of a joint effort to conduct a heritage resource survey throughout the entire property to provide a comprehensive assessment of the NHL designation. This paragraph then discusses the possibility that this joint survey may be completed at a future date if sufficient funding and staffing resources can be secured. It clarifies for the reader of this DEIR that until that joint survey and evaluation are completed, the heritage resources within the Woodlands property will be protected through a comprehensive set of procedures. This discussion fits best under regional setting.

Likewise, paragraph 3 of Page VII.9-19 discusses the historic Cat Barn, its National Register status, condition, and the Department's decision to manage it as a standing ruin until it falls down on its own or to possibly tear it down after first obtaining appropriate approvals. This paragraph discusses work that has already been done and fits best in the discussion of current project setting.

Response to Comment 105
Approximately 15 years ago, the Department hired a team of technical experts to assess the condition of the historic Cat Barn located at Camp 20. This team documented extensive and fatal deterioration of its wooden superstructure caused by natural decay and provided an estimated cost

for reconstruction. The Department determined that rehabilitation of the Cat Barn was not feasible due to an extremely high cost for restoration. The massive historic building has been managed as a standing ruin ever since this determination was made. The Department constructed a fence preventing access to the interior of the barn to keep forest visitors safe. This Cat Barn will eventually collapse. The Department may at some point in the future decide to tear it down after obtaining appropriate approvals.

The cited court case involved the City of Oakland's proposed demolition of the historic Montgomery Wards Building in downtown Oakland. That court ruled that a Lead Agency must use an EIR for that type of project. It found that a Mitigated Negative Declaration for demolition of a significant historic building was inappropriate since it also ruled that documentation prior to demolition did not constitute mitigation to reduce the significance of the impact to a less than significant level. As a result of precedent setting case law, Lead Agencies such as the Department are now aware that an EIR must be prepared for any proposed project involving the demolition of a significant historic building.

The DEIR does not include a detailed analysis of the potentially significant impact of tearing down the Cat Barn, and does not propose to do so. However, The Management Plan for Historic Buildings and Archaeological Sites ((HRMP) Foster and Thornton 2001) discusses the possibility of tearing down the Cat Barn and a number of other historic buildings that the Department is unable to save due to a number of constraints affecting their preservation and management. The HRMP also discusses a commitment to long-term preservation of 29 significant historical buildings including the 1915 Caspar Woods Schoolhouse located within JDSF in close proximity to the Cat Barn. This statewide preservation effort mitigates the significant impact associated with the eventual loss of the Cat Barn and the remaining historic buildings that the Department is unable to save. The plan was developed in consultation with the State Historic Preservation Officer and in response to extensive public review during an EIR process. The HRMP-EIR (State Clearinghouse Number 99021015) was certified on October 12, 2001. In the event that the Department chose to demolish the Cat Barn, it would find that this action did not cause a significant effect because the demolition of historic buildings had already been disclosed and fully mitigated in the HRMP EIR.

Response to Comment 106
The DEIR identifies construction and maintenance of roadways as the project activity with the greatest potential to cause significant damage to heritage resources. The DEIR also includes a number of mitigation measures designed to avoid these impacts or reduce them to a less than significant level. Prior to any grading activity which could threaten heritage resources, a number of procedural steps will be followed. These include checking the JDSF archaeological database to identify any known sites that might be affected, conducting surveys along existing roads to search for undiscovered heritage resources which could be affected, and the development of protection measures to avoid or protect heritage resources. This work will be done by JDSF staff in consultation with the regional Department Archaeologist. The primary objective will be to avoid grading through a heritage resource by using site avoidance, lifting the blade and leaving that section untreated, or by placement of clean fill over the top of the potentially affected resource (DEIR section VII.9).

This section identifies the possibility of having to re-route road segments around a site or the need to conduct archaeological studies at a site to evaluate its significance or to recover its data before a site is disturbed. These mitigation measures will be designed to reduce the level of impact to less than significant level.

Response to Comment 107
Case law has indeed clarified that documentation of historic buildings prior to demolition does not constitute mitigation sufficient to use a Mitigated Negative Declaration, and that an EIR would need to be prepared. This clarification of law should not be interpreted to mean that public agencies have no requirements to document their historic buildings. CEQA, PRC 5024, and Executive Order W-26-92 provide state agencies with a clear mandate for such documentation and the preparation of Historic Building Records (including photographs) is a standard professional procedure employed during heritage resource inventories. For historic buildings, the recording process often includes a

determination of the building's significance. By discussing documentation of historic buildings under Mitigation Measure 1, the Board is not attempting to mitigate this impact to a less than significant level. It represents public disclosure of the intention to record and document historical resources as a standard practice during inventories and project review.

Response to Comment 108
These mitigation measures commit JDSF staff to follow a number of important steps designed to ensure resource identification and protection. These tasks include heritage resources training given to key JDSF staff, and consultation with local Native Americans. The mitigation measures also specify that the Archaeological Review Procedures for CDF Projects (Foster 2003) be followed during review of all non-THP project activities which have potential to damage heritage resources. All of these listed mitigation measures contribute to the overall objective of identification, documentation and protection of heritage resources.

Contrary to the comment, the mitigation makes use of strategies including avoidance and site-specific mitigation. The following discussion of protection measures appears in Archaeological Review Procedures for CDF Projects (Foster 2003:16):

Develop Protection Measures: CDF shall develop effective protection measures for all identified cultural resources located within project areas. These measures may include adjusting the project location or design to entirely avoid cultural resource locations or changing project activities so that damaging effects to cultural resources will not occur. These protection measures shall be written in clear, enforceable language, and shall be included in the archaeological survey report. CDF shall exercise a strategy of avoiding all adverse impacts to cultural resources. If impacts to cultural resources cannot be avoided, CDF is responsible for developing specific, effective measures to ensure the mitigation/reduction of impacts to cultural resources in order to avoid or prevent substantial adverse change as defined in state law (PRC Sections 5020-5024, 210833.2, 21084.1, and CCR Sections 15064.5 through 15360).

Water Quality

Response to Comment 109
See response to comment 57 above.

The North Coast Regional Water Quality Control Board (NCRWQCB) letter (Agency Comment Letter A-1) has been mischaracterized. See the NCRWQCB letter and the response to its comments in section III of the FEIR. See specifically the response to comments 1, 2, 4, 7, 8.

The NCRWQCB letter cites one instance of a THP (THP 1-03-093 MEN) that it believes was not written in a manner consistent with the Forest Management Plan or the Forest Practice Rules, based upon the field report by it's representative in the THP pre-harvest or pre-approval field inspection process. THP 1-03-093 MEN is not an approved THP, and as such, has not been subject to a full multi-disciplinary review and approval process. The THP was prepared and submitted by a registered professional forester employed by the Department, and employed participation by a certified engineering geologist, a certified sediment and erosion control specialist, and others. The plan was reviewed in the field by representatives of the NCRWQCB and the Department of Fish and Game. As is generally the case, recommendations were made by the agency representatives, to be considered by the Department and the review team in further review of the THP. JDSF staff would have an opportunity to respond to the recommendations made by representatives of agencies who participate in the preharvest field inspection, and to agree with the recommendations, disagree with the recommendations, or offer more information, further analysis, alternative measures, or explanation. This exchange would then go before the multi-disciplinary review team for consideration before a final decision were made by the Department. The review process for the THP was halted by the Department in order to complete the EIR and management planning process for JDSF. This is

not an indication that the NCRWQCB has expressed the opinion that the management plan does not conform to its rules, laws, or policies.

Response to Comment 110
The numerical TMDLs for the Noyo and Big River watersheds are listed in US EPA 1999 and 2001, respectively. Listed instream parameters and targets include turbidity (≤ 20 above background), % fines <0.85 mm (≤ 14% as wet volume), embeddedness (increasing % of riffle habitat units that are less than 25% embedded), pool frequency/depth (≥ 40% of habitat length in pools > 3 ft deep), V* (≤ 0.27 Noyo, <.0.21 Franciscan Big), backwater pools (> % of backwater pools per habitat length), LWD (increase in number and volume of key pieces per stream length), and thalweg profile (increasing variation in thalwag elevation around the mean thalweg slope). Current conditions for these parameters are listed in the Aquatics chapter of the DEIR. In general, turbidity is highly variable depending on discharge (see chart on page VII.10-9), % fines not available (data for D_{50} provided), embeddedness was 20% in 0-1% gradient channels and 27% in 1-2% channels (VII.6.1-25), pool frequency data provided on page VII.6,1-21, V* has mean values of 0.28 for 1-2% gradient channels and 0.39 for 2-4% gradient channels (page VII.6.1-21), LWD data provided on page VII.6.1-35, thalweg profiles—data not available.

The DEIR considers the Big River and Noyo River sediment TMDLs established by the U.S. EPA. Proposed JDSF Management Measures beginning on page VII.10-18 discuss measures in the Plan to achieve water quality goals, including reduced sediment input. Thresholds of significance, beginning on page VII.10-20 in the DEIR, include the following threshold: "An impact of the proposed project would be considered significant to hydrology or water quality if it results in…[a] violation of any water quality standards." This includes the sediment TMDLs established by the U.S. EPA.

The DEIR identifies in the "Rapid Sediment Budget" discussion, that it is estimated that approximately 74% of sediment results from road-related surface erosion and road-related landsliding. This estimate established the need for the Road Management Plan analyzed in the DEIR and RDEIR and contained in the ADFFMP. Road sites are the identified priority for treatment due to the predominance of sediment originating from these sites. The reductions in sediment yield associated with the implementation of the Road Management Plan are anticipated to be consistent with the Noyo and Big River TMDL requirements.

Instream and hillslope monitoring to be implemented is well described in Chapter 5 of the Draft JDSF Management Plan and will provide an indication of stream condition and attainment of water quality objectives. For instream channel conditions, the document states that "Parameters sampled will vary depending on the stream reach evaluated, but may include:

- LWD frequency by size class, with information on condition and placement
- Pool dimensions (including pool volume], residual pool depth, and useable
- rearing/holding/overwintering habitat)
- Pool frequency
- Gravel permeability, embeddedness and size distribution (including overall d_{50} of sampled reaches)
- Channel dimensions (measured using transects)
- Longitudinal profiles and cross sections
- Bank conditions and entrenchment
- Benthic macroinvertebrates

These are parameters listed with associated water quality targets for North Coast listed watersheds.

Response to Comment 111
The text states that increased storm flow volumes (or peak flows) are increased for 10-11 years following clearcut harvesting based on research conducted in the North Fork Caspar Creek basin. In a geomorphic context, a change of approximately one decade is considered a short-term impact.

Nakamoto (1998) reported that while variability was high, there were no dramatic changes in the abundance of coho salmon or steelhead trout recorded after clearcutting nearly 50% of the North Fork in only three years, a treatment in both intensity and timing much more severe than is proposed for the JDSF Management Plan. No changes to the text are necessary.

Response to Comment 112
A time period of three to five years can reasonably be considered to be a short-term hydrologic impact based on common usage in the watershed literature. As the brief literature below indicates, nutrient releases related to logging do no raise significant concerns for salmonids.

Hicks et al. (1991) state that studies indicate that nutrient increases (mostly nitrates) are limited to the first decade after logging; that primary production is stimulated in the presence of increased light and nutrient concentrations; that watersheds dominated by volcanic rock are more likely to show enhanced autotrophic production after logging than watersheds dominated by sedimentary or metamorphic rock (JDSF is largely underlain by sedimentary and metamorphic material); that herbivorous invertebrates will most likely benefit from increased algal growth; and that salmonid production may or may not be enhanced during periods of increased nutrient concentration (citing Gregory et al. 1987). Gregory et al. 1987 state that increased light and nutrient levels following harvesting can elicit increased primary production that may persist for 10 to 20 years. There is no indication from these comprehensive reviews that salmonid production would decrease from the low level nitrate increases that follow logging.

In the JDSF assessment area, Bottorff and Knight (1996) reported that most macroinvertebrate and algal variables increased significantly after clearcut logging in the North Fork Caspar Creek basin. Macroinvertebrates increased because of increased stream algae, and algae increased because of increased light, water temperature, and nutrients. In conclusion, while the literature states that improperly implemented forest practices can adversely impact salmonids if they cause thermal tolerances are exceeded by water temperature increases, if winter habitat is reduced, or if sediment degrades spawning and rearing habitat, there is no indication that nutrient increases associated with logging hillslopes will directly adversely impact fish numbers or biomass.

Dahlgren (1998) documented that nitrate increases following clearcut harvesting in North Fork Caspar Creek were relatively minor. He found that nitrate fluxes from the clearcut watersheds were generally 2 to 2.5 times greater than from the adjacent reference watersheds, but that the elevated concentration of NO_3 in stream water from the clearcut watersheds was rapidly decreased in the higher-order downstream segments. Dahlgren (1998) reported that while elevated NO_3 concentrations in stream water from the clearcut watershed might suggest a large loss of nitrogen due to clearcutting, conversion to a flux (kg/ha/yr) indicates maximum loss of only 1.85 kg/ha/yr, and fluxes decreased to <0.4 kg/ha/yr in the three years following harvest. Thus, he found that stream water loss of nitrogen following clearcutting was not a major environmental concern in this redwood/Douglas-fir ecosystem.

Response to Comment 113
The California Forest Practice Rules state that the applicable Regional Water Quality Control Board Basin Plan standards must be upheld when timber operations are conducted on non-federal lands in this state. See also the responses to comments 1, 2, 5, 6, and 7 in the DEIR comment letter submitted by the North Coast Regional Water Quality Control Board (agency comment letter A-1).

The practices that are proposed under the preferred alternative in the RDEIR have been developed to meet or exceed the standards in the Forest Practice Rules. Proposed JDSF Management Measures beginning on page VII.10-18 discuss measures in the Plan to achieve water quality goals, including reduced sediment input, which directly relate to Basin Plan standards. Thresholds of significance, beginning on page VII.10-20 in the DEIR, include the following threshold: "An impact of the proposed project would be considered significant to hydrology or water quality if it results in…[a] violation of any water quality standards."

Multiple remediations of sediment sources over time and space within JDSF, or, more importantly, within the relevant cumulative watershed effects assessment area, have the potential to produce both short-term adverse impacts and long-term positive impacts on sediment levels and associated beneficial uses. Sediment reduction practices such as replacement of failing or improperly placed or sized culverts have the potential to cause short-term increases in sediment, while promising to provide a long-term reduction in stream sedimentation. These potentials are recognized in the DEIR on page VIII-39. See also footnote 6 on page VIII-58. The programmatic cumulative effects analysis in the DEIR and RDEIR, which looks across the entire watershed assessment area and considers management on other ownerships, concludes that the either the DFMP or the ADFFMP would result in a significant beneficial effect on sediment. At the project level, project-based CEQA analysis is likely to be done for most road remediation projects (see the DEIR sections "Programmatic EIRs and Future Projects" at pages II-10 to -14 and "Future Decisions to Implement the JDSF Management Plan" at pages IV-1 to -2), including, where required, additional cumulative effects analysis that will consider the potential short-term and long-term interaction between the potential sediment effects of multiple road remediation projects. This approach, which will address these effects at the appropriate watershed level of analysis regardless of land ownership, will ensure that the potential short-term increases in sediment that such projects may cause will not result in a significant adverse impact or be in a quantity deleterious to fish, wildlife or other beneficial uses.

Response to Comment 114
Please see the response to comments 110 and 113 regarding compliance with TMDLs and the Basin Plan.

The Board notes that CEQA does not specifically require quantitative modeling. CEQA requires the analysis in an EIR to be sufficient "to provide decision makers with the information which enables them to make a decision…". Such an analysis "need not be exhaustive" and "is to be reviewed in the light of what is reasonably feasible" (CCR §15151). Qualitative projections can be adequate to address future impacts in many cases; in some cases, quantitative models or the necessary data inputs to quantitative models do not exist.

Perhaps the most in-depth and comprehensive water quality information available in California related to timber operations has been collected on JDSF as part of the Caspar Creek watershed study, and results from this 40+ year study have been incorporated in the RDEIR in several locations where appropriate. Practices proposed under the preferred alternative will be superior to those tested in the North Fork of Caspar Creek, making it reasonable to conclude that water quality impacts will be even further reduced. In the North Fork study, the modern Forest Practice Rules were tested in a statistically valid experiment, with results published and posted online. Actual field results from the North Fork Caspar Creek study are far superior to use of a office-based quantitative model, as suggested by the commenter, that can be manipulated to yield results suited to the model developer. The Caspar Creek results have shown that implementation of the modern forest practice rules (post-1973) have substantially reduced water quality impacts related to sediment. Results from the Caspar Creek study, and other information and analysis provided in the DEIR and RDEIR, support the conclusion that TMDL and Basin Plan standards will be upheld under the preferred alternative in the RDEIR.

Response to Comment 115
The comment suggests that DEIR Hydrology and Water Quality Impact 6: "Otherwise degrade water quality" should address herbicide use. Herbicide use is addressed in the Hazards section and the Cumulative Effects section. Individual projects will vary in the potential to deliver herbicides to water; requiring site-specific measures such as increasing buffer width or changing surfactants to reduce this risk. Any applications will be carefully designed to avoid potential water contamination. The project-specific planning process, including CEQA-appropriate project-level assessment of site-specific conditions, compliance with labels, pesticide regulations, and pest control recommendations, will provide adequate water quality protection. Given the limited potential use and protection measures the probability of impact to water quality is virtually non existent. There is no need to address herbicide use under Impact 6 since it is addressed elsewhere.

See also the response to comment 137.

Land Use Planning

Response to Comment 116
The DEIR does not indicated that the buffer would mitigate all potential land use impacts, but that it would prevent any significant land use impacts (see DEIR discussion of land use impacts 2 and 3, DEIR pages VII.11-11 to -12). The neighbor buffer is a mapped and designated zone adjacent to specific rural residential areas, not state parks. A buffer is also specified in forest practice regulation for areas adjacent to state parks, and is referred to as a Special Treatment Area (STA) in the Forest Practice Rules. The neighbor buffer, on the other hand, is a buffer area that has been proposed by the Department to help protect residential properties from potential impacts associated with forest management within JDSF.

This is a programmatic EIR which addresses the general impacts associated with approving the DFMP. The EIR provides a general description and analysis of the neighbor impacts that may occur and provides general mitigation to address those impacts when implementing individual projects under the Plan. However, this EIR is unable to clearly establish the significance of the neighbor impacts associated with individual projects. It therefore requires project proponents to consider the neighborhood effects associated with the individual project and develop appropriate mitigation. This site-specific analysis will be dependent on the proximity of the project to sensitive receptors (e.g., campgrounds, residences, state parks, and sensitive animals), the type of impact generated and intervening vegetation and topography – factors that cannot be addressed at the programmatic level. Subsequent CEQA documents (or THPs) will identify any additional mitigation. Many of the potential neighbor impacts are closely related to the noise, aesthetic, and recreation resource areas that are discussed in their own sections of the DEIR.

JDSF (with the exception of a small area of rangeland) is zoned as “timberland production zone” (TPZ) by Mendocino County, in accordance with the state’s Timberland Productivity Act of 1982. Land use in TPZ is restricted to growing and harvesting timber, as well as certain other compatible uses. The state Government Code for TPZ establishes a presumption that timber operations may be reasonably expected to and will occur on that parcel [Government Code § 51115.1(a)]. By zoning JDSF as TPZ and zoning neighboring parcels as rural residential or other zoning designations, the County is making a per se determination that the adjacent land uses, including timber management and homes, are compatible.

Department of Parks and Recreation comments on the DEIR did not indicate any specific concerns regarding neighborhood buffer effects and harvesting (see Agency DEIR comment letter A-4). As stated above, the forest practice rules establish a special treatment area adjacent to state parks. The Department of Forestry and Fire Protection and the Department of Parks and Recreation have a memorandum of understanding in place to address mutual management concerns related to Mendocino Woodlands. That MOU contains the stipulation:

> Without approval of DPR, CDF shall not harvest trees commercially from within 200 feet of camp areas, recreational cabins, or main roads located within the lands administered by DPR. This harvest exclusion shall not apply to timber removal necessitated by road maintenance activities, activities associated with the existing Railroad Gulch Silvicultural Study area, or other provisions established by this agreement.

This MOU item uses the same buffer width as the basic neighborhood buffer and the STA provided in the DEIR and FPR, but is more restrictive in that it allows no commercial harvesting within the buffer. The more stringent MOU buffer requirement will supersede the standard neighborhood buffer provided in the DFMP or ADFMP.

Response to Comment 117
Page VII.11-6 states. " Issues related to state parks as neighbors are addressed in the Aesthetics and Recreation sections of the EIR. Aesthetics begins on page VII.2-1 and Recreation begins on page VII.14-1.

Response to Comment 118
Please see response to comment 117.

Noise

Response to Comment 119
As described earlier, this is a programmatic EIR which addresses the general impacts associated with approving the ADFFMP. The EIR provides a general description and analysis of the noise sources and impacts that may occur and provides general mitigation to address those impacts when implementing individual projects under the Plan. However, this EIR is unable to clearly establish the significance of noise impacts associated with individual projects. It therefore requires project proponents to consider the noise effects associated with the individual project and develop appropriate mitigation. This site-specific analysis will be dependent on the proximity of the project to sensitive receptors (campgrounds, residences, state parks, sensitive animals), the type of noise generated and intervening vegetation and topography – factors that cannot be addressed at the programmatic level. Subsequent CEQA documents (or THPs) will identify any additional mitigation. Programmatic mitigations 1 through 4 from the DEIR were incorporated into Alternative G (in the RDEIR) to address those noise impacts which were identified and that could be addressed at the program level.

Response to Comment 120
This is a programmatic document which discloses the fact that quarries may be necessary to the future management of the Forest; however, their location, size and proximity to sensitive receptors is speculative at this time and therefore the EIR does not address specific impacts or mitigation. Any quarry development would be subject to further permitting and therefore require the preparation of subsequent CEQA documents. Also, see response to comment 119.

Response to Comment 121
The Board did recognize that temporary or periodic noise associated with implementing the ADFFMP could be significant (Noise Impact 4 (Page VII.12-13) and required mitigation (Noise Mitigation 2). These mitigations have been incorporated into Alternative G which was identified by the Board as the proposed project in the RDEIR.

Response to Comment 122
The proposed 200 foot buffers are not the only noise mitigations required under the Plan. The buffers are part of a suite of measures to address the variety of impacts that may arise. Noise Mitigation 2 also includes: limiting days of timber operations; avoiding nesting and breeding sites; biological surveys prior to project implementation; and limitations on helicopter operations. These mitigations have been incorporated into Alternative G.

Given that this is a programmatic EIR and the uncertainty associated with site specific projects to be implemented at a later date, the Board believes that the level of analysis is appropriate. As described above, future site specific projects will require a more detailed evaluation of their noise effects. Once adopted, the Plan will require future project proponents to "consider" the noise effects associated with their site specific project. Within this context, "consideration" is appropriate mitigation.

Response to Comment 123
Mitigation 3, as well as the other noise mitigations found in the DEIR, has been incorporated into Alternative G, the new proposed project identified by the Board. See Responses 119 through 122.

Public Services and Recreation

Response to Comment 124
The description of the Big River Interim Management Plan found in the in the Recreation Section of the DEIR is adequate for CEQA purposes, as CCR §15125 states the Environmental Setting must describe the conditions that exist at the time the Notice of Preparation is published. The Board has directed the Department to carefully consider the plan's guidance when managing portions of JDSF adjacent to the park unit.

Response to Comment 125
CEQA requires analysis of potential changes in the environment. Additionally, CEQA does not require complete harmony among competing uses. The DEIR recognizes the potential for conflicts between uses on JDSF. These conflicts are addressed through measures in the management plan or through mitigations developed in the DEIR. The combination of thresholds found in the Recreation, Noise and Aesthetics sections of the DEIR provide adequate measures to identify potential impacts to recreation resources: specifically, potential adverse effects on a scenic vista; degradation to the visual character or quality of a site; and, substantial increases in noise. The DEIR provides mitigations to address these potential impacts. Furthermore, site-specific impacts will require analysis and mitigation through the CEQA analysis conducted for individual projects.

Response to Comment 126
The potential decommissioning of Road 200 is offered as an example of a roadway that is suspected of contributing sediment to Chamberlain Creek. There is no plan to decommission this roadway. Should such a plan be considered in the future, the potential for effects related to aquatic and watershed resources, in addition to the potential for impacts to recreational resources, would be considered and an assessment produced.

Response to Comment 127
Please see response to comment 117.

Transportation and Traffic

Response to Comment 128
The baseline condition for determining impacts is the existing environmental setting. This coincides with the management that occurs under the current (1983) management despite temporary lulls in activity, either seasonally or annually. Regardless, the level of truck traffic, under the 1983 Plan or the DEIR's proposed project (Alt. C1) do not exceed the thresholds of significance, especially in consideration of the non-truck traffic already occurring, such as routine forest management, recreation, or state highway traffic. Alternative G will produce an estimated average annual harvest that is lower than Alternative C1, resulted in fewer log truck trips and other harvest-related road use.

Response to Comment 129
In an effort to avoid repetition and minimize the size of the DEIR the Board considered the individual and cumulative impacts to Transportation and Traffic together. Page VII.15-8 describes the thresholds of significance to be applied and Page VII.15-9 makes the significance determinations for both the individual and cumulative effects. In that JDSF is located in a largely rural area and that timber harvesting and recreation activities contribute in a minor way to local traffic, the DEIR found all potential impacts to be less than significant or no impact. The cumulative effects section of the DEIR states that, *"There is no indication that there are currently any existing traffic cumulative impacts within the assessment area;"* therefore, adoption of the DFMP would not contribute toward an existing cumulative effect. The individual and cumulative effects associated with Alternative G were assessed in a similar manner.

Cumulative Effects

Response to Comment 130
Sections of the DEIR and RDEIR that address cumulative effects can be readily identified in the table of contents.

The DEIR and RDEIR provide discussions of cumulative effects in multiple, appropriate places throughout the documents. Cumulative effects are addressed in a number of the individual resource analysis sections, as well as a single section that deals entirely with cumulative effects (Section VIII in the DEIR and Section IV in the RDEIR). Where cumulative effects are discussed in an individual resource analysis section, those discussions are clearly labeled as being about cumulative effects.

Some cumulative effects issues are crosscutting: For example, how do sediment, stream temperature, nutrients, flow, and large woody debris combine to affect in-stream fish habitat? Such issues are appropriately addressed in integrative sections like VIII in the DEIR and IV in the RDEIR. Other cumulative effects issues are more focused on how a single impact type may accumulate over space and time, such as loss of a particular habitat type and its impacts on a species that prefers that habitat (e.g., needs of Marbled Murrelets for trees, typically old growth, with large platform branches to provide nesting sites). This kind of focused impact can be appropriately contained within a section addressing wildlife and wildlife habitat.

Response to Comment 131
The DEIR and EIR provide mitigations that are determined to be necessary and appropriate at a programmatic level. However, while the ADFFMP is primarily programmatic, it does provide some specificity in terms of location and probably silvicultural method for future projects. CALFIRE, in crafting the DFMP, included a list of proposed future harvest units (DFMP Table 5, page 56, and as amended in RDEIR Table II.3). And the DEIR cumulative effects section discusses future timber harvesting that may occur within the assessment area. While the list is subject to change due to adaptive management and operational considerations, it constitutes a series of reasonably foreseeable future projects that require disclosure, impact analysis, and consideration in the assessment of cumulative effects. However, the depth of analysis contained in this EIR for each of the proposed THPs is not to the level of specificity that is typical in the Department's review of THPs, primarily due to the fact that the projects either have not yet been planned to any level of detail, or the planning was preliminary at the time the analysis for the DEIR was conducted. All THPs conducted both on and off JDSF—whether currently approved, under review or in development—will be subject to the Department's discretionary approval under the Forest Practice Act and Rules and the THP review process (a functional equivalent to an EIR; PRC §21080.5). Those that are within the boundaries of JDSF will, in addition, be evaluated for compliance with the protection measures and management guidelines identified in the final Plan and EIR. Subsequent environmental analysis (CEQA documents or THPs) required to conduct activities at JDSF will, where appropriate, rely on "tiering" and incorporate all, or parts, of the final EIR and Plan by reference to avoid repetitive analysis and discussions, and to focus on site-specific information (CCR §15152). All activities will be subject to the constraints and mitigations identified in the final EIR and Plan. In that the DEIR does not authorize or approve any of these future projects and the projects located within JDSF will be subject to the constraints found in the ADFFMP and DEIR the level of analysis is sufficient for a programmatic EIR.

Response to Comment 132
The DEIR does not find that all impacts of timber harvest are fully mitigated. Where the potential for significant impacts is found, those impacts are mitigated to a level of less than significant.

See also the response to the Patrick Higgins DEIR comment letter (see e-mailed comment letter E-26 in Section IV); see specifically the responses to comments 27 and 28.

Similar concerns about past rate of harvest and future harvest intensity were expressed by James Strittholt. See the response to his DEIR comment letter (see e-mailed comment letter E-25); see specifically the response to comment 32.

Response to Comment 133
The DEIR is programmatic and not designed to evaluate detailed impacts from individual future timber harvest plans. However, it is anticipated that water temperatures will improve, in both the short- and long-term, under the management proposed under the DFMP and as mitigated under individual project level THPs. The forest management proposed under the DFMP will promote late seral conditions in the WLPZ in the 5 to 10 year period the commenter is concerned about as well as over the life of the Plan. This should have the indirect benefit of maintaining and enhancing canopy cover as well as a positive effect on stream temperature, large woody debris presence and general streambank stability. In addition, JDSF has a long-term effort to collect water quality data which is expected to facilitate an adaptive management approach (see Chapter 5, Adaptive Management and Monitoring, in the ADFFMP). See also response to comment 67, second paragraph.

Response to Comment 134
The statement made in the RDEIR refers to reduced nutrient loadings compared to impacts from timber operations conducted in the 1980s and 1990s on JDSF, not for the period from approximately 2000 to the present when logging has essentially ceased due to repeated legal challenges to the JDSF Management Plan and DEIR. It is illogical to compare nutrient loading from the proposed alternative to that which has occurred without timber harvesting occurring on JDSF. Based on the court rulings regarding management at JDSF, the 1983 Management Plan is the plan that is currently operative on JDSF, although all harvesting under that plan is enjoined. Harvesting during the 1980s and 1990s was carried out consistent with this plan. Thus, harvesting during that period is an appropriate benchmark for comparison of future logging.

Response to Comment 135
The discussion of large woody debris (LWD) in the Cumulative Effects section (VIII) of the DEIR is substantively supported by more detailed discussion in the Aquatic Resources section (VII.6.1). For aquatic resources as well as other resource areas, the cumulative effects section builds on and integrates the contents of the individual resource analysis sections. In addition to discussing the importance of LWD as an in-stream fish habitat element, the aquatics section of the DEIR provides a large quantity of existing information on the amount of LWD present in streams and information in how past actions have influenced those levels. The DEIR specifically discusses how historic harvest and previous misguided efforts to “clear” streams has resulted in a deficit of LWD (i.e., resulted in an adverse cumulative effect) on JDSF and the larger cumulative effects assessment area in general. Information on LWD loading of JDSF streams is provided in section VII.6.1.3. Regional and JDSF information on LWD loading and recruitment is provided on DEIR pages VII.6.1-34 to 37. Additional stream-specific information on LWD also is provided. Finally, the DEIR also describes several restoration projects that have been implemented in recent years to add large woody debris to streams on JDSF.

The descriptions of the LWD provisions for the ADFFMP (see DEIR sections VII.6.1.11 through VII.6.1.14), including the Additional Management Measure for Large Woody Debris Survey, Recruitment, and Placement, make it clear how the Plan and future projects implemented under it will lead to increased LWD in the JDSF streams over time. These provisions include management of Class I and II Watercourse and Lake Protection Zones (WLPZs) for development of late seral forest, which over time will provide the large sized LWD that will persist the longest in streams and provide the best in-stream habitat function. The provisions also favor LWD recruitment by prohibiting salvage logging in WLPZs. The Additional Management Measure for Large Woody Debris Survey, Recruitment, and Placement (see DEIR page VII.6.1-97 to -98) provides a specific, literature-based target metric for the desired level of LWD in JDSF streams, directs that surveys be done (either programmatically or at the THP level) to determine whether this metric is met, and specific steps that are to be taken where the target is not met.

In short, the DEIR/RDEIR and ADFFMP provide a thorough discussion of cumulative effects with respect to the current deficit of LWD found on many JDSF stream reaches, and they establish LWD recruitment procedures and goals that have a clear target metric and a clear process for their implementation and achievement of increase levels of LWD. The Monitoring and Adaptive Management Program (ADFFMP Chapter 5) addresses LWD as a component of Instream Conditions and Fisheries.

By increasing in-stream LWD over time, the ADFFMP will improve in-stream fisheries habitat. These habitat improvements have the potential to support larger salmonid populations. How these improved habitat conditions will translate into improved fish population numbers and biomass is clearly dependent on factors beyond those related to timber operations on JDSF. These factors include short-term ocean conditions (such as El Niños) and longer term shits in ocean climate (such as the Pacific Decadal Oscillation), as well as changes in ocean harvest (fishing) rates. These influences contribute to year-to-year variability, as well as longer term fluctuations in population levels. These factors are beyond the scope of the DEIR and RDEIR.

Response to Comment 136
The DEIR includes an analysis of potential sediment effects upon water quality that includes a discussion of past impacts, current conditions and observed trends, future potential projects, and proposed mitigation. The comment does not take note of the analysis found in various other sections of the DEIR, including Section VII.7 and VII.10. The assessment includes citation of multiple local watershed studies and their relationship to proposed management and expected results, and a discussion of how research has helped to formulate practices and mitigation. The assessment includes the modeling of planned and potential land management, and expected level of impact resulting from that management. The analysis of potential impacts of sediment upon the fishery can be found in Section VII.6.1.

Response to Comment 137
See responses to comments 101 and 102.

The DEIR (see sections VII.8, VIII.5, and Appendix 13) and RDEIR (III.8, and IV.4) specifically address the potential for cumulative effects from herbicide use and found that a significant impact would not occur.

The comment focuses on the argument that one cannot simply say the additional effect of the proposed project will be small in order to claim there will be no cumulative effect. This is correct. The comment cites the DEIR's information that forestry use of herbicides is a small percentage of total county herbicide use as an indication that the DEIR is making an inappropriate analysis. This conclusion is incorrect and the DEIR's analysis is more sophisticated than this. The critical points with respect to herbicide cumulative effects for JDSF are (1) what are the amounts of herbicide being used on JDSF watersheds, (2) is there any indication that there is currently a significant accumulation of herbicides in the affected environment, and (3) is there is an opportunity for herbicide effects to accumulate over time and space.

Herbicide Usage on JDSF Watersheds The amounts of herbicides used on JDSF watersheds are small. As the data in the DEIR indicate, forestry use of herbicides is a small percentage of total county usage, with agriculture being the largest use by far. As discussed in the DEIR, agricultural land comprises less than one percent of the cumulative effects assessment area. The information below updates the herbicide use information provided in the DEIR and serves to further support its arguments about the lack of potential for significant herbicide-related cumulative effects.

The table that follows lists forestry use relative to county-wide pesticide use for the last three years available. It shows that forestry use has declined from the 2002 use (18,706 lbs and 15,561 acres, DEIR Table VII.8.5, page VII.8-9) and typically accounts for approximately ½ of one percent of total pesticide use in the County by weight, despite the extensive forestlands (there are 925,721 acres of forestland in the county as compared to 72,179 acres of agricultural lands, per county land use

information, presented in DEIR Table VII.1.1). County-wide pesticide use has declined in these last three years as well, when measured by weight. Forestry related herbicide treatments were implemented on approximately 1/3 of one percent of the county land base.

A more local area, bracketing JDSF lands on the north and south, comprised of approximately 266,600 acres was identified using township and range. The area was not extended to the east as this is a different watershed with different land uses; to the west is the ocean. For these lands surrounding JDSF, past forestry and timberland herbicide usage use varied annually from 74 percent to 35 percent of total pounds used within this smaller area. The annual variation in use ties to the fact that the major forestry use in this area, reforestation, typically occurs only once or twice per stand rotation (~45-80 years) on a given area. Note that for the most recent data (2005), forestry applications occurred on less than one percent of the listed land area surrounding JDSF.

Pesticide Use Patterns in Mendocino County Relative to Forestry Use

Analysis Area	Year	Pounds of All Pesticides Applied	Pounds of Pesticides Applied for Forestry & Timberland Applications	Fraction of Total Pesticide use for Forestry & Timberland Applications	Acres of Forest & Timberland Treated*	Acres of Forest & Timberland Treated as Fraction of Total Acres Examined
Mendocino County (2,482,050 acres)	2003	1,475,689	10,032	0.68%	9,277	0.37%
	2004	1,162,903	5,189	0.45%	6,255	0.25%
	2005	1,213,174	6,287	0.52%	9,382	0.38%
JDSF and Neighboring Areas (266,600 acres)	2003	5,389	3,976	73.79%	2,673	1.00%
	2004	3,659	1,298	35.48%	1,414	0.53%
	2005	4,256	1,724	40.49%	2,244	0.84%

* Reports may count acreage more than once if more than one pesticide has been applied. For the county-wide numbers not enough information was available to remove duplicate acres. For the JDSF and neighboring areas, the acres that were obviously duplicated for a given location were removed.

Source: DPR website and DPR staff, October 2007.

Evidence of Existing Significant Cumulative Effects There is no basis in existing information that indicates there has been any significant accumulation of herbicides in the affected environment.

Potential for Accumulation of Herbicide Impacts The foregoing indicated that the amount of herbicides used in the vicinity of JDSF is small. The effects of this small amount of herbicide use to accumulate over time and space with the anticipated use of herbicides on JDSF under the proposed ADFFMP are not expected to be significant. For adverse cumulative effects to occur, the prior use effects would have to persist and combine with present and future potential effects. The small level of herbicide use in the JDSF area, the low level of herbicide use that will occur on JDSF under the management plan, and the fact that these treatments are dispersed across the landscape over space and time provides one indictor that the opportunity for impact accumulation is low.

Forestry-related herbicide use does not typically occur repeatedly in any given area or location. The herbicides most commonly used in forest management applications degrade fairly quickly, as noted in the information provided in DEIR Appendix 13. These products do not tend to bioaccumulate (build up and concentrate over time) in living organisms. The potential for herbicides to accumulate over time.

Mechanisms for movement of herbicides include drift via wind, surface water, and groundwater. Standard herbicide application practices avoid application when wind is capable of moving herbicide off target. No aerial application will be conducted. Herbicides will be applied directly on target vegetation by use of a backpack pump sprayer, thus minimizing potential for drift. This type of application results in little to no atomization of herbicide with potential for wind dispersal. Various measures are used to ensure that application of herbicides does not result in herbicide contamination of surface waters. Buffers and methods of application are effective mechanisms used to address this potential. Movement of herbicide into ground water typically occurs via the soil. Any herbicide movement is related to the period of time in which the herbicide persists in the soil, and whether it's chemical properties result in transport through soil or binding to soil particles. These two attributes are noted in DEIR Appendix 13 for each herbicide.

The Board has determined that cumulative impacts related to herbicide use are not expected to occur.

Other CEQA Analysis

Response to Comment 138
The Board continues to find that there are no significant unavoidable impacts associated with adopting the ADFFMP.

Table for Response to Comment 91: Rationale for Identifying Species with No Potential for Significance Effects Under Any Alternative and Therefore Not Addressed in Detail in the JDSF EIR.

Species	Project Area Occurrence and Habitats	Basis for Determination of Effects	Impacts and Significance of Plan Alternatives
Pomo bronze shoulderband snail	Found on lands adjacent to JDSF. Associated with dense redwood forest in riparian habitats and other mesic areas.	All current old growth forest habitats protected. Riparian habitats to be managed to increase late successional character.	Minor or no direct effects. Potential for habitat enhance-ment. Overall effects less than significant
Fringed myotis Long-legged myotis Pacific big-eared bat	No reported occurrences on or adjacent to JDSF. Breeding and roosting uses are mostly associated with building, caves, but may use hollow trees and other substrates	Breeding and roosting habitat will not be affected. Rangewide declines likely associated with disturbance at roosting and nesting sites (Williams (1986). Species are not likely to be sensitive to vegetation treatment with protection and creation of large snags. Old growth habitat with large snags to be protected and extent of late successional forest to be increased on JDSF	Little or no effects on species or habitat. Impacts less than significant, likely beneficial over long term
Great Blue Heron Great Egret, Double-crested Cormorant	Species are not known to regularly occur, but are observed occasionally onsite or are present on adjacent lands.	Species populations are stable or increasing in the state. If they occur at JDSF, they are localized. Existing FPR nest site protections applied on a project level during timber harvest are effective. Nesting habitat may improve through riparian management	Less-than significant; potentially beneficial in the long-term
Northern Harrier	Primarily a species of wetlands and grasslands. Seldom use shrub or forested areas, even following even aged timber harvest. No known occurrences on or adjacent to JDSF, but winters and may breed in grasslands on nearby Coastal plain.	Likely occurs only as an irregular or localized migrant or wintering species. Uses grassland and other very open areas (e.g Keiffer 1993) generally on flatter terrain, which are limited at JDSF JSDF of low importance to species.	No impacts

Species	Project Area Occurrence and Habitats	Basis for Determination of Effects	Impacts and Significance of Plan Alternatives
Sharp-shinned Hawk	Known to occur	Species has increased substantially through most of its range (Sauer et al. 2005). Not considered a state species of special concern (SSC) in draft revision of SSC list (Shuford, in prep.). Readily uses younger forest stands.	Less than significant or no impact
Merlin	No reported occurrences of the species on or adjacent to JDSF, although likely occurs in low density. Uses open areas and edge habitats for foraging. A wintering species only.	Former threat was pesticide contamination (Remsen 1978). Species has increased over most of breeding range (Sauer et al. 2005), so likely has increased as a wintering species in California. Not considered a SSC in draft revision of list (Shuford, in prep.) Likely not limited by wintering habitat	No impact.
Tricolored Blackbird	No occurrences; found locally on adjacent lands. Requires combination of marsh or wet meadow with dense cover (frequently blackberry) for nesting with grassland for foraging	Limited marsh and meadow habitat at JDSF will not affected by management actions. Not known to forage in forested habitat, even recently cleared areas. Few breeding records in Mendocino County (Keiffer 1993, Beedy and Hamilton	Less than significant or no impact
Yellow-breasted Chat	Known to occur on adjacent lands. Uses well-developed riparian areas dominated by hardwoods. Likely to be locally distributed if present	Suitable habitats will be protected through riparian management	Less than significant or no impact

References

Bawcom, J.A. 2007. Even-aged management and landslide inventory, Jackson Demonstration State Forest, Mendocino County, California. p. 323-33 *in* Standiford, R.B., G, Giusti, Y. Valachovic, W.J. Zielinski, and M.J. Furniss, technical eds. Proceedings of the Redwood Region Forest Science Symposium: What Does the Future Hold? Gen. Tech. Rept. PSW-GTR-194, Pacific Southwest Experiment Station, USDA Forest Service, Albany, CA. 553 p.

Beedy, E.C. and W. J. Hamilton III. 1997. Tricolored blackbird status update and management guidelines. U. S. Fish and Wildlife Service, Portland, OR, and California Department of Fish and Game , Sacramento, CA.

Bottorff, Richard L.; Knight, Allen W. 1996. The effects of clearcut logging on stream biology of the North Fork of Caspar Creek, Jackson Demonstration State Forest, Fort Bragg, CA -- 1986 to 1994.

Unpubl. Final Rept. prepared for the California Department of Forestry and Fire Protection, Contract No. 8CA63802. May 1996. Sacramento, CA. 177 p.

Dahlgren, Randy A. 1998. Effects of forest harvest on biogeochemical processes in the Caspar Creek watershed. Final report to California Department of Forestry and Fire Protection. Agreement Number 8CA17039. December 1998. Department of Land, Air, and Water Resources, University of California, Davis, CA. 153 p.

Gregory, S.V., Lamberti, G.A., Erman, D.C., Koski, K.V., Murphy, M.L., and Sedell, J.R. 1987. Influence of forest practices on aquatic production. *In* Streamside management: forestry and fishery interactions. *Edited by* E.O. Salo and T.W. Cundy. Univ. Wash. Inst. For. Resour. Contrib. 57. pp. 233–255.

Hicks, B.J., J.D. Hall, P.A. Bisson, and J.R. Sidell. 1991. Responses of salmonids to habitat changes. American Fisheries Society Special Publication 19: 483-518.

Keiffer, R. J. 1993. Field checklist of the birds of Mendocino County, California. Hopland, CA.

Remsen, J. V., Jr. Bird Species of Special Concern in California. Wildlife Managemnt Branch Admin. Rept. 78-1. California Department of Fish and Game, Sacramento CA.

Sauer, J. R., J. E. Hines, and J. Fallon. 2005. *The North American Breeding Bird Survey, Results and Analysis 1966 - 2004. Version 2005.2.* USGS Patuxent Wildlife Research Center*, Laurel, MD.*

Shuford, D. (Ed.) in preparation. Bird Species of Special Concern in California. California Department of Fish and Game, Sacramento, CA.

Williams, D. F. 1986. Mammalian Species of Special Concern in California. Wildlife Management Division Admin. Rept. 86-1.California Department of Fish and Game, Sacramento CA.

P-178

Dear Friends - P178

I am very interested in taking
1 care of Jackson State Demonstration forest
in a sustainable way.

2 I would like the old growth
logging to be stopped. I would like to
3 have more recreation areas. I would
like to have silt-causing, salmon habitat-
4 injuring poor roads brought up to standard -
this is so deeply essential.

Also I would like various-age
trees in all the forests upheld as natural
5 healthy habitat. I think plantation
style "tree farms" are irritating, disease prone,
and all around bad concepts.

This forest is soulfully precious &
I'd be so happy to have it correctly
managed so it can be the healthiest
environment possible. It is a treasure
6 we all would adore having preserved for its
own sake as well as for the joy of being
able to go there and partake of the fresh
piney-scented paths and lovely waters and walk
and seeing the wildlife and listening to the silence.

lovely forest. Please give highest priority to Stewardship rather than exploitation.

Lets hold on with all our might to the concept of doing the best we can to take care of the health of this rare resource. It needs all we can do to maintain it in a good way that will recognize its complex and amazing natural right to exist as itself and also for us & future generations

6

Thank you for your time & for listening to the wee small voice of one nature appreciation. I could've made this letter huge with issues, but I think you get the idea.

Sincerely,

Diane Nelson

P.O. Box 387
Hopland Ca
95449-0387

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Mailed Letter P-178

Response to Comment 1
Please see General Response 2.

Response to Comment 2
See General Response 8.

Response to Comment 3
See General Response 14.

Response to Comment 4
See General Response 11 and 13.

Response to Comment 5
See General Response 10. Even-age stand structure is not limited to stands created by even-age silvicultural practices. Naturally occurring disturbance events, such as fires or landslides, create forest openings that often develop into even-age stands. Even-age management practices as implemented on JDSF will not result in a "plantation style tree farm". Rather they will be used to create a varied landscape with a mosaic of habitat types.

The ADFFMP restricts the use of even-aged timber management to up to 26% of the land base. The remainder of the forested areas will utilize uneven-aged management. The areas designated to allow even-aged management may include uneven-aged management as well. In addition, where even-aged prescriptions are applied, there will be a goal to retain important habitat elements such as LWD, snags, and individual trees with structural characteristics that provide habitat value, such as broken tops. Even-aged management as practiced on the Jackson Demonstration State Forest will generally produce stands with more than one canopy layer, consisting of a main canopy layer of trees grown to the designated rotation age, and an overstory of a few to several trees per acre retained from the previous stand to provide a legacy of wildlife habitat elements.

Response to Comment 6
The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions over time in comparison to existing conditions. The current plan is based on a monitoring and adaptive management feedback system. Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary in response to the results that are observed. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts (please see the analysis performed for the EIR). See also General Response 11, 12 and 14.

The legislative mandate that led to the creation of JDSF requires that the forest is actively managed as a demonstration of forest management. It is protected from land use conversion, but it will not be managed as a preserve due to the fact that this would be inconsistent with current legislation and Board policy.

P179

P.O. Box 339
Camptonville, CA 95922
1-800-738-8733

Northern California SOCIETY OF AMERICAN FORESTERS 1900

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY AND FIRE PROTECTION

March 1, 2006

Mr. Stan Dixon, Chairman
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

SUBJECT: Draft Environmental Impact Report for the Jackson Demonstration State Forest Draft Forest Management Plan

Dear Mr. Dixon:

The Northern California Society of American Foresters (NorCal SAF), with over 750 members, is a unit of the Society of American Foresters. NorCal SAF is comprised of professional foresters with extensive experience in the management of forestlands in California. The mission of the Society of American Foresters is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

For a programmatic environmental impact report (EIR), the Jackson Demonstration State Forest (JDSF) draft EIR provides an exceptionally detailed level of description and impact analysis of the draft forest management plan (DFMP) and its alternatives. Considering that timber harvesting plans must be prepared to address the potential project-level impacts of subsequent timber operations, the DEIR
1 ensures that the principal California Environmental Quality Act goal regarding disclosure of environmental impacts for decision makers and the public will be met to an unprecedented extent at JDSF. NorCal SAF commends the California Department of Forestry and Fire Protection and JDSF staff for completing such a deep and comprehensive exploration of the ecological and managerial trends that will determine the future character of JDSF. This EIR reaches, if not defines, the state of the art for environmental analysis of forest management at the property level.

The DEIR persuasively demonstrates the extent to which the California Forest Practice Rules and other forest practices that have become standard industrial practice in the Pacific Coast region have provided, and will continue to provide, improved levels of environmental protection, and the major environmental
2 benefits that accrue to society from the conservation commitments of industrial forest landowners and the diligent application of advanced knowledge by professional resource managers. Moreover, considering the DFMP commitments that exceed standard industry practice (e.g., retention of all old-growth trees and designation of many special management areas), the management approach prescribed

2 in the DFMP achieves a highly desirable balance between environmental protection and restoration and economic productivity at JDSF from which virtually all Californians will benefit.

NorCal SAF supports adoption of the preferred alternative, C1. Alternatives A, E and F conflict so irreconcilably with the established purposes and goals of demonstration state forest ownership that we 3 strongly urge their rejection. In this regard, we disagree with the conclusion on page 40 of Section VII.6.3 that implementation of the latter alternatives would have a less-than-significant effect on the goal of maximum sustained production of high-quality timber products (MSP). Taken on its face, these alternatives would demonstrably fail to achieve this goal. It is only when MSP is considered to impose only an upper limit on timber harvest, as opposed to also entailing a lower limit, as any reasonable interpretation of the goal must imply, that Alternative A, E or F could be construed as not violating the MSP requirements of the Forest Practice Act.

NorCal SAF has two concerns about the preferred alternative. These are the harvest level and political restriction on the treatment of biological systems. JDSF is a highly productive and well-managed forest. Limiting harvest levels to 70% of growth could lead to stand health issues in future decades that would 4 be more difficult and expensive to treat in older stands. The restrictions placed on allowable silviculture systems, including even-aged systems, are not biologically appropriate. Forest research scientists need the management flexibility to conduct responsible and important research to better understand forest ecosystems. Forest conditions are constantly evolving and vary across the landscape. The State of California employs professional foresters to determine feasible and appropriate management activities for a designated area based upon on-site conditions. The foresters on the ground are the ones who are in the best position to determine what methods are most appropriate to maintain forest health and productivity, while giving consideration to other resources as directed by the Forest Practices Act and Forest Practice Rules.

NorCal SAF would also suggest that the DEIR be revised as necessary to provide the required contents 5 of a program timberland environmental impact report (PTEIR). This type of document provides for a relatively stable regulatory and management climate. We believe that adoption of a PTEIR by JDSF would provide a major impetus for serious consideration of that type of management plan by other landowners. As such, adoption of a PTEIR by JDSF would perfectly match its demonstration function. Considering the resources and level of effort the State has already invested in this EIR, and the relative ease with which it could be converted into a PTEIR, not doing so would represent a major loss of opportunity.

Thank you for considering these comments.

Sincerely,

John S. Kessler, Policy Chair
Northern California Society of American Foresters

Mailed Letter P-179

Response to Comment 1
Comment noted. The Board and Department went to great lengths to ensure the quality and completeness of the 2005 DEIR and 2007 RDEIR.

Response to Comment 2
Comment noted. The Board believes that the balanced achieved in Alternative G and the Administrative Draft Final Forest Management Plan based on Alternative G provides a desirable balance among multiple factors, including those mentioned in the comment. This balance is represented by the goals established in the Administrative Draft Final Forest Management Plan, as well as the detailed measures the Plan contains.

Response to Comment 3
The Board has formulated and proposed to adopt an Administrative Draft Final Forest Management Plan, based on Alternative G, which includes elements of several of the alternatives. The Board has determined that the implementation of Alternative G will achieve the goal of maximum sustained production. Alternative G results in a higher level of short-term harvest than Alternative A, E, and F. It is estimated that the short-term annual harvest will vary between 20 and 25 million board feet per year. The Administrative Draft Final Forest Management Plan does not propose to establish a lower limit upon harvest level, but the Board has provided that the short-term harvest not exceed 35 million board feet per year. While the upper harvest limit is constrained in the short-term, continued assessment of stand development and growth and yield, over the longer-term is likely to result in an increasing inventory and level of harvest.

Responsibilities for JDSF to achieve maximum sustained production of high quality timber products (MSP) are found in several places in the Public Resources Code (PRC) and Board policies. The Forest Practice Act establishes the overall intent to regulate the use of timberlands to assure that:

> The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment, [PRC § 4513(b)].

Specifically relevant to JDSF, the theme of achieving maximum sustained timber production “while giving consideration to...” is repeated in Public Resources Code (PRC) §§ 4639 and 5651 and in the Board Policy on timber management on the Demonstration State Forests (Policy 0351.4).

The DEIR (page VII.6.3-40 and Table VII.6.3.9) discusses the issue of whether the alternatives considered would result in significant environmental impacts with respect to the achievement of MSP. The focus of the analysis is ensuring that harvest does not exceed growth. The tradeoff between current timber production vs. greater long-term accrual of timber inventories is discussed. Table VII.6.3.7 in the DEIR or Table III.7 in the RDEIR indicate that lower levels of first decade annual harvest correspond to higher levels of long-term sustained yield.

More generally, the Board, as other land managers, has substantial discretion in determining the consideration to be given to the listed nontimber values while implementing the direction for maximum sustained production of high quality forest products.

Response to Comment 4
The harvest levels and silvicultural systems contained in Alternative C1 and in the Administrative Draft Final Forest Management Plan, which is based on Alternative G, reflect a variety of considerations, including existing statutory and policy direction for the management of JDSF, the need for maintaining a wide variety of forest stand conditions over space and time to provide highly varied research opportunities, protection of a range of environmental values (e.g., providing late seral

or older forest habitat conditions), and public concerns regarding the management of this public forest. Within areas that are to be managed to demonstrate high levels of sustained timber production, both inventory and harvest are expected to increase in the long-term, due to application of intensive forest management principles.

Alternatives C1 and G provide significant flexibility, within their frameworks, for professional forest managers to provide stand-appropriate treatments for addressing management concerns such as forest health. The frameworks of these alternatives, such as spatial assignments of areas that may receive different kinds of silvicultural treatments or overall goals for forest structure conditions, help to ensure that a varied forest landscape is provided for research and demonstration. At the same time, assignment of general treatment types (e.g., unevenaged management) at the watershed level provides research units that have undergone consistent treatment types, which may then be compared to watershed research units that have received other treatment types (e.g., a mix of evenaged and unevenaged management).

While aggressive stand treatment, under certain circumstances, has the potential to provide the opportunity to increase stand health and vigor, passive or light management also has potential to improve forest health in many instances. JDSF will be managed to demonstrate and test a broad range of forest management approaches for the benefit of private forest landowners.

The application of even-aged management has been constrained by Alternative G in consideration of its potential to produce various effects. While the Board generally agrees that management systems are most appropriately determined and applied by professional foresters at the local level, some level of restriction on even-aged management was deemed necessary in order to provide a base level of protection against impacts associated with aesthetics, habitat, and watershed resources. It is the Board's hope that research and demonstration over the coming decade will help to determine the potential for impacts associated with various forms of management.

The Administrative Draft Final Forest Management Plan is expected to remain in effect for the next 10 to 15 years. In the event that unforeseen forest health issues arise during this period, the management staff is free to come before the Board and request that the management plan be reconsidered. The Plan can be modified, through either the standard five-year plan review process called for in Board policy (Board Policy 0351.10) or through more immediate plan amendments brought to the Board by the Department. It is somewhat speculative at this point to attempt to predict the circumstances that may develop which would make this reconsideration a possibility, but both the Board and the Department have this option available at all times.

Response to Comment 5
The Board agrees that there is potential utility in the PTEIR process for JDSF. It is also the Board's desire to see the Forest back in full operation in the near future. The Board will consider the potential for a PTEIR for JDSF during the coming years, as advisory entities provide implementation and policy advice during the interim period.

The process used for development of the management plan for JDSF, including the DEIR, RDEIR, Draft Forest Management Plan and Administrative Draft Final Forest Management Plan have substantial similarity to the PTEIR process. Specifically:

- a detailed, long-term management plan is prepared and is the "project" for the purpose of the CEQA process;
- alternatives to Forest Practice Rule standards can be developed which provide equal or better protection to the resource that may be affected;
- analysis demonstrates that impacts of implementation will be less than significant per CEQA and other relevant laws;
- a separate THP process is required at the timber harvest project level, with the environmental analysis relying substantially on the EIR document;
- projects conducted are within the scope of the EIR document;

- all CEQA processes must be followed, including provision of opportunity for public input.

Also, we note that the Board and Department have previously participated in the development of a PTEIR as a demonstration project. This was the PTEIR developed for a range of fuels treatment prescriptions in the Meadow Vista community of Placer County.

01/01/1995 00:25 7079644182 RECEIVED BY PAGE 01

MAR 1 - 2006

BOARD OF FORESTRY AND FIRE PROTECTION

P180

March 1, 2006

Patricia Lawrence
PO Box 673
Mendocino, CA 95460

Board of Forestry and Fire Protection

Jackson State Demonstration Forest
Draft Environmental Impact Report
SCH @2004022025

Dear Board Members:

Almost daily, since 1990 I have walked or ridden horses on the roads and trails in Jackson Demonstration State Forest. I have engaged in these recreational activities mostly around the intersections of Roads 500 and 600 and adjacent roads beginning about one mile east of Caspar California. I live close enough to often hear the sounds of what people are doing out there. They are usually not very pleasant sounds.

1 From around the intersection of Roads 500 and 600 I can hear the sounds of vehicles being driven recklessly back and forth on Road 500, at Road 600; especially at night and weekends when the partiers know there will be no law enforcement. The next morning I see the deep tire gashes the trucks made and the alcohol containers and other items from the night debauchery. If these drunken people have a vehicular accident and their car explodes and starts the forest on fire, or someone dies or is injured, who's responsible?

2 I can hear the sounds of guns being shot from this same area in Jackson Demonstration State Forest. I'm not sure what they are shooting at. Sometimes people walk though the forest shooting, even rapid-fire guns. Sometimes they are close to where many people live. I walk through the same forest alone and with my friends. So do a lot of other people. One time I walked up to a vehicle whose passengers had just discharged a firearm from their vehicle at this famous intersection. What if someone gets shot while walking through Jackson Demonstration State Forest and all it would have taken is a sign warning people that there are other people in the park.

3 Party fires are also a major concern of mine. People use the dead and live trees from the edge of roads to build fires. They use the trash left by other people. They burn tires and other items such as appliances and vehicles that don't get picked up by anyone, even though your Fort Bragg office gets called many times by several people.

4 Fires at old slash piles. Slash piles of debris from the last logging are used for fires. When these are set on fire in these dry years, you will not have a forest to fight about. Why are there no signs saying extreme fire dangers like there are in other places in California parks?

Patricia Lawrence continued page two...

Patricia Lawrence continued ....

5 Illegal dumping of trash is also out of control. Some of the sites look very toxic. These sites size increases until someone starts the entire pile on fire or the state of California picks it up. Fires are often started under or with dead and dying conifer trees.

6 I do not have all the solutions, but here are some that have occurred to me over the years. Signs need to be posted at entrances to Jackson Demonstration State Forest. I was told the signs get shot at. Better than people getting shot at. Make them out of metal. Visitors will know where the park boundaries are and what they can and cannot do.

7 Park rangers could take a vehicle and a laptop and sit at the entrances to the park. They could give people directions to recycling centers and transfer stations, and talk to them about gun safety and Wildlife preservation.

8 There are many trees in Jackson Demonstration State Forest that are dead and dying from bugs and global warming. It gets worse each year. The chance of a major forest fire increases. The Pine bark beetle, and other pests are causing tree deaths in Mendocino County and across the United States in numbers beyond imagination. Europe and other countries will not take wood from the USA because of this epidemic. In much of Europe, trees are removed when they begin to show signs of disease. They are not left to die and spread diseases to other trees.

9 Your decisions about forest practices can be a good example of what this country can do to save all its forests. I do not think we can afford to cut healthy live trees, especially redwood trees that are needed for erosion and climate control. We need healthy trees to create oxygen for us to breath and to clean the air of pollution. They are a part of our weather. They are a part of the solution to global warming.

10 I understand that Jackson Demonstration State Forest gets funding from its timber harvests. What happens when there are no longer intact ecosystems? When new timber harvest plans for Jackson Demonstration State Forest are made, please consider these important and worthwhile budget items; protection of wildlife, and cleanup and preservation of ecosystems and Native American sites.

Sincerely,

Patricia Lawrence

Patricia Lawrence
PO Box 673
Mendocino, CA 95460
707-964-7821

Jackson State Demonstration Forest
Draft Environmental Impact Report
SCH @2004022025

Mailed Letter P-180

Response to Comment 1
The ability of JDSF staff to enforce all applicable rules and regulations is limited by a combination of the amount and form of illegal activity, the size of the staff, level of law enforcement training, and available budget. It is recognized that illegal activity occurs, and not all of this activity can be prevented. However, the local staff does what it can to limit and curtail this form of activity within the Forest.

JDSF is open to public access and recreation. While most visitors to the Forest abide by all applicable rules and regulations, some do not. It is illegal to damage the Forest roads, to litter the Forest, and to light fires in unauthorized locations. Damage caused by illegal activity is ultimately the responsibility of the person or persons conducting this illegal activity.

CAL FIRE employs staff dedicated to law enforcement, but this limited staff is incapable of preventing all illegal activity, especially after nightfall and on weekends when the majority of the staff is not at work. The few trained law enforcement personnel are incapable of preventing all illegal activity. However, when individuals are encountered who are breaking the law, they are dealt with appropriately.

Response to Comment 2
This discharge of firearms within JDSF must comply with applicable regulations. Many forms of shooting can be conducted legally, but limits apply, such as distances from roads and residences, campgrounds, and other places of concentrated public use. Regulations apply to the discharge of firearms within JDSF. CAL FIRE enforces these regulations when individuals are encountered who are breaking the law. An increase in signage relative to shooting regulation may reduce the incidence of illegal shooting that occurs, but this is somewhat speculative. The management plan does not propose to alter shooting provisions or shooting regulation within the Forest, but does propose to increase the level of signage relative to recreational uses.

Response to Comment 3
JDSF staff devotes a considerable amount of time, effort, and expense to the pickup and disposal of refuse dumped illegally within the Forest, contrary to the stated concern. A clean-up staff of three part-time employees, often in combination with a heavy equipment operator and a conservation camp crew, has loaded and hauled hundreds of cubic yards of illegally-dumped refuse from the Forest, in addition to dozens of abandoned automobiles, travel trailers, and miscellaneous household appliances. This is an on-going activity, conducted in response to illegal dumping within the Forest.

Burning in unauthorized areas is a violation of law.

Response to Comment 4
The Department of Forestry and Fire Protection posts the level of fire danger at all fire stations, and at additional locations along public highways. Additional signage may have limited potential reduce the incidence of illegal burning of vegetation within the Forest, but this is somewhat speculative. The Board believes that most of the individuals who make fires illegally are well aware of the law, which is why most of the illegal burning occurs at night.

Response to Comment 5
The Department actively inspects and removes trash concentrations along roadways and in other places where dumping tends to occur. These trash concentrations are examined for evidence of toxic materials. When these materials are encountered, they are properly disposed of. The County Department of Public Health is contacted whenever an unidentified and potentially toxic substance is encountered.

Response to Comment 6
The Board agrees that improved signage may help reduce the incidence of illegal activity within the Forest, and an increase in signage has been proposed in the management plan.

Response to Comment 7
While posting employees at the entrances to the Forest for substantial periods of time may have potential to reduce illegal activity, the Department does not have sufficient staffing or budget to devote to this effort. The Board believes that most of the illegal dumping that occurs is due to an effort to avoid high dump fees on the part of the participants, not due to lack of knowledge concerning the location of legal waste management facilities.

Response to Comment 8
The death of individual trees within the Forest has not been linked to the phenomenon of global warming. Individual tree mortality is a natural occurrence within the Forest, particularly due to the density and age class structure of many of the stands. Dead trees have demonstrated value as habitat for wildlife. The Department of Fish and Game encourages the retention of dead trees within the Forest. While dead trees may be more prone to burning, the extent of mortality within JDSF is not expected to result in significant impacts related to fire hazard.

Response to Comment 9
Live trees consume carbon dioxide and release oxygen into the atmosphere. The forests of JDSF are growing and productive, and the level of carbon sequestration is increasing. A sustainable harvest of timber can be maintained while continuing to grow and sustain a healthy forest. Significant impacts related to global oxygen supply are not expected to occur. JDSF will produce a net ozygen benefit over time. A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. Significant impacts are not expected to occur.

Response to Comment 10
It is the intent of management to maintain and create intact ecosystems. Protection of wildlife, restoration and protection of ecosystems, and of Native American sites are important elements of the management plan, and are considered when timber harvesting is being planned and implemented. Please see DEIR Sections VII.6 and VII.9 for the assessment of potential impacts to ecosystems, wildlife, and heritage resources.

P-181

Regarding Jackson State (SCH#2004022025) the intent should be restoration of the forests (with selective thinning) and zero erosion of the hills and creeks. With proper management it can be done.

T.S. Force

1

Mailed Letter P-181

Response to Comment 1
Please see General Response 2. Desire for restoration to be the management focus for JDSF noted. Management of JDSF is guided by legislative statutes, regulations and Board policy. While forest restoration is one of the main goals of the ADFFMP, it has not been adopted as the sole management goal. However, the ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for natural resources over time in comparison to existing conditions. The current plan is based on a monitoring and adaptive management feedback system. Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary in response to the results that are observed. Implementation of the ADFFMP is not expected to cause any significant adverse environmental impacts.

A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. A Hillslope Management plan to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion. See also General Response 13.

P-182

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

3/1/06 -1000

MIKE RILLA

ALTERNATIVE D IS BEST APPROACH

COMMENT BY PHONE

Mailed Letter P-182

Response to Comment
Support of Alternative D noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

IV.8 Individual DEIR Mailed Comment P-183

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Fax:707-576-2608 Apr 17 '06 10:04 P.02
653-8957
RECEIVED BY
MAR 1 - 20
BOARD OF FORI
AND FIRE PROTE

P-183

February 24th, 2006

Bruce Campbell
614 Gretna Green Way
Los Angeles, CA 90049

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Comments on Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan

Dear Board of Forestry and to whom it may concern:

The Proposed Alternative known as C1 must be emphatically rejected because:

01 1. the vast majority of Mature Trees are scheduled to be logged in the near term at Jackson DSF, and mature stands are a unique aesthetic resource that will become good habitat for old-growth dependent species -- *logging them would result in fragmentation and thus more edge effects, while it is likely that such logging will increase the amount of sediment in streams as well as raise the temperature of the watercourses which could imperil listed native salmonid species and amphibians;*

02 2. the document largely pretends that mature trees do not exist at Jackson DSF, and, to my knowledge, the Draft EIR for the Draft JDSF Management Plan never mentions the largest mature stands in coastal Mendocino County in the Brandon Gulch, nor the sizable mature stands at West Chamberlain Creek;

03 3. it hurts old-growth dependent species and makes it difficult for them to recover in the Mendocino County redwood region;

04 4. there is considerable wiggle room / leeway under C1 to log large and even old-growth residual trees;

05 5. forest management focusing on removing older trees and stands to plant younger tree plantations is a fire hazard;

06 6. such intensive management activities are an aesthetic nightmare;

07 7. there is an inadequate road plan;

08 8. it would bring increased sedimentation of watercourses and increase their temperatures;

09 9. it would hurt rather than encourage recreational activities;

10 10. it would add toxic materials to land which also impacts watercourses and species;

11 11. the invasive plant control plan does not consider preventative measures;

1.

12 12. it hurts habitat for many species by removing too many snags; (pg. VII.6.6-121 admits that "some key habitat elements, such as snags, depending on their location, could be at risk." Page VI-35 admits that Alternative E would provide "vastly expanded opportunity for snag development".

13 13. it is too vague as to what the plans really are and there is no indication in the documents about the location to which one should send comments;

14 14. the Preferred Alternative C1 would count on commercial logging proceeds to supposedly carry out more ecosytem protection activities, though overall the ecosystem would be clearly better if the larger trees were left where they are, rather than exploiting them to feed bureaucratic pressures to expand activities.

Related to the second point above, Page 4 of Appendix 4 in the Notice of Preparation shows this deception as to what age stands comprise the JDSF. It says that, "The majority of this area is now forested by young stands of redwood and Douglas-fir, but there are a few remnant stands of old growth forest." Excuse me, but is there anything in between? No mention of sizable mature stands. That same page says that, "Substantial core areas would be established to preserve old-growth forest stands and to provide for the development of late-seral habitat conditions." But, a 15 total of 783 acres of late-seral habitat augmentation under Alternative C1 (allowing cutting quite a number of trees even in the buffer area around the small old-growth stands) split between various stands, along with the admittedly narrow riparian areas which have significant edge effects, in no way forms a biologically healthy "core" area in any conservation biology sense of the word. But, continued growth without timber-cutting disruptions in the sizable mature stands (along with nearby smaller ancient stands) can form important core habitat, but these mature stands must be protected rather than logged!

****

I would like to point out that I found no mention in about 1500 pages in 3 volumes in regards to what address (or fax or e-mail) to which one should send comments on the Draft EIR for the JDSF Management Plan. This is entirely unacceptable, and this fact alone should necessitate the preparation of at least a Draft Supplemental document. In most such major (or minor) documents, such information is given often on the first or first few pages, or at least on the first or first few pages following the Table of Contents. Even better than a Draft Supplemental document would be, for this and a number of reasons, for the Board of Forestry should reject the whole Draft EIR and Draft Management Plan, and prepare thorough new draft documents with better alternatives, with it clearly stated where to send comments on those draft documents (through various modes), and with 16 more updated specifics addressed -- some of these topics needing updating and specifics I will mention toward the end of these comments.

When I was seeking the Jackson documents a few weeks ago, I called the Board of Forestry who did not know where I should send it officially, but said I could order a CD of the documents. I did get an e-mail address and a fax number from an officeworker who was trying to be helpful, but these locations to send the comments were not the official ones -- and I know that some lawyers would be happy to not adequately respond to points raised in the draft if something was a little askew such as sending to an unofficial address. I was further appalled that I believe it was Mr. Gentry that called me back when I was insisting on a paper version of the documents, and informed me that it would cost $200 !!!!! Clearly, the state agencies are not interested in thorough public review of the documents (though at least the comment period was extended somewhat) and for this and some bogus claims in the document that many damaging activities are less than significant after

2.

mitigation, I do not believe the legal requirements have been met to adopt the plan – let alone the damaging alternative C1.

17 Appendix 5 Page 21 says that JDSF in 1982 was 50,505 acres. Why is it now claimed to be 48,652 acres? What accounts for this serious discrepancy in acreage totals?

REJECT THE DRAFT EIR for the DRAFT JDSF MANAGEMENT PLAN

I urge outright rejection of the Draft EIR for the Draft JDSF Management Plan. One of its main faults is the logging of the vast majority of the oldest second-growth forest stands at Jackson. These 10,000 to 12,000 acres of valuable forest stands are very unique for the region, yet except for mentioning some mature stands toward the extreme western part of the forest (as well as some at Lower Big River) on a mere two pages of print (plus a map), the mature / older second-growth
18 stands were barely mentioned in the lengthy documents – clearly by design! Adding the acreage of the mature stands mentioned in the aforementioned areas at Jackson, it totalled about 3500 acres, a number which is likely a little less than a third of the mature stands left at Jackson DSF. Why not admit where the other mature stands are in the forest, and what the various alternatives offered would do as far as protecting or pillaging them? I note that page VI-19 says under Alternative F, "Approximately 12,000 acres that have not been entered in the past 80 years shall be managed to address the regional scarcity of that age class".

Other very serious problems with the Jackson documents are the plans for massive clearcutting – with the amazing claim that with few exceptions 29% of the forest could be clearcut for "research purposes." There are other very damaging not quite clearcuts proposed in many other areas of the forest. There is also way too much wiggle room about how even old-growth residual trees may be
19 logged if one determines that they do not have the proper structural characteristics, and I'm sure even more sizable mature trees even in the few areas mentioned for special treatment would be logged due to questionable excuses (with the prime reason to get the cut out to help the fund flow for the bureaucracy at JDSF). Other serious problems with the draft Jackson documents are the inadequate protection for stream temperatures which support native salmonid species, not paying adequate attention to accomodating recreational visitors in the northern and some other parts of the
20 forest, and the proposed use of five identified and some unidentified herbicides (including even leaving the option open for aerial herbicide use). The other main problem with the documents were the inadequate alternatives. Surely, those who like the protective portions and working toward late seral stages in Alternative E would be champions for not just an aggressive inventory examining which of the 500 miles of roads should be decommissioned on the forest, but also would back
21 funding the decommissioning of many roads at JDSF, as well as funding active stream restoration to improve native salmon and steelhead habitat. Though I do not believe that Alternative E or even F are being seriously considered as a possible choice to guide management at JDSF, yet at least Page VI-8 admits in regards to the 7 alternatives that, "These alternatives have been determined generally feasible, consistent with the basic project purpose, goals and objectives and consistent with the CEQA concept that alternatives avoid or lessen a project's environmental effects."

****

PROPOSED HERBICIDE USE

22 I will start with the serious matter of herbicides, and will make short points / paragraphs often asking questions, so that the "response" won't put a number by a big paragraph and act like a simple sentence adequately answers a number of very serious complex questions.

3.

22. There is inadequate analysis and discussion about proposed herbicide (and other possible pesticide) use at JDSF in the Draft EIR / Draft Management Plan. Appendix 13 admits that, "These herbicide summaries are not intended to be exhaustive reviews of the herbicides that may be used at JDSF." That is an understatement!

23 1. Page VII.8-10 and 8-11 says that, "When management activity levels on the Forest increase following the implementation of the DFMP, herbicide use levels may increase above those of the past several years. However, it is not anticipated that herbicide use will increase to the levels of the early to mid 1990s." What were the herbicide use levels in the early to mid 1990s? What is the amount of anticipated annual herbicide use at JDSF? If another EIR / Management Plan mentions an anticipated level of herbicide use, is there anything preventing JDSF managers from ignoring that theoretical anticipated use level and applying more herbicides than stated?

24 2. It is so vague that no herbicide, herbicide formulation, herbicide combination, active ingredient, inert ingredient, or surfactant (be they currently approved, yet-to-be approved, or perhaps even banned herbicides) are forbidden from use at Jackson forest.

25 3. Even aerial application is not forbidden, due to this sentence likely written by a lawyer, "CDF does not anticipate any aerial application." (App. 13, page 1) Just because something is not anticipated does not mean it cannot be done unless specifically stated. Was the last sentence correct in this assumption(?), or will the next EIR / FMP forbid aerially spraying of herbicides at JDSF?

26 4. While admitting that CDF anticipates possible use of 5 proposed herbicides (plus an unknown number of current and future herbicides) "for invasive weed control and reforestation purposes", there is no indication how much (if any) might be used in bodies of water targetting aquatic plants or in riparian zones.

27 5. If 1500 pages can be spewed to justify essentially the same damaging stale plan halted by the court in mid-2003, surely you can present the basic "specific label and Material Safety Data Sheet" mentioned in the first sentence of the second paragraph of App. 13, page 1 in regards to herbicides proposed for use at JDSF.

28 6. How many of the 5 herbicides (or others being considered for use at Jackson) have had a complete set of Toxicological Profile tests completed and documented? Will you delay or ban use of such herbicides that do not have such a complete Toxicological Profile? If they are completed for certain herbicides, what results from the profile would prompt a decision to not use these materials?

29 7. What are the active ingredients, inert ingredients, surfactants, adjuvants, carriers, diluents, binders, dispersants, stabilizers, neutralizers, antifoamers, buffers, and degradation products for the 5 mentioned herbicides and for any other herbicide that may be used by CDF or worker at JDSF?

30 8. Will you allow the use of any herbicide at JDSF which was approved due to testing by Industrial Bio-Test which was a firm with a number of labs which had some executives jailed due to falsified, sloppy, and inaccurate chemical testing work?

31 9. Seeing that the majority of the pesticides in the western United States are sprayed / applied by Spanish-speaking workers, will all who might apply herbicides be able to read the warning label and Material Safety Data Sheet (whether or not the Toxicological Profile) in Spanish? Do such exist in Spanish in Mendocino County, in Sacramento, or beyond?

4.

32 10. Seeing that App. 13 page 1 says, "in the future, there may be additions or deletions to the list of herbicides considered for use at JDSF", then I'd like to propose deleting the 5 proposed herbicides and all others from consideration for use at JDSF.

33 11. Has it ever occurred to CDF / BOF that JDSF could be a demonstration center for non-chemical ways of controlling unwanted vegetation, and that you could partner with universities to develop innovative tools and other non-chemical alternatives, plus have unemployed forestry and other workers, youth, prisoners, and others assist with the task?

34 12. Has JDSF considered the fact that clearcut logging (and other severely disturbing logging practices) as well as related vehicular traffic (and otherwise) are the prime factors spreading invasive plants as well as lead to pioneer brush which chemical addicts determine need to be poisoned?

35 13. Will any studies regarding volatilization of herbicide residues (through brown-and-burn operations or due to wildfire following herbicide application) and might they have any effect on herbicide use decisions at Jackson?

36 14. Have the 5 herbicides, or any future use of other herbicides, consider studies relating to herbicides and formulations disrupting immune and/or hormonal systems, or in regards to their genetic, teratogenic, or fetotoxic effects?

37 15. I see no mention of likelihood of these 5 herbicides and others which may be used to reach groundwater (or their degradation products). Has CDF / BOF examined the studies or summaries about why contamination of groundwater resulted in the banning of Roundup / glyphosate in Denmark. (A couple articles on this matter are at <www.organicconsumers.org/foodsafety/glyphosate051503.cfm> <www.organicconsumers.org/ge/monsanto_roundup_banned.cfm>. I believe that due to very effect p.r. by Monsanto claiming that glyphosate biodegrades so quickly, that those testing groundwater for pesticides do not even consider testing for this widespread active ingredient whose formulation is always more toxic than the active ingredient glyphosate alone.

38 16. Might an herbicide which necessarily contains dioxin contaminants be considered for use at JDSF? Might any herbicide which sometimes contains 2,3,7,8 tetrachlorodibenzo-p-dioxin or 1,2,3,7,8-pentachlorodibenzo-p-dioxin be considered for use at Jackson forest?

39 17. Page VII.8-9 says, "In addition to pesticides, other regulated potentially hazardous materials that are anticipated to be used on JDSF include:" -- then the last bullet point says, "other pesticides, such as insecticides, fungicides, rodenticides (no use in DFMP)". So, other pesticides are "anticipated to be used on JDSF", yet it claims "no use in DFMP". This is bait-and-switch -- obviously written documents / CDs which is "the plan" does not entail use of such, but apparently on the ground use at JDSF is anticipated. Please clarify these contradictory claims.

40 18. Under "8.2 Regional and Project Setting for Hazardous Materials" on Page VII.8-10, it says that, "JDSF maintains a chemical storage facility, which contains herbicides, located near the Mendocino Woodlands Forest Fire Station (Personal communication, Walt Decker)." Is there anything besides herbicides and related spray equipment in this facility? Are there any herbicides / chemicals other than the 5 listed in the Draft EIR / DFMP in this chemical storage facility? Why

5.

was there no analysis of dangers from possible incidents regarding this, likely the largest concentration of toxic materials at JDSF? (By the way, the one sentence saying that there are requirements for "the transport, storage, handling, and disposal of the hazardous materials that might be used at JDSF are established and enforced by the NCRWQCB, Department of Pesticide Regulation, and County Agricultural Commissioner" means virtually nothing on the ground since these are generally office bureaucrats who have some written regulations on a computer or in a filing cabinet. The public wants to know what could happen in the real world on the ground (with some likelihood of impacting air and water pathways and living organisms, not some rosy theory that there is no need for concern since there are regulations. Will the herbicide storage matter be analyzed for the next EIR / DFMP at JDSF?

41 19. In regards to the Washington Toxics Coalition lawsuit which forced EPA to study the impact of 55 pesticides on salmon, I note on page VII.8-18 that, "As of June 30th, 2004, the EPA had reviewed over half of the 55 pesticides subject to this litigation." How did the 5 herbicides anticipated for use at JDSF in this Draft EIR / FMP fare in these studies? Please elaborate on EPA's findings pertaining to the herbicides which your documents listed as anticipated for use at JDSF.

42 20. Have you considered the impact on the aquatic food chain from the "eutrophication" effect of herbicides on waterways (whether applied onto aquatic plants or from herbicides washed into watercourses after being applied on land)? If so, please present these findings.

43 21. Clopyralid was banned for lawn uses in California in 2002 because of its persistence in compost. Would vegetation killed by clopyralid be burned or be hauled to a municipal dump or compost heap, or what would be the specific fate of this vegetation? (It is also been found to be "highly soluble in water" and is considered a "Hazard to Humans and Domestic Animals".

44 Page 4-91 of the Bureau of Land Management's Vegetation Treatment on BLM Lands in Western U.S. Draft Programmatic Environmental Review says, "Aquatic herbicides with the greatest likelihood of affecting special status amphibian species during normal application to an aquatic habitat are diquat and some formulations of glyphosate."

45 Excellent compilations of important points from studies regarding the impact of pesticides on salmon can be obtained from the Northwest Coalition for Alternatives to Pesticides based in Eugene, Oregon. The Executive Summary of the report Diminishing Returns: Salmon Decline and Pesticides can be found at <www.pesticide.org/salpestx.pdf>, while the Full Report can be found at <www.pesticide.org/salpest.pdf>. The report called Poisoned Waters (Protecting Pacific Salmon) can be found at <www.pesticide.org/PoisonedWaters.pdf>. Various articles on the subject are compiled at <www.pesticide.org/CleanWaterSalmon.html>. Please include these reports and articles, and research and give their references in your next EIR / FMP documents.

46 I am appalled by the wide range of uses of herbicides planned by William Baxter mentioned on Page VII.8-12 of the DEIR / DFMP, "Herbicide use may occur in the following situations:" "Controlling invasive species in order to maintain native plant communities, promote conifer habitat, and prevent the establishment and spread of new exotics." "Control roadside vegetation, primarily invasive species such as pampas grass, broom, and gorse that easily spread via roadways, but also native plant species that vigorously grow in these conditions and hamper road use and maintenance. *"For use, following broadcast burns and wildfires, to facilitate successful establishment and growth of planted conifer seedlings by reducing brush competition. * To inhibit

6.

the regrowth of hardwoods and maintain high conifer occupancy in harvest areas." Controlling Tasmanian blue gum infestation (plantation) at Caspar Creek watershed is also mentioned.

47 Virtually all excuses for use of herbicides is included in that quote, including reasons where one could make an argument to conduct aerial spraying of herbicides. One could spray all 500 miles of roadsides at JDSF. One can spray to kill invasive plants admittedly largely spread by the excessive road system. One can spray following wildfires and broadcast burns. And one can spray after logging to control brush and hardwood regrowth, and then again to assist conifer plantations by killing the so-called competition of brush and hardwoods which dare to try to maintain some botanical diversity on our publicly-owned state forest.

I will briefly touch on herbicides later in these comments when discussing fire dangers.

USE of OTHER CHEMICALS at JDSF

48 a. In relation to other hazardous material in those bullet points on pages VII.8-9 and 8-10, where are these materials stored at JDSF?

49 b. What substances comprise the "chemical treatments on Forest roads for dust abatement"? (Page VII.8-10). Are these analyzed in this Draft EIR / DFMP? Will they be analyzed in the next EIR / FMP? Are these the same or different chemicals as will be used as "chemical stabilizers" to control soil erosion? If different, of what materials do these chemical stabilizers consist?

50 The next EIR / FMP (be it another Draft, a Supplemental Draft, or the Final) must consider possible cumulative impacts of purposeful use and accidental spills and their impact on workers, recreational users (including children and pregnant women), specific sites, sensitive plants, aquatic areas, and the food chain in the watersheds at JDSF. Synergistic and cumulative effects from different herbicide formulations, and impacts of combinations of ingredients and breakdown products of different herbicides along with fire retardants (if used at JDSF), spilled fuel and other lubricants, and "proper" or improper use of "chemical soil stabilizers" and road dust-abating chemicals -- and their impacts on soil, watercourses, spawning gravels, groundwater, various listed and other sensitive species (and their food chain) must be carefully examined.

GENETICALLY MODIFIED TREES, GRASSES, and MULCH

51 1. Will the Board of Forestry or the California Department of Forestry plant, or allow to be planted, any genetically modified (using recombinant DNA technology to cross the trans-species barrier) trees, grasses, or other plants at JDSF? Seeing that there is an ordinance in Mendocino County prohibiting these crops, I hope such are not planned for Jackson. Also, I like that JDSF uses tree species from local genetic stock, which should preclude genetically modified trees, grasses, turf, and other plants from becoming an issue -- which should also make the likelihood of these threatening plants at Jackson a remote possibility.

52 2. Will land managers at Jackson take any steps to try to discourage mulch used at the forest from being from remnants of genetically modified crops? Will any of these steps also apply to the type of feed which horse and other riders may bring to JDSF to feed their horse or other animal? If the commercialization of genetically modified alfalfa goes through (which is being proposed in the past several months), could people bring genetically modified alfalfa to Jackson to feed their horses or other animals despite the likelihood of some seed escaping and taking hold on what is supposed to

be a forest with just genetic stock vegetation (besides the invasive weed and eucalyptus problems)? (I will discuss mulch further when primarily discussing the impact of roads and management activities on the spread of invasive plant species at JDSF.

****

53 I call for the rejection of the Draft Management Plan for JDSF due to the logging of the oldest second-growth mature forest stands (between 80 and 120 years old), due to plans for widespread clearcutting and other commercial logging, due to inadequate protection for streams from warmer temperatures and sedimentation which can harm or kill native salmonids, due to plans to use herbicides, and due to some other reasons enumerated above.

54 Also, there are no plans to accomodate more recreation in the area, while much of the mature forest at key current recreational sites such as Brandon Gulch and West Chamberlain Creek areas will be logged, while leaving just small "facade" buffer areas near trails and campgrounds -- and some logging can even occur within these "facade" buffer areas! I even object to the so-called management or treatment to achieve late seral forests in mature stands especially in the West Chamberlain and Brandon Gulch areas, as well as in the few areas identified as notable habitat 55 proximate to marbled murrelets at the western side of Jackson forest (as well as at the Lower Big River mature stand). I note on page VIII-36 that 40.4% of the Brandon Gulch CWE assessment area and 21.6% of the Chamberlain CWE assessment area are on the chopping block within the next decade.

56 The best alternative presented is Alternative E which would manage the forest for a return to late-seral forest conditions. However, even that alternative is lacking because it does not allot funds for the decommissioning of hundreds of miles of roads which wreak havoc on stream habitat or the active restoration of salmon habitat in streams. Thus, the Proposed Alternative C1, and the Draft JDSF plan in general, should be rejected!

****

AESTHETICS

The Proposed Alternative C1 would substantially degrade the existing visual character and quality of many sites at Jackson Demonstration State Forest:

a. aesthetic mitigations under C1 are clearly inadequate -- not only is the 29% of the forest planned for clearcutting / even-aged management clearly not mitigatable, but other widespread commercial logging (including of mature stands) cannot be mitigated. Amazingly, on page VI-10, the Draft EIR 57 has the nerve to say that in relation to Alt. C1, "With limited exception, clearcutting is permitted only for research purposes." Give it up! JDSF has had a massive amount of these so-called "experiments" already, and they are harmful aesthetically, to streamcourses and rivers, to aquatic and amphibian life, and to old-growth forest dependent species. And seeing that you mentioned it, what parts of the forest would be the "exceptions" where clearcutting would be allowed other than for "research purposes." Also, what precisely are the research purposes for the extensive clearcuts 58 planned for the Berry Gulch watershed assessment area, as well as for other watershed assessment areas at Jackson forest?

59 b. Page VII.2-12 "Thresholds of Concern" points out that the proposed project would have a significant impact on aesthetics if it "substantially degrades the existing visual character or quality of the site and its surroundings" -- and mentions that the guidance as to what is considered significant is based on the California Environmental Quality Act (PRC Section 21001 and CEQA

8.

Guidelines). The documents act like one need not be concerned with aesthetics other than from a panoramic vista along a main road or trail. But, Webster's New World Dictionary 1975 defines 59 "site" as "location or scene". There are many locations at JDSF, and most of these are not panoramic vistas (a number of which also show the scars form excessively intensive timber and road management activities).

60 c. It is wrong to have a Registered Professional Forester as the point person making determinations as to whether a certain management activity has a significant impact on aesthetics.

d. In relation to the Alternatives presented in the Draft Forest Management Plan, page VII.2-19 says, "Alternatives C2 through F contain more provisions than C1 for aesthetic considerations. 62 Alternatives D through F include little or no clearcutting or other evenaged management and provide for greater levels of late seral forest development. These alternatives would have a less than significant impact on the visual character or quality of the site and its surroundings."

e. The terms "visual character" as well as "site and its surroundings" certainly include more areas than what one can see from a major road or trail at Jackson forest or near a state park or Special Concerns Area -- and even most of these buffers can have a certain amount of management activities / logging! (Thus, the Draft Forest Management Plan for Jackson acts like less intensive 63 logging in buffer areas, as well as treating logging slash within 50 feet of major corridors, is sufficient to declare that "Timber harvests and related activities" would not "substantially degrade the existing visual character or quality" of the Special Treatment Areas and buffer areas, yet acts like there is no need to be concerned about visual impacts on the vast majority of our state forest.)

f. Page VII.2-18 admits that "comments made through the public Scoping process expressed the sentiment that the buffers were not necessarily sufficient to mitigate aesthetic impacts." Page 64 VII.2-24 says that "The public scoping for this document clearly indicated a strong desire by some citizens and organizations for the State Forest to place increased importance on recreational and aesthetic resource values."

OVERLAP BETWEEN AESTHETICS and MATURE FORESTS at JDSF

Please note that AESTHETICS "d." above mentions the more aesthetically-pleasing alternatives and mentions the plus for aesthetics in providing "for greater levels of late seral forest development". Of course, not only is managing -- and sometimes non-managing -- for future late 65 seral development helpful for aesthetics as well as for a number of species, but if a forest is currently mature, then it is clearly aesthetically pleasing. One doesn't need to log trees and leave stumps and slash around to try to accelerate some eventually pleasing aesthetics because the mature forest stands -- so rare especially in the Coast Ranges of central or southern Mendocino County -- are already aesthetically positive and will naturally become more so.

The following points are also related to the importance of the overlap of the importance of the mature forest stands at JDSF with the topic and legal requirement to not significantly impact the currently pleasant aesthetics in these stands:

66 , immediately following,

a. Pages VII.2-24 and 2-25 admit only that there is an aesthetic problem related to PG&E transmission lines which the State Forest has no control over, and claim that "all other visual cumulative impacts within the boundaries of the State Forest to be less than significant is supported by the following findings:". The third bullet point is "The State Forest maintains a high proportion

9.

of area devoted to continuous forest cover in managed stands of medium to large trees, and maintains the highest standing timber inventory of any large forest ownership in the coastal watersheds of Mendocino County." Since the eleven ancient groves (totalling 459 acres, and ranging from 5 to 101 acres in size) cannot be considered managed (except by nature), then this last
66 quoted sentence must be referring to the 10,000 to 12,000 acres of mature forests (with a few scattered residual old-growth) at Jackson forest. (See the section on Mature Forests immediately following, because it is precisely the"medium to large trees" that allegedly make the current visual cumulative effects at Jackson "less than significant" which are the primary trees which are targetted for widespread logging as soon as JDSF managers can undertake it!)

b. The second bullet point in regards to criteria to help in determining whether physical changes significantly affect aesthetics on page VII.2-12 is "The integrity and uniqueness of the existing
67 aesthetic resource." The first sentence under that point says that, "The magnitude of change necessary to create a significant impact to aesthetics is greater in a disturbed or non-unique environment than in a pristine or rare environment." (This also can apply to the Mature Forests section because substantial tracts of mature forests are comparatively pristine and extremely rare in coastal Mendocino County other than the 10,000 to12,000 acres at Jackson forest.)

68 c. I do like the admission on page VI-41 that under Alternative E, "Reduction in forest management activity expected to provide increase in aesthetic values."

MATURE FORESTS

Under "Scenic Attractiveness" on pages VII.2-3 and 2-4, it says that "Distinctive landscapes on JDSF with a high scenic attractiveness are:" – the fifth bullet point is, "forested areas dominated by a high level of stocking of relatively large trees (The high levels of forest stocking and higher
69 percentages of relatively mature timber stands, as compared to commercial industrial forest ownerships within Mendocino County, provide aesthetic values for forest visitors who desire to recreate or travel within JDSF)". (Clearly, this quote also applies to the Aesthetics topic.)

Page VI-8 says that, "JDSF is not typical of other large forestland holdings in its maturing second-growth timber conditions, its ongoing research activities such as the Caspar Creek Study, its old growth redwood and Douglas-fir groves, and its special facilities such as conservation camps."

In relation to relatively rare habitat types and a forested mosaic, page V-11 says, "Maintaining a forest mosaic that helps support the many species in the region is a goal for both forest management and private forest demonstration. Habitat protection and restoration of relatively rare habitat types
70 is also an important element of forest management." Clearly, old-growth forests which are predominately redwood, some residual old-growth with mature redwood forest, and also mature redwood forests are all "relatively rare habitat types". That same page mentions that, "It can be assumed that most of the redwood forest in this region was once dominated by old-growth".
moderately intensive

For the Proposed Alternative C1 (under "Forest Management Special Concern Areas and Woodlands Special Treatment Areas) on page VI-20, it says that only 780 acres at JDSF is devoted
71 to "old-growth augmentation (late seral development)". This is clearly inadequate to protect this relatively rare habitat type, while even what JDSF managers may declare timber harvest for habitat restoration may well look like at least moderately intensive forest management which other than in young plantation areas would look to recreationists as well as some old-growth dependent species like you were eliminating canopy and sizable trees which can serve as murrelet social activity

10.

habitat and work into at least marginal nesting habitat within several decades. Not that I support even what this plan purports to be management to achieve late seral forest stage especially in the
71 older and larger mature stands, but your denial of the importance of the mature stands even to the point of not proposing at least lighter thinning in those areas is appalling and biologically ignorant as well as an aesthetic disgrace from the perspective of recreationists.

72 It is quite disturbing to read on page VII.2-15 that, "Even-aged prescriptions are proposed in the central and eastern portions of the JDSF". It is also disturbing that such a high percentage of Berry Gulch, which is adjacent to the Mendocino Woodlands area and the Lower Big River mature stands the document discusses the importance of when discussing the marbled murrelet, is scheduled not only for logging, but for clearcutting / evenaged management.

WESTERN PART of JACKSON FOREST

73 Despite the stupidity of having a special "clearcutting experiment" on the Caspar Creek watershed in the latitudinal middle of the western portion of the Jackson forest (and the existence of a eucalyptus plantation in the area), still this portion of JDSF is quite important. In the western portion, MANAGEMENT ACTIVITIES SHOULD BE MINIMIZED and recreation should not be encouraged because:

74 a. rare plants at Jackson are especially concentrated here -- these include: Pygmy Cypress, Pygmy Manzanita, Leafy-Stemmed Mitrewort, Bolander's Beach Pine, Swamp Harebell, Coast Lily, and California Sedge.

75 b. some mature forests exist here (plus some old-growth residuals are in the Russian Gulch watershed in the state forest, besides more substantial old-growth groves in the state park further west);

76 c. the special clearcutting area at Caspar Creek has already caused enough damage in the west, and apparently this area cannot be guided by the managment plan;

77 d. there should only be an increase in campgrounds in this area if some campgrounds at adjoining state park land are closed to try to avoid disturbing marbled murrelet nests nearby -- and if campgrounds are located, JDSF personnel should educate campers not to leave food scraps which attract corvid bird species which also consumes marbled murrelet chicks and eggs.

78 Management activities such as logging should be minimized in the western portion (as well as in Lower Big River, Brandon Gulch, West Chamberlain Creek watershed, east side of mainstem of
79 Chamberlain Creek, and other areas), while road-related activities should generally pertain to decommissioning damaging and unneeded roads. I object to the intensive nature of JDSF's
80 so-called "management for late seral forest", and definitely object to more logging activities in these mostly mature stands adjacent to state parks before the specific assessment of habitat for the marbled murrelet is completed. Off-road vehicles must be halted from damaging riparian and other
81 areas, plus should be controlled to stop the spread of invasive plants and so as not to run over and damage the aforementioned rare plant species which especially favor the western part of the Jackson forest. And due to this area being adjacent to murrelet nesting habitat (while hopefully being
82 allowed to mature further to accomodate some murrelet nests in the future), hunting must be prohibited at least in this part of JDSF.

11.

COAST REDWOOD ECOSYSTEM and MARBLED MURRELET RECOVERY

83 The draft documents try to downplay the role which Jackson Demonstration State Forest can play in recovering old-growth forest dependent species. This area is quite vital due to it being the largest contiguous publicly-owned land in coastal Mendocino County -- a county and part of the county devastated by corporate timberland clearcutting. Also, the 459 acres of unentered or residual old-growth areas are a start, and the 10,000 to12,000 acres of mature forests are quite unique in the county and vital for recovery of watersheds and various species in this region.

Page V-12 of the Draft JDSF Management Plan says, "JDSF and the surrounding forestland area provides habitat for a number of listed and sensitive fish and wildlife species, including the Northern Spotted Owl, coho salmon, and steelhead. In addition, JDSF currently provides or may provide in the future, habitat for several listed or sensitive species that are not currently known to occur on the forest. These species include the Marbled Murrelet, Pacific fisher, and Humboldt marten. As such, the large block of publicly owned forestland that is JDSF, in conjunction with other parcels of public land in central Mendocino County, represents a valuable resource of potential reoccupancy and sustainability for at-risk wildlife species."

84 On a disturbing note which should mobilize us (and managers at JDSF and overseers at BOF) to action is that the 5-Year Murrelet Status review (McShane et al. 2004) assessed the status and trends of Marbled Murrelet populations within each of U.S. Fish and Wildlife Service's 6 Recovery Zones. Page VII-6.6-74 says, "The Zone Model projected an extirpation probability of 100% within 40 years for Recovery Zones 5 and 6 with a 2% annual migration rate into the zone." That means that murrelets will be entirely gone from the Humboldt / Mendocino County line all the way down to the southern extent of their habitat in Monterey County by the year 2044!

We need the agency managing the largest publicly-owned contiguous block of land in coastal Mendocino County to step up to the plate big-time, and do all that they can to provide extensive habitat for the Marbled Murrelet (and other old-growth forest dependent species). So-called mitigations to help murrelet habitat under the plan are a dismal sham when they plan to log the bulk of mature trees at JDSF within the next five to ten years. The marbled murrelet, which is federally-listed as threatened and state-listed as endangered, needs our help immediately (or even sooner!). A decent start at this late date would be to emphatically reject the Jackson Demonstration State Forest Management Plan.

85 I noticed on pages VI-5 and VI-6 that rejected from consideration as an alternative was a "Regional Watershed and Conservation Planning" approach using JDSF as a "mitigation bank" or "mitigation site" for wildlife connectivity partly with other public lands in the county. While it makes sense to dismiss this as an alternative because it may be difficult to mandate participation of neighboring timber companies (though it makes some sense for neighbors developing Habitat Conservation Plans to work with this approach), yet it is incredibly logical biologically. It is disingenuous to say that, "The use of JDSF as a mitigation site could allow more intense timber management activities elsewhere likely resulting in a full range of significant indirect impacts that would not otherwise occur as a result of this project." Just because you are obsessed with board-feet does not mean that if you take better care of a certain area, that it would necessitate more-than-planned intensive timber activities (beyond what was already planned) elsewhere in the watershed having significant indirect effects. Using that so-called logic, why protect any forest area since people will get just forest products from somewhere else? You mention regarding the

12.

aforementioned suggested alternative which you dismiss as not needing analysis that, "Components of this alternative have been incorporated into Alternatives C2, D, E and F to the extent that they meet the project purpose, goals and objectives, and reduce environmental impacts." This indicates that the Proposed Alternative C1 does not consider and incorporate into it the regional significance which the JDSF area could play in regional wildlife connectivity and as a prime area for recovery of habitat for old-growth redwood ecosystem dependent species. 86

So, on the one hand you dismiss the role of Jackson as a possible key recovery area for old-growth dependent species in the watershed and regional setting, yet on the other hand you use portions of somewhat "coarse" studies to act like the Jackson area is not in the highest priorities for restoration as far as redwood ecosystem conservation. If you are going to use extrapolations from Strittholt's "coarse" work and snippets from other studies to argue that the JDSF area is not vital for recovery of the coast redwood ecosystem, you cannot simultaneously argue that it is beyond your scope to analyze JDSF as a key component in watershed and regional recovery habitat for the redwood ecosystem and for a number of species dependent upon it. 87

I note that Page V-1 says that, "About half of the total area of redwood forest is located to the north of JDSF and about half to the south. With 542,000 acres of redwood forest, Mendocino County encompasses more redwood forest area than any other county in California (Fire and Resource Assessment Program 2002)." This fact that Jackson has similar amounts of redwood ecosystem to its north and to its south, and the fact that the Jackson DSF is the largest contiguous publicly-owned acreage in coastal Mendocino County, should give one a hint about how significant a role this area could play in "demonstrating" that we should care about managing this vital area to help in watershed, regional, and ecosystem recovery for the health of its watersheds and to prevent extirpation of species (for instance) from murrelet Recovery Zone 5. But since you do not seem to take watershed, regional, or ecosystem conservation and recovery seriously, I do not believe your statement on page V-11 that, "Habitat protection and restoration of relatively rare habitat types is also an important element of forest management." This EIR / FMP admits that there would be substantial edge effects in the streamside buffer areas -- thus they could certainly not develop to be anything but very marginal murrelet nesting habitat even centuries from now. 88

Need I remind you all that murrelets have been spotted near or in JDSF by such folks as Cota and Papke (1994), Ralph et al. (1994), Georgia-Pacific Sustained Yield Plan (G-P 1997), Camp Three Timber Harvest Plan (Jameson 1999), M. Jameson (personal communication 2002), and by others reporting sightings or giving interviews about such. Page VII.6.6-54 says that there are indications that "murrelets are likely nesting in Mendocino County and in the vicinity of JDSF (K. Nelson pers. comm. March 11, 2004)."

MARBLED MURRELET BIOLOGY

Here are some key quotes about the murrelet from the document. Though they are in the EIR / FMP, it does not seem like many of these points were considered in the development of the proposed alternative's management activities at Jackson. Page 6.6-53 says, "Current breeding populations are discontinuous and generally concentrated at sea in areas adjacent to remaining late-successional coniferous forests near the coast (Nelson, 1997a)." "A 300-mile gap occurs in the southern portion of the marbled murrelet's breeding range, between Humboldt and Del Norte Counties in the north and San Mateo and Santa Cruz Counties in the south. Marbled murrelets likely occurred in this gap prior to extensive logging of redwood forests (USFWS, 1997ac). Moderate numbers of murrelets have been observed along the coast of Mendocino, Sonoma, and 89

13.

Marin counties (Paton & Ralph 1988, 1990)." I would say that the term ":moderate" is optimistic here. Page 6.6-73 says, "A major gap in the at-sea distribution of murrelets is found between Humboldt and San Mateo Counties. Murrelets have recently been found to breed in small patches of nesting habitat still extant in Mendocino County. A moderate to low density (1.8 - 3.9 birds per square mile) was recorded from Loleta, Humboldt County to Albion, Mendocino County to Half Moon Bay in San Mateo County."

89

Page 6-75 says, "According to Ralph and Miller (1995), the most important factor in indicating occupied stands was density of old-growth canopy cover. Occupied stands had a greater percentage of old-growth canopy cover than stands with only murrelet presence or no detections (Ralph and Miller 1995)."

One key point from my 17 years of research regarding the marbled murrelet which I did not see mentioned in the Jackson Draft EIR / FMP is that to successfully nest in California, murrelets need not only to be on a large mossy horizontal conifer branch (which need not necessarily be redwood), but also need ancient redwood canopy above the nest in order to help protect them from the gaze of corvid bird species. It is admitted on page 5-75 that, "Nests were typically located in the top third of the dominant tree canopy layer and usually had good overhead protection. Such locations seem to allow easy access to the exterior of the forest and provide shelter from potential predators." Yet, this does not admit what some key researchers believe to be biological fact in California, which is

90

that murrelets need old-growth REDWOOD canopy above their nest to have a chance for nesting success. Thus, the sentence on page VII.6.6-75 telling of Ralph and Miller's findings that "the most important factor in indicating occupied stands was density of old-growth canopy cover" -- in California, that should be clarified to say "old-growth redwood canopy cover". I note that page VII.6.6-168 under "Alternative C1 Project Alternative --Inside JDSF" says, "model outputs for Alternative C1 within JDSF indicate a decrease in acreage of large size and multistoried canopy condition in Redwood (RDW6)" – thus even the most classic ancient forest type will have a canopy reduction which hurts species dependent upon interior forest conditions with mostly closed canopy. Page VII.6.6-170 in regards to habitat changes within the first period (2004 through 2030), says that, "Potential Marbled Murrelet habitat capability is expected to decline in the first period (-7%) given reduction in extent of Redwood 6." This is unacceptable in an era where murrelets may be facing extirpation from Zone 5 and possibly Zone 6 as well!

Page 6-76, in reference to studies by Meyer (1999) and fide Raphael et al.(2002), "In that study, patch size and isolation were important attributes of sites occupied by murrelets; at a broader scale, proximity of habitat patches to each other and amount of habitat in the largest patch predicted murrelet densities in adjacent offshore areas." Thus, since mature forests are at least half way there to being old-growth, and seeing that there are substantial mature stands especially at Brandon Gulch

91

CWE assessment area, in part of Chamberlain CWE, and elsewhere, these stands should remain intact which could develop into at least as good a murrelet habitat area as those nearer the coast mature stands which unfortunately are facing excessive timber management ironically in the name of "late seral" development. The sizable mature stands especially adjacent to ancient stands are especially important, and the proposed alternative's plan for timber activities even within so-called buffers near old-growth areas does not help the recovery of old-growth dependent species. McShane et al. 2004 concluded that (pg. VII.6.6-77), "Increased levels of nest site predation as a result of forest fragmentation and increased amounts of edge are considered the most significant cause of nest failure (corvids being the principal predator)."

14.

I did find it interesting that a study in Washington state concluded that, since there is somewhat more uniformity in a mature stand than in a multi-layer ancient stand, when mature stands meet ancient stands or aggregations (as in the Brandon Gulch and Chamberlain cumulative watershed effects assessment areas as well as at mature stands at the western part of Jackson adjacent to state parks which contain ancient forest elements), that it is superior murrelet nesting habitat since these areas would tend to have less corvids (unless recreationists in the state parks leave considerable food scraps around anyway). Here is most of that interesting paragraph, "General landscape condition may influence the degree to which Marbled Murrelets nest in an area. In Washington, detections of murrelets increased when old-growth/mature forests comprised more than 30% of the landscape. Raphael et al. (1995) found that the percentage of old-growth forest and large sawtimber was significantly greater within 0.5 miles of sites that were occupied by murrelets than at sites where they were not detected. Raphael et al. (1995) suggested sites with 35 percent old-growth and large sawtimber in the landscape are more likely to be occupied. However, Raphael et al. (2002) found that murrelet numbers on the Olympic Peninsula, Washington, increased as the amount of core area of late-seral forest and proximity of patches increased, and decreased with increasing amounts of edge of late-seral patches." Thus, rather than log nearly all of the mature trees which comprise about 20-24% of JDSF – which sometimes are adjacent to the scatterings of old-growth groves which are almost 1% of the Jackson acreage, let that substantial amount of sawtimber remain vertical and allow other areas to grow larger trees as well so that the percentage of good-sized trees in good-sized patches can be over 25% and climb from there. In the Meyer (1999) and fide Raphael et al. 2002 studies regarding murrelet habitat in California, page VII.6.6-76 explains that, "proximity of habitat patches to each other and amount of habitat in the largest patch predicted murrelet densities in adjacent offshore areas." Thus, protect especially the substantial patches of mature trees which are of extra value if adjacent or in relative proximity to remaining old-growth stands and residual, partially to reduce the number of avian nest predators on murrelet chicks and eggs as will be elaborated upon in the following paragraph.

92

On a similar note, Page VII.6.6-77 discusses the findings of Marzloff et al. (2000) by saying, "In their study area (western side of the Olympic peninsula of Washington State) providing landscapes that include mixtures of simple-structured mature, mature forest, and old-growth forest likely to be occupied by murrelets could increase nest success and productivity relative to landscapes of pure old-growth because those portions of the landscape with mature stands of relatively simpler structure would hold fewer avian nest predators."

I find it disturbing that page VII.6.6-83 says that, "Outside of stochastic events like the Biscuit fire, the greatest loss of suitable habitat is attributed to consultations on individual harvest units, individual trees, and suitable habitat harvest through Habitat Conservation Plans (McShane et al. 2004)." Thus, this shows that the wildlife agencies are not serious about protecting murrelet habitat (let alone the forest managers) even in areas that have been declared "critical habitat" for the federally-threatened and state-endangered marbled murrelet. Not only do biologists need to do more than token consultation and perhaps suggest a minor mitigation modification for habitat, but they and others need to realize that where you have both designated critical habitat as well as a large contiguous publicly-owned forest in a region which has largely had its older trees butchered, it is time to get serious about providing substantial areas for murrelet recovery -- and what better an area than one with substantial mature stands (sometimes adjoining ancient remnants and groves) on publicly-owned land designated critical habitat in the heart of the redwood region not only of Mendocino County, but of California as well.

93

15.

The Jackson management plan cannot have it both ways. Page VII.6.6-127 says that, "Marbled Murrelet habitat value within current old-growth groves on JDSF and late seral forest conditions associated with WLPZs are discounted under the DFMP due to distance from the coast reduced likelihood of certain nest site conditions given that distance and in the case of the latter, increased edge effect and potential for nest site predation." So, the near-term plans are to do intensive logging of mature stands especially where there are most extensive (and which also adjoin some ancient stands like at Brandon and Chamberlain areas), yet it is admitted that "increased edge effect and potential for nest site predation" are problems. Substantial mature forests are becoming murrelet social activity and flyway areas and will become at least marginal murrelet nesting habitat within several decades, so do not log them which would ruin chances for future nesting habitat in the
94 mature stands and which would make any murrelets who may wish to attempt nesting at the ancient stands in these area be more prone to edge effects including corvid predation! The aforementioned page continues, "Harvest of certain forest conditions under the DFMP could reduce the effective future recruitment of potential Marbled Murrelet habitat that by virtue of its location would have a higher probability of occupancy." Thus, both the mature stands adjacent to state park and Mendocino Woodlands areas, and the sizable mature stands at Brandon and West Chamberlain areas, should not only be logged en masse as is planned for nearly all of the larger mature stands, but also should not have substantial treatment to allegedly achieve late seral characterisitics because taking over half of the sizable trees out (which would not occur in more considerate practices of late seral stage development, for instance by the Institute for Sustainable Forestry or by a landowner at Deer Creek, Josephine County, OR) would also increase edge effect and predation of murrelet nests.

Thus, it is preposterous to make the claim (obviously urged by lawyers rather than reputable biologists) on page VII.6.6-121 that "Substantial adverse effect, either directly or through habitat modifications" of sensitive species, or "Reduce the number or restrict the range of a rare or endangered animal" is claimed to be "Less than Significant with Mitigation". Some generic impacts from management activities which do not kill a species outright but which impact their habitat is mentioned on pages VII.6.6-122 (and 123), "Indirect impacts may include, but are not limited to, the reduction of suitable nesting habitat or nest sites, habitat connectivity and dispersal corridors,
95 canopy cover, and key habitat elements (hardwoods, snags, LWD, and trees with cavities). Many of these impacts affect habitat quality and/or suitability and, ultimately, can adversely affect reproduction and the continued persistence of a species in a given area." Obviously, the writer of the following sentence conveniently overlooked the fact that JDSF contains the most substantial mature forests in coastal Mendocino County (which is a "rare habitat" in the region and will become another rare habitat within decades -- an old-growth habitat), "The proposed action does not propose the modification or removal of rare habitats." I believe that the Proposed Alternative calls for wholesale removal of the rare mature forest habitat with the potential to be the largest block eventually supporting marbled murrelet nesting in Mendocino County.

Though some elements of the Interior Dept. are now claiming that one need not list the murrelet in California, Oregon, and Washington because there are plenty of murrelets in Alaska, is ignoring info such as is mentioned by McShane et al. 2004 and others about not only different genetics among
96 murrelets south of Alaska, but even the difference in murrelet genetics in different recovery zones in California: "Loss of Genetic Variation Among Populations. Given that there are at least 3 genetically distinct populations of Marbled Murrelets, loss of any of these populations would reduce the species' genetic resources and compromise its long-term viability." "The probability for extirpation is especially prominent for Marbled Murrelets in Zones 5 and 6." In regards to the greater murrelet range, page VII.6.6-86 says, "Estimates of the distribution of neutral genetic variation in Marbled Murrelets indicate that population loss in California, British

16.

Columbia/mainland Alaska, or the Aleutians would however compromise long-term viability of the species and adaptive variation."

97 Page VII.6.6-89 says, "JDSF was included in the critical habitat designation (USFWS 1996b). Criteria for critical habitat include the presence of suitable nesting habitat, presence of murrelets, and proximity to foraging habitat. Critical habitat also was designated in zones of current low use by murrelets. These areas are intended to support the USFWS goal to reduce gaps in the species nesting distribution, and help buffer the species from future catastrophic events such as oil spills and forest fires. JDSF is the largest contiguous parcel of public land on the Mendocino County coast. In California, 175,000 acres (71,040 ha) of state lands were designated as critical habitat, of which JDSF constitutes about 29 percent." "Jackson Demonstration State Forest falls within the Mendocino Zone (Zone 5) that extends from the southern boundary of Humboldt County California, to the mouth of San Francisco Bay." This zone extends from 1.2 miles at sea to up to 25 miles inland. "Conservation measures here could still benefit the species. Murrelets along the coast of Mendocino, Sonoma and Marin Counties are considered important to future reconnection of murrelet populations in northern and central California. Recovery efforts in Zone 5 may improve survival and recovery in adjacent zones by reducing the current geographical gap in breeding distribution. Given that the population of murrelets in this zone is so small, longer-term recovery efforts geared toward the development of new habitat may be most important (USFWS 1997)." However, this does not mean that what is now suitable social activity and marginal nesting habitat for the murrelet should be exposed to greater edge effects and corvid predation due to the intensive management activities proposed under Alternative C1 simply because of claims that buffer strips and riparian areas will have some old-growth over a century from now. Substantial chunks of good habitat are needed, and the best chance for this is to protect the mature stands at JDSF, especially when they are larger and when they are bordering ancient stands either at JDSF or in adjacent state parks or the Mendocino Woodlands area.

98 I notice that page VII.6.6-89 mentions "actions that will contribute to population stabilization and eventual recovery of the species" which could be "potentially implemented at JDSF" -- point #2 is "provide for the maintenance and recruitment of suitable, high-quality habitat over the long-term (50-100 years)". Seeking to have young-growth grow to be old-growth murrelet habitat just will not happen in that length of time. But if the JDSF mature stands are protected, they will provide good social activity and flyway habitat in the very near future, and will provide at least marginal nesting habitat in the length of time where some studies conclude the murrelet will be extirpated from south of the Humboldt County line -- extirpation predicted to be 100% by 2044 in Zones 5 and 6. Thus, protect the mature stands to provide just enough habitat for the murrelet to possibly survive in the recovery zone until the middle of the century, and keep protecting the mature stands so that it can provide good murrelet nesting habitat by late this century.

MURRELET, MENDOCINO COUNTY, and REDWOOD ECOSYSTEM RECOVERY including addressing the "coarse" STRITTHOLT Study

99 Some areas of Mendocino (with a couple in northwestern Sonoma County) in which murrelets have been detected in recent years include Ten Mile Creek, Big River, Navarro River, Chadbourne Gulch, Usal Creek, Russian Gulch State Park, Alder Creek, Admiral Standley Park, Greenwood Creek, Gualala River, Garcia River, Albion River, Hardy Creek, Wheatfield Creek, Haupt Creek, Willow Creek, Digger Creek, and at the Wages Creek and Rider Gulch confluence. (An earlier paragraph told of murrelet sightings in the vicinity of JDSF.)

17.

In 1999, Stritholt et al. came out with an admittedly "coarse" overview of relative conservation values for watersheds in the North Coast redwood ecosystem. There was a general map called figure VII.6.6.5A. on Page VII.6.6-27 which was the "Composite Model Ranking by Watershed Using Criteria Two Through Nine". Though the map should have been considerably larger and the names of rivers and creeks should have been listed, I used my California atlas and the shape of the coast to determine which river watersheds were which shade on that map. The Noyo River as a whole looks like it is given a "medium" conservation value. I believe that both Big River and the short coastal watersheds which run from JDSF through state parks to the ocean (as well as Ten Mile Creek watershed to the north of the Noyo) were given High conservation value potential.

Looking on Page V-28 at "Table V.4. Stritholt et al. (1999) Redwood Ecosystem Conservation Ratings for JDSF Cumulative Effects Assessment Area", it gets into more detail. Three of the four coastal drainages, as well as the Mouth of Big River, were the areas at least partially on the Jackson forest rated of High Conservation Value. In regards to the CWE assessment areas that have substantial acreage at JDSF, I note that 4 of the 5 CWE assessment areas scheduled to have the most intensive timber management activities over the next five to ten years are rated of Medium conservation value. Yet, these watershed assessment areas (Brandon Gulch 40.4%, Kass Creek 35.2%, Berry Gulch 23.8%, Chamberlain 21.6%, and Parlin Creek 17.9%) are planned for the most intensive logging at JDSF in the near future. Except for smaller coastal drainages and the Mouth of Big River, as well as 4 of the 5 just-mentioned watershed assessment areas, almost all the rest of the conservation value for JDSF is rated low. Why is JDSF itching to conduct timber management activities in the very near future which would ruin the redwood ecosystem conservation and recovery values? The one of the 5 mentioned watersheds which did not have a medium rating was Chamberlain Creek, however it has substantial mature stands on its western fork, and must not be hammered so that there would be close to no connectivity (with the exception of inadequate riparian buffers which could still have logging within them). So, besides being surprised at the rating for Chamberlain area, I'm not too surprised by the other ratings when one considers that it was based on GIS photography which is focusing on age and species of tree stands rather than focusing on maintaining watercourses so that they are not excessively sedimented which can ruin chances for reproductive success by native fish species. Likewise, clearly stream temperature needed to support Coho salmon as well as steelhead trout was not considered by Stritholt et al.

99

Before I relate the Stitholt redwood ecosystem conservation value criteria to JDSF, I will comment on the first and the tenth criteria. The first was given, but was ignored in the modelling and assigning of conservation values of watershed areas. That first criteria is "Patch size of late successional forest". While technical definitions would only include the ancient stands at JDSF none of which is over 101 acres, but Stritholt's calculations did not consider the considerable mature forests at JDSF which could develop within several decades to marginal habitat for ancient forest dependent species, and could be full-fledged old-growth habitat within a century. No other area can come close to the many thousands of acres of mature mostly redwood forest adjoining small ancient stands -- at least south of Humboldt Redwoods State Park. Thus, if relatively near future late-successional patch size at JDSF (depending upon management) could combine with the realization that JDSF is the largest contiguous publicly-owned redwood ecosystem land in Mendocino County, clearly JDSF would look rosier in terms of conservation value for the redwood ecosystem to Stritholt and others. Regarding the tenth criteria, it says on Page VII.6.6-26. "A tenth criterion addressing management potential was not modeled but qualitatively included to evaluate institutional barriers to management." What does that mean? Does it mean it examines the obstinance or bottom line of companies and management agencies to see whether practices are

100

101

18.

likely to change to allow more conservation? Does it mean that there are institutional barriers among companies and management agencies which precludes management (or non-management) which would protect or work toward late-seral characteristics? Of course, bear in mind that many of the most prime areas for conservation of the coast redwood ecosystem are natural and thus not
101 managed by humans, and should not be managed -- though possibly some very light management in the greater area / buffer area of older or mature stands to assist recovery of the area to provide better habitat for old-growth dependent species. The BLM's Arcata office is doing well at such work in the Headwaters Preserve area, and they are not oriented toward cutting big trees and taking out the majority of large trees in a so-called buffer as are forest managers at JDSF.

Before I get into those 8 criteria which were listed and used to determine conservation value of watershed areas, I will point out that Strittholt's work was mentioned as "coarse", thus not having much detail. Did you consult any other groups (besides the few words mentioning BLM and Save-the-Redwoods League) about prime areas within which one could conserve, restore, and
102 recover the priceless coast redwood ecosystem? Not long before finishing these comments, it occurred to me that Legacy - The Landscape Connection group did detailed GIS and other work in regards to the North Coast redwood ecosystem. They were unable to get back to me before I completed this paper, but their phone number, for future reference and to hopefully include some of their material in the next EIR / FMP is (707)826-9408.

In regards to Strittholt's Criteria 2 through 9, it is true that the road density currently at both JDSF and neighboring timberlands is out of control -- while the Alternative C1 proposes more roads and
103 is very vague as to how many roads will be decommissioned, so it is important to choose Alternative E or F in regards to roads while being sure to fund their substantial decommissioning work in the very near future. There are some threatened and endangered species at Jackson, so do
104 not let the watercourses receive more sediment or have their temperature raised, so that native fish can still survive in many of Jackson's streams and allow the mature stands to become old-growth habitat to host species such as murrelets and NSOs which are currently not very common at JDSF. The "Concentration of late successional patches" criteria should be examined in regards to what I
105 mentioned under Criteria 1 about if one protects mature stands and lets that become ancient, that could become excellent future habitat for old-growth dependent species. Forest age composition I basically just covered, but unfortunately JDSF and the nearby timberlands have predominately young-growth -- which makes the substantial mature with a little ancient at JDSF more unique and important. Forest fragmentation is certainly a problem, thus do not fragment the mature stands
106 bringing more edge effect to ancient stands at JDSF, and do not carry out widespread clearcutting as scheduled under Alternative C1. Even the JDSF areas with some decent mature elements near the state parks to the west are not well-managed (regarding criteria 7). There are too many road and stream interactions at Jackson (partly due to Hwy. 20), though it does divide areas of the state forest
107 where recreation should not be promoted toward the western reach of the forest, from the campgrounds, recreation corridors, and mature/ancient stands in the Brandon Gulch, West Chamberlain, and other areas. For criteria 9, while there are some regulations promulgated regarding riparian corridors at JDSF, they would allow too much logging of all but the ten larger conifers in a stretch of more than a football field, plus logging too much hardwood in places. These
108 areas are not wide enough under the proposed alternative for Jackson to make edge effects negligible. However, some mature stands along the North Fork of the South Fork of the Noyo River, at West Chamberlain Creek, plus some toward the western part of the forest as well as a little of James Creek to the east do have some decent forest nearby streams.

19.

The 3 regions related to Stritholt's GIS work do not make much sense. Both the northern and central regions for redwood ecosystem conservation value in California include parts of southern Humboldt County, while both the central and southern portions include parts of northern Santa Cruz County. Seeing that redwood parks (besides narrow strips along the coast in northern Humboldt and Del Norte Counties) of substantial size are concentrated in southern Humboldt and in northern Santa Cruz County, watersheds partly within or adjacent to the major parks such as Humboldt Redwoods 109 State Park and Big Basin Redwoods State Park help to skew the findings not in the favor of ecosystem recovery at Jackson and Mendocino County as priorities. Because only little state parks to the west are protected in the Jackson vicinity, and because most redwood state parks are so small in Mendocino County, only the little larger protected area at Little River made enough of an impression to get Stritholt to rate the Little River watershed and the neighboring Albion River watershed to the south as having a "Very High" redwood ecosystem conservation value in Mendocino County.

Page V-29 mentions the Save-the-Redwoods League and BLM report of 2001 which followed workshops about areas especially needing conservation in the redwood zone. Of the eleven focus areas, none involved watersheds within or adjacent to the CWE assessment areas of JDSF. It should be noted that historically SRL, besides purchasing some substantial acreage temporarily to be handed over to state or federal park managers, has been focusing on acquiring acreage to enlarge 110 current parks. Since that 2001 report however, they have turned more attention to key biological connectivity corridors, both in the Redwoods-to-the-Sea / Gilham Butte area of southern Humboldt County, and more recently the considerable cutover lands in the Mill Creek area which link the Smith River Nat'l Recreational Area with the coastal redwood parks in Del Norte County. I'm sure all or close to all areas discussed were private land areas which some felt should come into the public realm (or at least have good conservation easements), and thus did not focus on the one large contiguous publicly-owned land in the heart of the redwood region -- that being JDSF.

Let us look at murrelet sightings and potential for recovery in Mendocino County, while keeping in mind the Stitthold map on Page VII.6.6-27. A few things should occur to one when looking at the shadings for conservation values of watersheds in Mendocino County. One notices a Very High rating for the Alder Creek watershed toward the southern third of the Mendocino Coast. Then one notices mostly darker shades in the latitudinal heart of Mendocino County. That area includes the 111 Little River watershed with a more sizable (for Mendocino County) redwood state park, as well as the Albion River watershed to its south which contains some old-growth remnants. Then it is mostly High conservation values for watersheds until you reach the Noyo River which is rated Medium (yet varies on the more specific chart about the CWE assessment areas in the JDSF area). And then, north of the Noyo River, there is High conservation value, as well as murrelet sightings, at Ten Mile Creek. Thus, this Albion River through Ten Mile Creek area is essential to the recovery of the coast redwood ecosystem and its dependent species -- and seeing that JDSF is in this area and includes substantial amounts of the Noyo, Big, and other watercourses (and is so sizable especially in the west-east direction, this is clearly the place to focus conservation energy in the heart of the redwood region (along with protecting as much as possible of Alder Creek further south).

BLM's Cahto area is mixed conifer rather than redwood, while the lands to the east of the very narrow Sinkyone Wilderness State Park are generally in bad cutover shape. It is still important to 112 conserve remnants of watersheds in those shaded areas indicating coastal watersheds in northwestern Mendocino County -- partly for murrelets who decide to fly to the southwest from their nests at HRSP or from southern parts of Pacific Lumber lands because they do not like to fly over the King Range which is primarily Douglas-fir and thus not ideal murrelet nesting habitat in

20.

California. But due to it being the heart of the redwood region and certainly the heart of Mendocino County's redwood region, that Ten Mile Creek watershed through Albion River watershed (including the sizable acreage at JDSF) appears to be the most vital area if murrelets are to survive in Recovery Region 5 (and many argue in Recovery Region 6) for the next few decades. 113

****

PACIFIC FISHERS

I notice on Map Figue M that there is no "fully suitable" Pacific fisher habitat at JDSF. There are some areas of JDSF which are adjacent to some "fully suitable" fisher habitats on private land, state park land, or Mendocino Woodlands area. Since fishers like a wide range of mostly old-growth with good canopy cover, on areas adjacent to "fully suitable" fisher habitat, there should be no logging -- even theoretically designed to develop "late seral" characteristics. This would include the northeastern end of Brandon Gulch CWE assessment area (which should generally be left alone anyway due to it having that large older mature forest), upper West Chamberlain area (also largely a key mature stand which also should be avoided as far as timber management activities), in some areas by the state parks to the west, in areas adjoining that private land which juts north of Highway 20 in the south-central area of Jackson forest, and by the Mendocino Woodlands area. 114

Besides some moderate to high fisher habitat on the map toward the west and in other areas, I note that the areas with the most moderate-to-high fisher habitat at Jackson are in areas proposed for especially heavy logging in the next 5 to 10 years, namely the Chamberlain Creek watershed, the Brandon Gulch CWE area, the Berry Gulch area, and the Parlin Creek area. It seems that the forest managers at Jackson have chosen precisely those areas which are best habitat for fishers to log -- which would be a disaster for this species that needs large ranges, good canopy, and little fragmentation. Page VII.6.6-13 points out some key habitat needs for fisher and marten, "Stand level characteristics of importance to forest carnivores (marten and Pacific fisher) include canopy closure, snag and log frequency". It is admitted that Alternative C1 would result in a 7% reduction in Pacific fisher habitat from this time through the year 2030 -- and I believe that this is quite an underestimation.

NORTHERN SPOTTED OWL

I notice that there were most NSO sightings in the Brandon Gulch CWE assessment area, followed closely by the Parlin Creek CWE assessment area. Yet, the Proposed Alternative plans to log 40.4% of the Brandon Gulch CWE assessment area within the next 5 to 10 years (likely targetting the best NSO habitat other than the fairly limited ancient stands themselves). Such butchering of mature stands must not take place! The Parlin Creek CWE assessment area is being substantially targetted too (as is Berry Gulch to the south which has also had NSO sightings), and it already has been quite cutover. Furthermore, the plans for clearcutting / evenaged management in the central and eastern parts of the forest will definitely ruin the NSO habitat not only in Parlin and Berry Gulch, but also some areas recovering in the Chamberlain and perhaps James Creek area (though the table with planned percentages of CWE assessment areas to be logged in the next 5 to 10 years does not include the James Creek area). Thus, there is quite a difference between declarations (to please lawyers) like "silvicultural allocation plan and silvicultural practice retains and creates habitat available for Northern Spotted Owl" and the plans for logging in areas at JDSF which have had the most NSO sightings. It is ironic that the document says, "As budget allows, expand more staffing to include greater biological expertise." No wonder the Proposed Alternative is harmful to habitat -- it is admitted that there is little biological expertise at JDSF! Do NOT log the mature stands in order to higher a biologist who may well conclude that you just finished off the 115

21.

best NSO, fisher, and murrelet recovery areas in order to hire them! (There was a NSO sighting in southeastern Chamberlain CWE assessment area, as well as in southeastern James Creek and along the Big River nearby, yet southeastern Chamberlain is scheduled for group-selection logging which would decimate NSO habitat features.) 115

Page VII.6.6-28 says that, "Franklin (2000) found that for Northern Spotted Owls, in his Northern California study area, an increasing amount of forest edge could be detrimental by decreasing the amount of interior habitat, increasing predation rates, and reducing the survival rate." Thus, do not log those larger mature stands adjoining the smaller ancient stands in the Brandon Gulch and West Chamberlain areas, and do not claim that mere riparian areas where logging is somewhat limited can suffice for interior forest habitat even more than a century down the line. 116

****

In my initial enumerations as to basic problems with this Draft EIR and FMP for JDSF, I mentioned that there is too much "wiggle room" or leeway to allow even the logging of old-growth trees at JDSF -- let alone, for now, the sizable mature trees which are so rare in the redwood region of coastal Mendocino County. Page V-11 says, "The JDSF DFMP proposes to protect all old growth redwood stands, as well as individual old growth trees that have defined structural characteristics." What percentage of old-growth trees other than those in the unentered old growth redwood stands could face being cut down? Is it the RPF who gets to determine whether an old tree has sufficient enough structural characteristics to let it live? Be as specific as possible in the next EIR / FMP as to which old-growth trees could live and which do not qualify. Seeing that you mention old-growth trees with "defined structural characteristics", it sounds like there is a working definition to determine whether an individual old-growth tree would be left alone or would be logged. Please present this precise definition in the next EIR / FMP. Likewise, leeway is left to timber managers on page VI-49 of that table which says "Retain existing old growth groves, retention of large residual old growth trees and old trees with structure". Though old-growth trees would be comparatively large in general, but if an old-growth residual was not a dominant tree in a clump / aggregation, could some of that clump be logged of old-growth residuals since it was not comparatively large for old-growth residuals? Also, which kinds of both old-growth residuals or other old trees (and approximately what percentages) could be not declared to have an adequate "structure", and thus be logged? Another disturbing excerpt from the Draft EIR / FMP is on page VII.6.1-97, "Some flexibility should be maintained to allow removal of large trees to adjust species composition and improve the potential performance of future LWD". Much as some more LWD could be good at some sites at Jackson, the history of forest management has not demonstrated that the JDSF managers can be trusted with this "flexibility."Also, I see nothing here about if there is an old-growth Douglas-fir stand or clump / aggregation -- is there any protection for ancient Douglas-firs other than some which may be within unentered ancient redwood groves? 117

I do like Alternative F in terms of protecting "heritage trees" (trees that were living when California became a state in the middle of the nineteenth century) -- unless they are particularly a hazard that would impact people or property. This would get rid of the 'wiggle room" which would allow the logging of old-growth and trees which could be termed between some people's definition of old-growth and their definition of "very mature". Yet, the rare (in regional context) mature trees (generally 80 to 120 years old) need substantial protection as well. 118

****

The documents admitted that little has been done at JDSF since the court injunction blocking the woefully inadequate Draft EIR / FMP back in 2003. In the meantime, the lawyers reached the conclusions that needed to be made, and these latest documents are a flailing attempt at trying to make manipulated biology and manipulated logic try to fit neatly with the lawyers' conclusions. 119

22.

119 Publishing hefty volumes may impress some, but why aren't the noted references which are mentioned summarized, while giving quotes from those documents to show that indeed they support the conclusions of this Draft EIR / DFMP?

120 There are a lot of matters I noticed in these JDSF documents which mention that more information is needed, plus there are many JDSF issues where it is presumed that sufficient information is available and presented, but which actually are very vague and non-specific. Some of these are what specific areas will be newly roaded and logged under C1, and what would the consequences be for habitat for various sensitive species if such actions were carried out (including for aquatic species).

121 One of these key tasks which should have been done already and should have been presented in these draft documents (or at least by the next EIR / FMP) are the need for specifics as to what parts of the cumulative watershed assessment areas would be logged during the next five to ten years under Alternative C1 and under other alternatives.

122 Another task clearly needing to be done is to examine the erosion and sedimentation impact on streams from the major storms of late 2005 and early 2006 on various watercourses at JDSF, and it is crucial to take temperature readings in August and September 2006 to be clear on the impact of sedimentation on the watercourse which could deleteriously impact Coho salmon, steelhead, and other species.

123 Other information which should be able to be produced in a relatively short length of time are: 1. a temperature TMDL should be developed for the Big River watershed; 2. a more accurate vegetation
124 map to distinguish between old redwoods with generally closed canopy from scattered old redwoods with dense understory such is in some of the James Creek area; 3. more specifics as to how many
125 old-growth residual trees and mature trees can and will be logged (since this helps to determine how much increase there will be in edge effects) and in sedimentation of streams which also can impact
126 temperature, how much decrease in shading of watercourses, how much management activity is
127 planned in steep landslide prone areas and inner gorges, where new roads are planned and how
128 many of these are clearly linked to a better location for a road to replace hopefully several nearby roads which have particular erosion / sedimentation problems); 4. let a recreation specialist or
129 perhaps an artist or landscape architect, rather than a RPF, determine whether a logging project will significantly impact the aesthetics of an area; 5. consider new recreation corridors as well as
130 protecting more than just narrow facade strips along roads and trails; 6. complete a recreation survey
131 as called for in the Draft EIR and include these results in the next EIR / FMP; include the James Creek Watershed Cumulative Effects Assessment Area on Table VIII.10 on pages VIII-37 (and
132 VIII-38) or else have no cut in this area in the next 5 to 10 years; and explain by words and by better labelling of maps where the 492-acre buffer around Road 334 which to be managed for late-seral
133 characteristics is, as well as where the 250-acre buffer around the waterfall grove complex (also to be managed for late-seral forest characteristics) is.

ROADS, TRAILS, and FEEDING of ANIMALS who are GRAZERS

134 Page VII.6.1-100 says that, "JDSF contains an estimated 350 miles of actively used roads and 150 miles of potentially improperly abandoned roads. The sediment contribution per unit area from roads is often much greater than that from all other land management activities combined, including log skidding and yarding (Furniss et al. 1991)." Elsewhere in the documents it is mentioned that the public uses 200 miles of road at JDSF. Page VII.2-12 says, "Aesthetic changes associated with paving a forest road would be less than significant whereas, establishing a new forest road may be significant." Thus, to abide by regulations, any new forest road should not be through or adjacent to mature or ancient forest areas, and it must be clearly needed for management activities and be in the general vicinity of several logging roads which have been decommissioned due to significant

23.

sediment from the roads having deleterious effects on watercourses in the area. All other new roads are clearly an aesthetic insult and would bring more edge effects which stresses (or results in deaths of) various species, plus can damage nearby watercourses. Even modern improved road-building techniques has done little to reduce sediment yields from the construction of new roads. Appendix 11 Page 5 says, "Significant construction of new roads has led to increasing sediment yields from road surface erosion, espite improved practices (see Table 27 in the Attachments, reproduced from Matthews 2001)." Page 11 of that Appendix points out that road-related sediment is the dominant source of sediment in both the Noyo and the Big Rivers. One should also realize that roads (and vehicular management activities largely using them) are the main spreader of non-native invasive plant species -- so there is another reason to minimize roads in the JDSF area.

134

It is insufficient to merely say regarding Alternative C1 that you will, "Decommission unnecessary and environmentally damaging roads." You need to give a general estimate regarding the approximate number of miles of road that would be decommissioned, since taking out just a token number of road miles when JDSF managers have such widespread logging plans (which include building some new roads, logging nearly all the mature forests, as well as logging in riparian areas which could also impact shading, sedimentation, and temperature of watercourses) is certainly insufficient evidence to be able to claim that overall there would be an insignificant cumulative impact from management activities proposed at JDSF.

135

I appreciate the urgency which Alternative F has (noted in Table VI.1 on pages VI-45 and 46) in regards to immediately inventorying unnecessary and/or damaging roads, and that it is clear that this activity would take priority over other management activities at JDSF. It is not that I believe that Alternative E would not wish such a focus too, but the way it is worded in the aforementioned table, while it calls for aggressive road decommissioning, it mentions nothing about immediate inventorying and decommissioning or a focus for allotment of funds for that alternative. Perhaps that is because it is clear that JDSF managers consider Alternative F the enemy and will not really consider this fine alternative to work toward restoring the lovely habitat and watershed condition which those of European extraction found in Mendocino County centuries ago, as well as protecting the best remnants currently at JDSF. I notice that under Alternative C1, it says that the road management "plan includes standards for 5-year inventory, construction, maintenance, and decommissioning; establishes a schedule repair and decommissioning work. Not only does this give no indication about whether there would be a dozen or a hundred or how many miles which might be decommissioned, and it is clear that JDSF personnel are in no hurry to do the inventory and are more focused on the earlier mentioned "construction" and "maintenance" than in taking out roads to reduce sedimentation so as not to damage salmonid habitat in watercourses. Under "Transportation (see also Road Management Plan)" part of the alternatives comparison Table VI.1., the wording for C1 (following the lawyer-mandated assurance that it would "Comply with FPRs and sediment TMDLs where applicable") is "Roads and landings constructed and reconstructed as needed to support harvest operations." This does indicate the priority of JDSF under the proposed alternative as far as roads -- the priority is constructing and reconstructing to assist timber operations. Thus, the talk of inventory and decommissioning of roads at Jackson is just a token non-enumerated effort to seek to validate the claim that watercourses would be in better shape despite intensive management on 75% of the forest (including substantial clearcutting / evenaged management as well as many other intensely chopped areas) due to decommissioning a not-even-estimated number of roads or mileage of roadway.

136

There are various indications in the Draft EIR / FMP that trails are virtually an afterthought from the perspective of JDSF managers. Page V-26 says, "There are over 60 individual campsites, many

24.

miles of riding and hiking trails, and over 200 miles of forest road utilized by the public." For a nearly 50,000 acre forest, obviously 60 individual campsites are not very numerous. Why is there no attempt at enumerating the miles of riding and hiking trails at Jackson? Is it because some of the
137 trails are mostly animal trails and thus you do not know whether to count them, or has there just been so little recreation focus that there was never an attempt to enumerate how many miles of recreation trails (other than some roads) are being used by the public? [Also, while a recreation survey is a decent idea, it doesn't take a rocket scientist recreation specialist to determine that, besides liking to hike some trails, many hikers and campers like to immerse themselves in Mother Nature, so butchering the forests other than along streamsides and major roads and trails (while even
138 cutting in most of these facade buffer areas) is clearly not what most who would like to enjoy redwood forests without travelling an additional distance to Humboldt County have in mind for an environment that they wish to further explore. (Also, note some discussion on the main recreation areas on the forest when discussing mature forests, as well as some of the alternatives offered in the Draft EIR / FMP.)

While I can see why there are some concerns about horses and other animals which folks ride or perhaps which carry their belongings freely grazing on vegetation at JDSF, yet urging or requiring people to bring feed / mulch to feed to their animals is also a problem. Not only are increasing
139 amounts of mulch (whether used for feed or for management-related activities at Jackson) genetically modified these days (which will increase if genetically modified alfalfa is commercialized), but mulch often carries seeds of invasive plants which we do not need more of in the JDSF area. Would JDSF managers consider that if certain invasive plant species are good to eat for horses and other livestock, that the target plants could be pointed out to riders and could be grazed upon at least near roads and trails which are some of the areas in which invasive plants thrive?

In case anyone needs to be reminded of the seriousness of mulch spreading invasive plant species, here are a couple quotes from page 3-26 of the BLM Vegetation Treatments Using Herbicides Draft Programmatic EIS, "Many other invasive plants have been introduced unintentionally via air, water, rail, or road transportation pathways. Common methods of introduction include contaminated seed, feed grain, hay, straw, and mulch; movement of contaminated equipment across uncontaminated lands; animal fur and fleece; spreading of gravel, roadfill, and topsoil contaminated with noxious weed seed; and plants and seeds sold through nurseries as ornamentals (USDI BLM 1996)." "Once introduced, invasive plants are spread primarily by vehicles, humans, wild horses, livestock, wind, water, and wildlife. Initially, invasive weeds may get established in disturbed sites such as trailheads, along roads and trails, firebreaks, landing pads, oil and gas development sites, wildlife
140 and/or livestock concentration areas, and campgrounds". [(Speaking of firebreaks, will the shaded firebreaks mentioned in the plan involve the spraying of herbicides on them?)]

****

INTENSIVE MANAGEMENT Leads to FIRE DANGERS at JDSF

The logging of old trees (which provide shade and are well along in developing a plumbing system to provide a more ongoing flow of cool clear water), the drying effect from spraying
141 herbicides, plus the fire risk involved with lots of machinery being operated on hundreds of miles of roads well as the drying effects of herbicide spraying, plus all the machinery used in management and along hundreds of miles of roads from which fires can accidentally or purposefully start are all major drawbacks of the Proposed Alternative C1. Regarding logging slash, it sounds like it might be gathered and burned in some clearcuts (obviously a slash fire is a fire and can escape at times), or just left on the ground upon other logging methods with a slight mitigation of scattering slash after

25.

logging within 50 feet of major roads and trails. Besides that, the highly flammable slash will be on the forest floor awaiting ignition.

142 It is quite obvious that if one removes all or nearly all vegetation from an area, it will dry out the area and provide deleterious edge effects to certain adjoining areas. Then, herbicides are sometimes used, which kills vegetation and dries things out further. Then, conifer trees (all of the same age and usually all the same species) are planted in a heavily stocked way. When one has a bunch of essentially Christmas trees all packed together, it not only could be prone to disease, but it is a virtual tinder box for not just fire, but for fire that is prone to burn more catastrophically which could also rise to become a crown fire and even seriously damage or kill ancient redwood trees in the JDSF area.

143 The DEIR / DFMP claims that the less intensive management alternatives are most prone to fire danger because a number of roads from which one could fight fires would be decommissioned. Certainly, a number of roads can remain not only to fight fires or for recreationists to use, but also for management activities. But, this document entirely fails to examine the implications in regards to forest managers promoting intensive vehicular and machinery activities in the majority of the JDSF. Other activities which increase fire danger are the use of herbicides, the increase in fire danger due to logging mature and other stands and replacing them with tightly packed conifer plantations, and even the further drying out of buffer areas intended for lighter management. There can be some valid excuses for managing an understory and brushfields in some places in order to lessen chances that there can be crown fires in the area, but seeing that even relatively light management at JDSF generally targets the larger trees of the area, the preponderance of proposed management at Jackson would lead to increased risk of fire -- including potentially catastrophic fire.

144 Page B-29 of the BLM's Vegetation Treatments Using Herbicides Draft Programmatic EIS says, "Herbicides used in site preparation reduce vegetation that would compete with conifers. In the brown-and-burn method of site preparation, herbicides are used to dry the vegetation, to be burned several months later." It should be pointed out that equipment use or smoking around herbicided vegetation on roadsides or in areas where intensive management activities occur would have a greater chance of igniting and spreading if there were drier dead vegetation around.

145 The DEIR / DFMP does nothing to analyze what age of tree species would be best to prevent not only fires, but catastrophic fires. Such fires could burn not only vital habitat, but could necessitate fire-fighting response with heavy equipment (including near watercourses) in order to control the fire, which could bring a horrible impact of less trees and vegetation shading streamcourses and thus more direct sunlight and warmer temperatures in streams (plus destabilized banks due to less living vegetation holding them together and due to heavy equipment use during firefighting). The ramifications on both native salmonids which need cool water to survive, as well as on mature and old-growth forest habitat if a fire burning super-hot through young plantations grew to a catastrophic level are very serious -- yet there was no analysis of such in the documents!

146 Because California Public Resources Code 4640 says (App. 5 pg. 2) that, "'Protection' means protection of forest trees against damage by fire, insects, disease, and trespass", i contend that this is being violated at Jackson DSF, and that the fire danger involved with the bulk of the management activities at JDSF must be analyzed in the next EIR / FMP.

STREAM TEMPERATURES and AREAS TARGETTED for LOGGING in Near-Term

The U.S. EPA has listed both the Big River and the Noyo River as sediment-impaired under Section 303(d) of the Clean Water Act. The North Coast Regional Water Quality Control Board has listed Big River for both temperature and sediment concerns, while just listing the Noyo River for sediment concerns. Sediment TMDLs have been established for both of these rivers, but a
147 temperature TMDL has yet to be established for Big River. Page V-16 says, "These sediment and temperature impairments are of particular concern due to the presence of listed salmonid species in these watersheds, specifically, coho salmon and steelhead trout (Figure V.5). These listings of the Big and Noyo River watersheds as impaired are an indicator of existing adverse cumulative effects in these watersheds."
This should happen certainly before a long-term management plan is adopted for JDSF.

On March 30th, 2005, the Coho salmon was listed as endangered under the California Endangered Species Act for the population south of Humboldt County's Punta Gorda area. NOAA Fisheries
148 followed suit to list the Central California coast population of Coho as endangered on August 29th, 2005. The Northern California Evolutionary Significant Unit of the steelhead trout was listed as threatened on August 7th, 2000. All accessible reaches of coastal streams between southern Humboldt and southern Santa Cruz Counties have been declared "critical habitat" for the Coho salmon, while 50 occupied watersheds for the steelhead were delineated as critical habitat for the steelhead early this year.

It is important to examine (especially during the late summer rearing stage) the maximum weekly
149 average temperature in watercourses, and this is especially important this year to see if there is an increase in temperature this year (despite plenty of rain) due to what could be substantially more sedimentation than usual from the major storms of late 2005 and early 2006. The Coho salmon, even more than the steelhead trout, particularly needs temperatures preferably cooler than 62.2% F, and certainly usually below 63.7% F at that critical rearing stage time of year.

Page 9 of Appendix 12 points out that, based on thresholds for interpreting water temperature, several areas in the JDSF CWE assessment area were potentially of concern. These included the South Fork of the Noyo River (including Parlin Creek) and the North Fork of Big River (including Chamberlain and James Creeks). Considering these concerns, which are also reiterated by examining the map on Page VII-6.1-28 about some on-the-brink temperature readings in certain areas of JDSF, it is appalling that the very watercourses that have temperatures almost too warm especially for Coho salmon, are precisely the CWE assessment areas targetted for intensive logging activities in the next 5 to 10 years at JDSF! Clearcutting is the preferred logging method under Alternative C1 for much of the Chamberlain Creek and Parlin Creek CWE assessment areas. It does not take a fisheries biologist to conclude that more roading, widespread clearcutting, herbicide spraying and other logging will have significant unmitigatable impacts on sensitive aquatic species including listed salmonids in these key tributaries, as well as the North Fork Big River and the South Fork Noyo River themselves. In addition, the CWE assessment area especially targetted in the near future, Brandon Gulch (which includes the North Fork of the South Fork Noyo River), would also contribute warmer water than usual to the mainstem of the South Fork Noyo upon massive logging of its vast tracts of mature forests. Note that Appendix 12 Page 19 says that, "The potential impact of timber harvesting on water temperatures can result from a single action, or the cumulative impact of multiple harvests." Plus, remember that roads are the largest source of
150 sediments into watercourses, and Alternative C1 plans numerous more roads, and proposes a vague eventual decommissioning schedule, whereas Alternatives E and F are serious about road decommissioning if they could only get chosen and funded to carry out these worthy endeavors to help the aquatic habitats at JDSF.

27

151 The Proposed Alternative C1, despite claims to the contrary, will result in increased stream temperatures in most years. Some of this increase will occur due to the following activites: logging in streamside areas; increased sedimentation into watercourses due to intensive timber-cutting and roading activities; roading and logging on steep slopes or in inner gorges; focused intensive logging in watersheds which already have temperatures which are on the verge of being too warm to support Coho salmon and steelhead trout; poor management at JDSF across most of the landscape which increases danger of fire with many associated repercussions on watercourse temperature (even if a major fire doesn't envelop the bulk of streamside vegetation which would amplify negative impact on watercourses as would the equipment used in firefighting); plus other factors.

152 Consider the plans under the proposed JDSF alternative C1 in regards to logging in the streamside buffer areas. Obviously, large conifer trees have been targetted for logging historically, which means that hardwoods tend to be present in greater proportion than their historic numbers. The ten largest trees in a stream area longer than a football field supposedly must be left standing, but I'm sure most of the other sizable conifers will be logged even if it means opening up the canopy more than theorized in the document. Hardwoods are supposed to be retained unless they are at a higher than their naturally-occurring percentage. Thus, it is likely that most medium to large conifers will be logged from such areas, plus substantial amounts of hardwoods will be logged in order to bring species composition back to historical levels. This will result not only in direct solar radiation warming watercourses, but also in increased sedimentation of watercourses due to soil disturbance and streambank disturbances.

****

153 I will once again call for either rejecting this quite inadequate Draft EIR / FMP, or I call for adopting Alternative E while devoting funds to take out many unnecessary and damaging roads, plus funding in-stream salmon restoration and expanding some recreation opportunities though not focusing this recreation on the western portion of the forest unless it is agreed with some state parks to accomodate some of their campers if they want to close campsites closer to marbled murrelet nesting areas. Also in regards to the western portion of JDSF, the couple murrelet recovery areas under Alternative F make a lot of sense, and it is absolutely appalling that in what should be the

154 geographical heart of this recovery area, there is this horrendous supposed "clearcutting experiment" and considerable infestation of Tasmanian blue gum (eucalyptus). I understand that this EIS / FMP cannot impact the Caspar Creek management mess, but the Board of Forestry likely has that power and should act immediately!

155 And, of course, need I mention again that the document has many unmitigatable cumulative impacts to aesthetics and to sediment / toxics / increased temperature in Coho salmon / steelhead / amphibian streams. The documents are largely in denial as to the existence, the biological importance, and the current and especially near future habitat value of the most extensive mature stands of redwood (with some fir) in Mendocino County. And, of course, the document tries not to realize that, despite historic abuses in the area, Jackson Demonstration State Forest can be the heart of the most hopeful area to recover habitat for old-growth forest dependent species in Mendocino

156 County -- since it is in the heart of the area of good conservation value between the Ten Mile Creek watershed to the north and the Little River and Albion River watersheds to the south. Good management (which in some areas involves lack of management) at JDSF is the hope for continued existence (and even thriving) of Coho salmon, steelhead, and amphibians in the Noyo and Big River watersheds which will have positive repercussions elsewhere in the county and help bolster the struggling marbled murrelet population in Recovery Zone 5 to hopefully some day link up with the

28.

156 murrelets in Recovery Zone 6 – rather than have them meet the fate of the prediction of 100% likelihood of extirpation south of the Humboldt / Mendocino County line by the year 2044.

157 For all of its paper and words, this Draft EIR / FMP does not give adequate specifics or analysis to justify ridiculous conclusions as to how the aggressive logging and roading of Alternative C1 will not result in cumulative impacts to various aspects of the environment including impact to threatened and endangered species. You must either reject this document in its entirety, or else choose what is admitted within the DEIR / DFMP to be the most protective of the environment -- Alternative E. Please choose E and strengthen it by focusing funding on near-future road removal and salmon habitat restoration, as well as expanding recreational opportunities in certain parts of the forest.

158 Finally, some of the legal statutes violated by Alternative C1 include California Code of Regulations §1422 on Polluting Waters, California Public Resources Code §4640 due to widespread activities at Jackson that increase fire danger, the federal Clean Water Act due to likely temperature increase in watercourses beyond the legal limit if the Proposed Alternative is carried out, as well as violating cumulative effects regulations of the state, and violating the federal and state Endangered Species Act due to obvious negative impacts which Alternative C1 would have on current and future habitat for the marbled murrelet and northern spotted owl.

Sincerely yours,

Bruce Campbell

Bruce Campbell

29.

Mailed Letter P-183

Response to Comment 1
A portion of the second-growth forest found within JDSF is scheduled for harvest within the next several years; please see the Administrative Draft Final Forest Management Plan (ADFFMP) Table 9. The majority of the harvesting will utilize forms of uneven-aged management, retaining the majority of trees within the harvest areas. Within areas proposed for management on an even-aged basis, second-growth trees will be retained at various levels, including most of the trees within the watercourse protection zone. Silvicultural systems and forms of management are described in the ADFFMP Chapter 3 (Silvicultural Allocation Plan, Table 8). The vast majority of the older second-growth forest found within JDSF will be either selectively harvested to retain a significant component of the largest and oldest trees or will be developed into late seral or older forest structure. Some young stands will also be regenerated. Mature second-growth redwood forest stands are not specifically defined and as such no formal inventory exists,. However, a substantial acreage of relatively advanced second-growth forest exists throughout the region, with many thousands of acres permanently protected within parks and reserves (e.g., Russian Gulch State Park, Van Damme State Park, Sinkyone Wilderness State Park, Navarro River Redwoods State Park, and Mendocino Woodlands State Park.

The harvesting of forested stands can contribute to habitat fragmentation and edge effects, depending upon the type and extent of management activity. Harvesting of timber can also contribute sediment to streams and is capable of leading to an increase in water temperature. The reader is referred to DEIR Sections VII.6.1 and VII.6.6 for an analysis of potential effects associated with fragmentation, edge, sediment, and water temperature. Significant cumulative impacts are not expected to occur, due to many factors, including operational standards, expected regulatory compliance, and other provisions of the management plan and subsequent individual projects.

Response to Comment 2
These characteristics of the Forest are described in the management plan. A large degree of variance exists, due primarily to a partially undocumented management history and the historic occurrence of fire within regenerated stands in the western and central portions of the Forest, which had the effect of setting back the development of the stands. Most of this fire occurred prior to 1940. Logging on the area now encompassed by the State Forest has been nearly continuous since the 1860s, which has resulted in a continuum of second and third-growth stand ages and sizes. There is no JDSF inventory or stand classification system that includes the term "mature forest". The term loosely refers to a stage in the development of young stands that follows what is commonly referred to as the pole stage, which occurs following the regeneration phase. There are many acres of even-aged second-growth forest and uneven-aged forest dominated by large second-growth trees in the western and central portions of the forest. Some of these stand conditions are reflected in the habitat analysis performed for the DEIR and depicted on the Map Figures (e.g. Map Figure K).

Most of the forest encompassed within the North Fork of South Fork Noyo watershed is second-growth forest that regenerated following logging that occurred between 1850 and 1930. Some of this regenerated forest was subsequently burned, and a substantial portion of the forest within this area has been harvested by uneven-aged methods. A substantial acreage of forest within this area has not been logged since the stands were regenerated (see DEIR Map Figures G and H for recent harvest history). The west side of Chamberlain Creek was initially regenerated between 1925 and 1950. There has been subsequent selective logging in a portion of this area.

Response to Comment 3
Wildlife will not be significantly impacted by the management plan represented as Alternative C1, and with Alternative G, which has been adopted by the Board. The ADFFMP proposes to increase the amount of habitat available for species normally associated with older forests (see DEIR Section VII.6.6 and RDEIR Alternative G description).

Response to Comment 4
The specifications for retention of old growth trees are clearly stated (ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, And Forest Structure). Regarding second-growth trees and stands, the ADFFMP calls for both active timber management on an even or uneven-aged basis, as well as late seral habitat development within specified areas of the Forest. It is the Board's intention that large young trees be both grown and harvested. Young redwood stands achieve a high level of productivity as stand age increases, depending upon the form of management that is implemented.

Response to Comment 5
Forest management can contribute to the risk of fire, primarily by altering forest fuel dynamics and stand density. The potential for this impact to occur has been considered. Please see DEIR Section VII.8. Significant impacts related to fire hazard are not expected to occur.

Response to Comment 6
Please see DEIR Section VII.2 for an assessment of potential impacts associated with aesthetics. Significant impacts are not expected to occur.

Response to Comment 7
Please see road-related responses below. No specific concern is identified in this statement.

Response to Comment 8
Please see response number 01 above.

Response to Comment 9
The potential for impacts to recreational values to occur has been considered. Significant impacts are not expected to occur. Please see DEIR Section VII.14 for the assessment of recreational resources.

Response to Comment 10
The potential for impacts related to the use of potentially toxic materials has been considered. Significant impacts are not expected to occur. Please see DEIR Section VII.8.2 for the assessment of potentially toxic substances. In addition, see General Response 7.

Response to Comment 11
Prevention is an important element of an effective Integrated Weed Management (IWM) program. The ADFFMP and DEIR/RDEIR discuss the prevention element of the weed management program. Please see ADFFMP Chapter 3 (Invasive Weed Species) and DEIR Section VII.6.2 for a discussion that includes prevention.

Response to Comment 12
The vast majority of snags will be retained. Only those that pose a safety risk, or risk to infrastructure will be removed until the specified snag targets are met.

Response to Comment 13
The official Notice of Preparation included an address to which comments could be sent (DEIR Appendix 4, Notice of Preparation). In addition, the Board's web site provides an address for mailing, faxing, or e-mailing public comments to the Board.

Response to Comment 14
The primary purpose of the State Forest is to serve as a demonstration of sustainable forest management and production. The Forest is funded primarily by revenue derived from the sale of forest products. The growth and production of young forests consisting of large trees is encouraged by legislation, regulation, and Board policies regarding the management of state forests. While a policy of not cutting large trees, or not cutting trees at all may provide greater protection for some

elements of the forest ecosystem, the proposed management of the state forest is not expected to produce significant cumulative effects.

Response to Comment 15
The young forests that exist at JDSF were created primarily by logging activity that has occurred recently (since 1860), relative to the age of old growth forest. The management plan recognizes that stand ages at JDSF are variable, and that stand management has been essentially continuous since the 1860s. This management has created an opportunity for regeneration of young stands or trees between 50 and 130 years of age. The term "mature forest" is not defined in legislation, regulation, or Board policy for the management of state forests.

The degree of edge associated with late seral development areas, riparian zones, and the remainder of the Forest will vary depending upon the methods, timing, and extent to which the forest stands are managed. Please see DEIR Section VII.6.6 for the discussion and assessment of forest vegetation, habitat, and edge. While retention of vast contiguous areas of young forest would provide a greater area of similar habitat that is beneficial to some species, this is not a necessary measure in order to prevent significant adverse effects to wildlife. The ADFFMP proposes to develop additional late seral forest and older forest structure within JDSF.

Response to Comment 16
Notification of the preparation of an EIR for the JDSF management plan was made as required by law, including the address to which comments could be sent. The Board provided sufficient opportunity for comment, accepting written, faxed, or emailed comments.

Response to Comment 17
Acreage figures for the state forest at various points in time represent estimates that are based upon the best available information. The entire forest has not been subjected to land survey in order to provide an exact figure. Past and current estimates utilize deeds, survey, and available maps to produce estimates for forest acreage. This is true of virtually all contiguous land masses, regardless of location. As time has passed, the amount of land survey has increased, which tends to increase the precision of area estimates.

Response to Comment 18
A complete inventory of young redwood stands by age class has not been made in the Forest, county, or region. While old growth forest is widely recognized as a relatively unique resource, second-growth redwood forest has no formal legal status as a disparate category of forest type. While an accurate inventory of stand age has not been made for all of JDSF, the Forest records include harvest history (i.e. year or period of historic logging). While recognizing that the period of logging may not directly relate to current stand and tree age, some correlation exists. For habitat purposes, forest stands are generally characterized by their structural characteristics, not the age of the trees. The ADFFMP and DEIR describe the general pattern of historic logging at JDSF (DEIR Section VII.6.3, ADFFMP Chapter 1). In addition, the forest vegetation is described in the DEIR (Section VII.6.3 and 6.6).

Response to Comment 19
The ADFFMP does not propose clearcutting of 29% of the Forest area. The ADFFMP limits clearcutting to specific research and demonstration projects, forest health needs, and very difficult regeneration situations, while the majority of the area would be devoted to other forms of even-aged or to uneven-aged management. Even-aged management is limited to 2,700 acres per decade, and clearcutting, as a subset of this, is limited to no more than 500 acres per decade. Planned rotation ages vary between 60 and 150 years, so it can be expected that a period of up to 150 years would be required to regenerate this 29% of JDSF. This is a long-term management concept; by comparison, the ADFFMP is expected to remain in effect for approximately five years before a Board review is performed and 10 years before another major update occurs. These timeframes may be greatly shortened by the initial implementation period provisions of the ADFFMP.

The ADFFMP proposes to retain old trees with unique structural characteristics of value to wildlife. Other, smaller old trees could be removed. It is the intent of the ADFFMP to grow and harvest larger young trees, while promoting late seral characteristics and large old trees within the late seral development areas, the watercourse and lake protection zones (WLPZ), and within parts of the Older Forest Structure Zone. Potential impacts associated with silvicultural activity are discussed in many sections of the DEIR, including Section VII and VIII. Significant impacts are not expected to occur.

Response to Comment 20
The ADFFMP proposes to retain a high level of shade canopy within the WLPZ and above the stream channels in order to maintain or improve water temperatures to the benefit of aquatic species. Significant impacts related to water temperature are not expected to occur (DEIR Section VII.6.7 and Appendix 12). The ADFFMP proposes a modest increase in recreational facilities (ADFFMP Chapter 3, Recreation, Aesthetics, and Public Use). Herbicides may be used as part of an Integrated Pest Management Program. Please see DEIR Section VII.8.2 for the assessment of potential impacts associated with herbicide use. Aerial application of phenoxy herbicides is unlawful in Mendocino County (Section 10A.04.020, Mendocino County Code). The ADFFMP does not propose to apply herbicides aerially.

Response to Comment 21
The comment does not explain the perceived inadequacy of the alternatives. The DEIR/RDEIR contains a legally sufficient alternatives analysis.

Response to Comment 22
The discussion related to the proposed use of herbicides is adequate for the analysis of potential impacts in a programmatic document. Discussion can be found on DEIR pages VIII8.9 to 18. All herbicide use must comply with applicable provisions of the FMP and EIR, all applicable regulations, label requirements, and provisions of the individual project analyses that are performed prior to any herbicide use. DEIR Appendix 13 provides additional information on herbicides that are proposed for use. The exact scope of projects cannot be estimated in detail as this document spans ten years. By implementing IWM principles CAL FIRE hopes to manage more efficiently and with less potential for negative effects by invasive plants or control measures as time passes. Site-specific projects with varying environmental conditions and treatment options will be analyzed on a project-specific level.

Response to Comment 23
Indicative of current herbicide use levels, page VII.8-10 identifies that only 20 pounds (active ingredient basis) of herbicides were applied on JDSF over a four-year period beginning in 2000. Pages VII.8-10 and 11 of the 2005 DEIR address the amount of herbicides that could potentially be used on JDSF based on the DFMP (Alternative C1):

> The low level of herbicide use on the Forest in recent years is indicative of the low level of management activity in general, in addition to the request for reduced herbicide use from the public. When management activity levels on the Forest increase following the implementation of the DFMP, herbicide use levels may increase above those of the past several years. However, it is not anticipated that herbicide use will increase to the levels of the early to mid 1990s.

Alternative G adds restrictions that will result in reduced herbicide use (RDEIR pages II-10 and 11 and Administrative Draft Final Forest Management Plan, Chapter 3), as compared to the DFMP. The Administrative Draft Final Forest Management Plan includes a sequence of evaluation factors that will limit use and potential for adverse effects (see response to comments 33 and 67 in DEIR comment letter E-28 for details). These will be analyzed for each specific project and mitigations measures developed to avoid impacts from herbicide use.

Definitive estimates of future herbicide use are not possible at this time, as specific projects using herbicides have not been proposed. The analysis conducted for the DEIR considers the potential for significant and cumulative effects. The anticipated level of impact associated with each area of

management, and associated with each of the alternatives considered, is included at the end of each resource subject analysis. A formal risk assessment was not conducted in association with each herbicide. Please see the discussion of herbicide regulation in Section VIII 8.2.3 of the DEIR. The Administrative Draft Final Forest Management Plan, though programmatic with respect to vegetation management, includes specific guidance that is related to forest conditions. This includes the direction with respect to the quantity of even-aged management, road management measures, and use of IWM. By implementing IWM principles, the Board is confident that management will be more efficient and effective, and that significant impacts related to invasive plants and control methods can be avoided, as demonstrated by the analysis in the DEIR and RDEIR.

Response to Comment 24
The ADFFMP is intended to provide guidance to JDSF for approximately ten years. New information on treatment options or environmental effects can be expected in the next decade. Any herbicide proposed for use would have the appropriate labeling as well as legal status and be superior to the proposed herbicides in effectiveness and or environmental safety.

Response to Comment 25
The aerial application of phenoxy herbicides is forbidden within Mendocino County (Section 10A.04.020, Mendocino County Code). Aerial application of herbicides will not occur.

Response to Comment 26
Treatment of aquatic invasive plants is not among the possible treatments listed on DEIR page VII.8-12. At this time, no invasive aquatic weeds are known that would necessitate treatment to protect aquatic resources. If an unanticipated infestation should occur, careful CEQA analysis would conducted to determine how best to protect aquatic resources.

Regarding riparian areas, no herbicide use would be proposed for post harvest reforestation in the zones with canopy retention. Invasive weeds should be approached on a site-specific basis, choosing feasible alternatives that best protect aquatic resources.

Response to Comment 27
The Superior Court did not consider the DFMP. The Court found specific weaknesses in the environmental analysis performed for the DFMP. The DEIR/RDEIR provides programmatic direction with respect to vegetation management. This does not relieve the Department from conducting the appropriate site-specific analysis before undertaking any weed management activities. The most appropriate point to analyze treatment options is on a site-specific basis. Please see DEIR Section VII-8 for a discussion of how herbicides are regulated.

Response to Comment 28
The DEIR (VII.8-13) states that in reviewing new products, the effectiveness and the environmental toxicology profile would be considered. The comparative environmental toxicological information can be gleaned from: label, Material Safety Data Sheet,(MSDS), and reviews such as those conducted by the Nature Conservancy, USDA Forest Service, Cal EPA- Department of Pesticide Regulation and other sources. Both federal and state regulation provides pertinent information and analysis documents. Staff will evaluate the information from these sources. As stated in the DEIR/RDEIR new herbicide usage would be reviewed for factors listed. The five herbicides proposed for use have been reviewed in such manner. Herbicides would not be used until they are reviewed. Environmental factors that would trigger a decision to not use an herbicide would be based on environmental fate and the risk the product poses to non-target organisms as well as human health.

The commenter has capitalized the term “Toxicological Profile” implying that there is a specific document required, which is not the case. Reviewing existing information to determine its pretence to site-specific conditions at JDSF is the technique anticipated. Some key information was formally presented in DEIR Appendix 13 as general information for readers and decision makers not familiar with herbicides.

Response to Comment 29
The information requested is beyond the scope of the DEIR's programmatic approach to vegetation management. The active ingredients are listed in Appendix 13. This also listed inerts such as POEA, when formulations containing that compound are relevant. Information on some inerts and degradation products are examined by both EPA and CAL EPA- DPR. Registration of pesticides includes review of information on degradation, metabolism and environmental fate. Information on some of the other ingredients added to formulations falls in the realm of trade secrets and is unavailable. Risk assessments and re-registration revisit effects of herbicides and provide insight as to the product formulations. In California, adjuvants are required to undergo product registration and have undergone regulatory review. The information is available in from these sources, cited in the DEIR and responses.

For most applications, the carrier or dilutent will be water. Food grade oils may be in small quantities for cut surface applications. Dispersants, binders, stabilizers, neutralizers, anti-fomers or buffers will not be needed for the majority of applications. When these products are used, they comprise a small fraction of the material used. Given the small quantity of these compounds used, there is no reason to list this information in the document. Including information with little or no relevance to the decisions to be made would add unnecessary bulk.

Response to Comment 30
The commenter is referring to a specific laboratory that conducted pesticide and other tests apparently in the 1980's. The information on herbicides comes from many sources and atypical results are examined carefully. The data has been reviewed both state and federal regulatory agencies. The historic conduct of laboratories are not relevant to the actual safety of herbicides.

Response to Comment 31
JDSF will fully comply with worker protection safety standards for applications carried out by Department staff. For herbicide work for hire, i.e. Contractors, the business itself and personal must be licensed appropriately and register in the County. Accountability for training and safety extend from the individual applicator to the land manager. To ensure this responsibility is being met, a variety of contract and operational measures can be implemented. The Department is aware that safety-training material is available in Spanish from the DPR web site. MSDS and labels are technical items and often lengthy. Providing MSDS and Labels as a sole training source would be inadequate, no matter what languages the applicator speaks.

Response to Comment 32
The statement does not express a specific environmental concern.

Response to Comment 33
JDSF has been a research site for non-herbicide vegetation control methods. Carla Brossard conducted research on broom control, using several techniques. She produced an assessment of the resulting seed banks. JDSF was the site of several of the tests by Steve Young that produced a technical report for CALTRANS on alternative methods for vegetation control. JDSF remains interested in any research proposals for control methods at JDSF. Non-chemical control methods have been considered and utilized, and will continue to be considered during the planning of management projects, demonstrations, and research projects.

Several of the alternatives, as well the Administrative Draft Final Forest Management Plan, include consideration of research on alternative methods to controlling invasive species (Alternatives C1, C2, E, F, and G). Alternative G, page II-10 of the RDEIR, include the following statement:

> In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks.…

The Administrative Draft Final Forest Management Plan (Chapter 3) details these elements more specifically:

> CALFIRE and the BOF recognize there is public controversy regarding herbicide use. A total ban on herbicide use would compromise research opportunities and the broad demonstration value of the Forest and could result in adverse environmental and economic consequences. JDSF staff will adopt the following limitations to potential herbicide use:
>
> - No herbicide will be used unless it is integral to long-term, ecological based management. Projects will be proactive rather than reactive. These considerations will limit and focus any herbicide use. Long-term management will often integrate a variety of treatment techniques.
> - Public and environmental safety is a priority. When herbicide use is indicated, JDSF staff will reduce risk by selecting appropriate herbicide formulations and application techniques.
> - Recognize that some forest visitors may experience negative aesthetic reaction to dead treated plants, even if they are invasive weeds. Herbicide use will be evaluated for aesthetics where treatments could have this potential effect.

Response to Comment 34
Timber harvest operations will vary in their potential to increase invasive weeds. The measures developed must be project specific. At JDSF, neither even-aged management, nor uneven-aged selection will prevent the establishment of invasive species such as broom, if IWM measures are not utilized. The ADFFMP Planned Actions for invasive weeds specifies the following; “Staff will consider the impacts of exotic weeds to native vegetation during the normal course of project development if there is a high likelihood of weed spread due to a nearby infestation. Mitigation should be considered where appropriate and consistent with IWM to minimize the spread of exotic weeds.”

The relationship between management activities and invasive plants has been considered. Invasive plant occurrences are related to both light levels and soil disturbances. See DEIR Section VII.6.2 for a discussion of opportunities to prevent or control invasive plants. JDSF has not utilized herbicides following timber operations to control native brush for many years, opting to utilize mechanical means of control, such as cutting with chainsaws.

Response to Comment 35
No "brown and burn" herbicide use is anticipated. In the case of wildfires, any herbicide residue constitutes a minuscule fraction of the materials that would burn. The combustion products of herbicides have similar toxicological concerns as the rest of the combustion products. No special risks are presented by the combustion products of herbicide treated vegetation versus non-treated vegetation (Bush et al. 2000).

Response to Comment 36
The herbicide registration process includes consideration of many of these factors. Risk assessments and other post registration research provide more detail. JDSF reviews this information as part of the consideration for use.

Response to Comment 37
Ground water concerns are typically higher in agricultural use in contrast to forestry use. This is because forestry uses are dispersed in space and time. Water monitoring of forestry use has constantly shown little water contamination for the herbicides proposed for use (Wofford et al., 2003; Schuette, 1998; Ganapathy 1997; Neary & Mitchel 1996). Specific to glyphosate concerns, the degradation process is well documented and water monitoring has been conducted targeting this herbicide. JDSF will review in context, information available on a given product considered for use.

Response to Comment 38
The question appears to be an oblique reference to the herbicide 2,4-D. This herbicide was initially considered for use. JDSF staff are cautiously optimistic that other herbicides can be substituted for 2,4-D at JDSF.

Response to Comment 39
Pesticide is a general term, while specific terms such as herbicides refer to a class of pesticide that controls plants. The regional data was for pesticides. For forestry use in the region, herbicides comprise the vast majority of pesticides used. Under Section 8.2.2, the DEIR clearly discusses planned herbicide use. Although it could be stated more clearly, other pesticide products such as fungicides, rodenticides, and insecticides are not proposed for use at JDSF. To clarify, the only pesticide class proposed for use is herbicides.

Response to Comment 40
Herbicides and adjuvant are the only products stored in the pesticide room. At the fire station there is an adjacent paint storage room and a nearby gasoline tank and storage for automotive products. There may be other chemicals in the shop/garage, storage shed and barracks on this compound, which are unassociated with the management of the state forest. JDSF does not store any herbicides that have not been proposed for use. As a public safety agency, the Department places an emphasis on complying with legal responsibilities for storage. Release of any of this material is not planned nor is it a reasonable possibility; therefore no separate analysis is needed. The Mendocino County Agriculture Department has conducted inspections of the herbicide storage facility recently.

Response to Comment 41
Status is per 6/9/06 from http://www.epa.gov/oppfead1/endanger/effects/#e7. As of 2004 new consultation regulations regarding EPA and Fish and Wildlife service have come into effect. Clorpyralid was not named in the court order resulting from the lawsuit. The remaining four herbicides have been covered by memorandums and analysis. Imazapyr and Sulfometuron methyl were found to have “not-likely-to-adversely-affect the salmon and steelhead or their habitat” on January 17, 2003. Tryclopyr TEA (amine form) was fond to have “no direct or indirect adverse effects” on ESUs relevant to JDSF , on November 30,2002. Forestry use Triclopyr BBE (ester form) was found to “May Affect, not likely to adversely affect” for some ESUs relevant to JDSF on December 12, 2004. For Glyphosate: “the use of glyphosate at label limits may affect the species of concern, but is unlikely to adversely affect” for the Coho ESU relevant to JDSF on October 8, 2004. Note that the uses that would approach the label limit of 5lb ai/acre are not proposed at JDSF.

Response to Comment 42
In order for eutrophication to occur, excessive nutrients would have to be delivered to the water body. Given limited uses anticipated, there is no basis to project this as a potential effect of herbicide use, therefore no analysis was considered necessary.

Response to Comment 43
The information about the potential for clopyralid residue in compost to damage non-target plants is disclosed in DEIR Appendix 13. The Appendix listed the more relevant regulatory change in California, cancellation of registrations for specialty lawn products. This demonstrates how the pesticide regulatory system is responsive to new information. The Transline label contains a precaution statement about composting or mulching. Compost is not one of the minor forest products that has been collected on the forest. The FMP/DEIR does not propose composting or making mulch from treated plants. The scattered treated star thistle individuals remain present in a mix of annual grasses and other forbs. Given all the organic material present in Redwood forests, illegal collection of the treated plants is extremely unlikely.

Regarding possible mobility in soil, recent detailed analysis conducted for the Forest Service include this (SERA 2004a):

> ...Clopyralid does not bind tightly to soil and thus would seem to have a high potential for leaching. While there is little doubt that clopyralid will leach under conditions that favor leaching—sandy soil, a sparse microbial population, and high rainfall—the potential for leaching or runoff is functionally reduced by the relatively rapid degradation of clopyralid in soil. A number of field lysimeter studies and the long-term field study by Rice et al. (1997) indicate that leaching and subsequent contamination of ground water are likely to be minimal....

At JDSF the major forest soil types are fine loams, and the temperate climate favors soil microbial activity. The proposed use of Clopyralid is low and dispersed. Though the label contains specific warnings, it hazard has warranted the lowest level of labeling “CAUTION”.

Response to Comment 44
DEIR Appendix 13 discloses the varying toxicity of glyphosate to aquatic organisms. JDSF does not anticipate treating aquatic plants with herbicides.

Response to Comment 45
JDSF will review available information on a given product considered for use in context, including any potential effects of herbicides. The Board agrees that each invasive weed and proposed project should be evaluated carefully. The DEIR and RDEIR provide a description of the range of control methods to be used and identify the weed species that are anticipated to potentially require treatment. Within this programmatic context, the assessment in these documents did not find that the proposed actions, as mitigated, would result in a significant potential environmental impact.

The specific possible options for control measures are appropriately considered at the project level. The DEIR includes a discussion of the objectives of the DEIR and its relationship to specific projects (page II –9 to 14). Alternative G provides some specificity in terms of general location of future projects, but the specific operational detail is not known at this time. This management planning process will establish constraints and mitigation that future projects must adhere to, and recognizes the potential need for future analysis and CEQA compliance.

Response to Comment 46
There is potential for limited, yet appropriate herbicide use associated with the conditions mentioned in the ADFFMP, Chapter 3. The use of herbicides for control of native species along roadways is not expected to occur.

Response to Comment 47
The management situations that could involve the use of herbicides are not "excuses" to use these materials. The materials are utilized appropriately and judiciously. A high degree of botanical diversity exists within the Forest, and will continue to exist. Limited herbicide use in parts of the forest will not significantly affect the botanical diversity present on the Forest.

The supposition that JDSF would aerially spray all 500 miles of roadside on JDSF is illogical. Aerial application of herbicide will not occur.

Response to Comment 48
There are storage facilities for fuels and materials used for equipment maintenance at the conservation camps and the fire stations located on lands within JDSF boundary.

Response to Comment 49
Dust control treatments are normally conducted as part of an approved Timber Harvest Plan (THP). THP road management measures receive extensive review by DFG and North Coast Water Quality Control Board. The appropriate choice of dust control measure is site-specific. Evaluation and selection of dust control measures will be conducted at the THP level. The comment letter includes speculation on the use of “slope stabilization products”. No chemicals have been used for slope

stabilization, and none are anticipated. These are not proposed for use in the DEIR. The concern is speculative.

Response to Comment 50
Regarding cumulative effects of Hazardous Materials, the analysis is included in the DEIR pages VIII-60 to 63. Note that soil or slope stabilization chemicals or products are not listed as a potential hazardous material that could be used. Stabilization products are not listed elsewhere in the DEIR.

Response to Comment 51
The use of genetically modified plants or seeds is not anticipated.

Response to Comment 52
JDSF's first priority is to support the use of "weed free" straw to prevent the introduction of invasive weeds. Alfalfa is not used as mulch. Typically alfalfa is harvested before it produces seed. Equestrian camping is limited and campgrounds are monitored. Mendocino County has received no complaints regarding GMO regulation to date (Tony Linegar personal communication, 6/12/2006). At this point, there is no basis to predict a risk to JDSF flora from the source postulated by the comment letter.

Response to Comment 53
The potential for the broad management activities mentioned to create significant impacts has been considered. Significant and cumulative effects are not expected to occur. Please see DEIR Sections VII and VIII for the assessment of individual and cumulative effects associated with the harvesting of timber and the use of herbicides.

Response to Comment 54
A modest increase in recreational facilities is proposed (ADFFMP Chapter 3, Recreation, Aesthetics, and Public Use). Many management measures are proposed to prevent significant impacts upon recreational users and recreational resources. These include establishment of buffers, limitations upon silvicultural systems within and adjacent to the buffers, establishment of mitigation associated with noise and dust, seasonal and daily operating limitations as needed, and site-specific measures associated with individual projects and accompanying environmental assessment. Significant impacts to recreation are not expected to occur. See also General Comment 14, and see DEIR Section VII.14 for an assessment of potential impacts to recreational resources.

Response to Comment 55
The objection to the statement "the so-called management or treatment to achieve late seral forest in mature stands" is not explained. The percentage of a watershed area proposed for some form of management activity cannot be directly related to a level of impact. The specifics of most future management activities are not yet known. At the time that detailed plans are formulated, an environmental assessment will be conducted. The general management direction provided by the ADFFMP, in addition to all mitigation specified by the DFMP and DEIR/RDEIR, will be applied. Significant cumulative effects are not expected to occur.

Response to Comment 56
Support forAlternative E is note. Concern is expressed that hat Alternative E does not allocate funds for road decommissioning. The Board is free to prescribe a form of management that utilizes selected measures or practices from the various alternatives that have been considered. No specific concern relative to Alternative C1 is provided. As adopted by the Board, Alternative G includes provisions to develop late seral forest and to decommission roadways that are potentially damaging to aquatic resources.

Response to Comment 57
Significant impacts associated with aesthetics are not expected to occur. Potential mitigation measures include project location, silvicultural system applied, consideration of public view points and vistas, application of buffers, and many other potential considerations associated with individual

projects, based upon the assessment that is conducted when the project is planned and proposed. Please see DEIR Section VII.2. The potential for impacts to streams, aquatic species, and wildlife species has been considered. Please see DEIR Sections VII.6.1, 6.5, 6.6 and Section VIII.

The DFMP states that clearcutting may be utilized where conditions require this form of silviculture in order to regenerate a specific area (Section VII.6.3-11). At this time, no specific areas with potential regeneration difficulties that would require clearcutting have been identified, and this situation is uncommon.

Response to Comment 58
No extensive clearcuts are planned for Berry Gulch or other watersheds of JDSF. Even-aged management may be utilized in the areas depicted on Map Figure Z of the DEIR.

Response to Comment 59
The Board recognizes the fact that aesthetics must be considered at scales other than "vistas". Please see DEIR Section VII.2 for the assessment of potential impacts to aesthetic resources.

Response to Comment 60
It is appropriate for a registered professional forester (RPF) to conduct assessments of potential impacts to aesthetics related to the harvest of timber. The forest practice rules require this assessment (Title 14 CCR 912.9 and Board of Forestry Technical Addendum No. 2). This requirement does not preclude the use of other individuals or other areas of professional expertise in the conduct of the assessment.

Response to Comment 61
There is no comment 61 due to a numbering error.

Response to Comment 62
The Board agrees with this statement. The alternatives vary with respect to level of potential aesthetic impact. However, no significant impact is anticipated in association with the potential implementation of Alternative C1, or the adopted Alternative G.

Response to Comment 63
The Board agrees that the visual character of an area, and the site and its surroundings, can include more area than can be seen from a major road or trail, or near a state park or special concern area. However, most of the recreational sites utilized by relatively large numbers of people include campgrounds, major roadways, parks, and trails. The ADFFMP does not imply that less intensive logging in buffer areas or the treatment of slash in close proximity to roadways is necessarily sufficient to prevent significant impacts to aesthetics associated with projects. However, these measures can serve to mitigate the effects of management activities, in combination with other specifics of the projects being implemented. The Board disagrees that the ADFFMP implies that there is no need to be concerned about visual impacts on the vast majority of the state forest.

Response to Comment 64
The level and form of mitigation applied to prevent significant aesthetic effects will depend upon the specifics of the project being proposed. The ADFFMP includes a number of measures that will be implemented, but these should be viewed as minimum standards for the protection of aesthetic resources. There is ample opportunity to increase the level of protection provided, depending upon the conditions that are encountered during the planning process for individual projects.

Response to Comment 65
The ADFFMP does not propose, nor suggest, that stand management will improve aesthetics in the short-term. There is certainly potential for stand management to accelerate the development of large trees and stand conditions that are aesthetically pleasing. This is readily evident in most areas of the forest, where the current views have developed as the direct result of stand management in the past.

Response to Comment 66
The statement made in the DEIR referring to continuous forest cover in managed stands of medium to large trees refers to the majority of the Forest, which contains forest stands that have been either partially cut or are even-aged at the present time. With the exception of non-timbered sites, unmanaged old growth stands, and recently created stands of regeneration, most of the remainder of JDSF falls into this category. Most of the old growth stands within JDSF have been managed in the past, primarily by selective cutting. Past stand management has occurred in close proximity to most of the campsites located with JDSF, while retaining the aesthetic qualities associated with the recreational values that are present. Significant impacts are not expected to occur. Please also see response 01 above.

Response to Comment 67
The Board generally agrees that the perceived change in aesthetic value may be greater in even-aged stands than stands that have been partially harvested in the past, but this effect is localized and depends upon site-specific conditions. The ADFFMP includes mitigation measures for the protection of aesthetic resources (Appendix IX). Also, see DEIR VII.2-15. Second-growth forests are not considered a rare or unique resource within coastal Mendocino County.

Response to Comment 68
This statement is not an expression of environmental concern. No response is necessary.

Response to Comment 69
These statements primarily consist of quoted text from the DEIR. No environmental concern is expressed. The Board agrees that these statements are related to aesthetic values present on JDSF.

Response to Comment 70
While the Board recognizes that there is little old growth forest remaining within Mendocino County, young forests are not defined as a rare resource. Please see DEIR Map Figures J and K for a depiction of forest vegetation types within JDSF and the assessment area. A considerable acreage of forest outside of JDSF shares similar vegetation classifications with those found toward the western end of JDSF that are considered to have the oldest second-growth trees. The majority of JDSF will be managed to maintain or create a significant component of large second-growth trees. All identified old growth groves will be preserved.

Response to Comment 71
The designation of forest as late seral development area is intended to produce forested habitat with a significant component of large old trees. This designation is not intended to preserve current forest conditions, which are not late seral. The vast majority of forested area within the late seral development areas is young, having regenerated following the original harvest of old growth forest subsequent to 1860. Future management will retain a large acreage of young forest with a significant component of large trees outside of late seral development areas.

The ADFFMP proposes to increase the amount of habitat available for the marbled murrelet in the future. Neither the ADFFMP nor the EIR denies the importance of forest stands or habitats of any size or age. As stated previously, the majority of JDSF will be managed to retain or create young stands with a significant component of large trees in excess of 80 years of age. Please see earlier responses to concerns related to aesthetics.

Response to Comment 72
The ADFFMP proposes to manage the forest in the Berry Gulch watershed with a mix of both uneven-aged and even-aged silviculture. For the areas managed under an even-aged method, the management activity is expected to occur over a very long period of time, extending at several decades into the future until the subwatershed is entirely regenerated. By the time selected stands are regenerated, the subwatershed will consist of stands representing a broad range of aged classes, while the WLPZ will begin to develop late seral characteristics. The proposed management of the Berry Gulch watershed is not expected to reduce the future habitat development within the

Mendocino Woodlands STA and the lower Big River area. In the short term, only a portion of the Berry Gulch watershed is proposed for harvest (RDEIR Table II.3 and ADFFMP Table 9).

Response to Comment 73
The Board recognizes that the Caspar Creek watershed is important in terms of timber production, recreational value, watershed values, and habitat values. The eucalyptus was planted by the Caspar Lumber Company before 1947. The Caspar Creek Watershed Study has produced well-known and often cited research on forest management and watershed effects.

Response to Comment 74
The presence of plant and forest types of special concern in the western portion of JDSF is well recognized. The ADFFMP proposes to protect the pygmy forest and all listed plants. Recreational activity in this area of the forest is concentrated primarily on existing roads and trails where rare plants do not normally occur. Should rare plants be discovered on roads or trails, the use of these facilities would be halted or mitigated to protect the plants and their habitats. One common practice employed to help protect the pygmy forest from damage is to restrict vehicle use on many of the roads within pygmy forest stands. Please see DEIR Section VII.6.2 for an assessment of potential impacts to rare plants.

Response to Comment 75
All large old trees and old trees with unique structural characteristics of value to wildlife will be retained (ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). An additional 1,549 acres of habitat has been devoted to development of late-seral forest in Alternative G (RDEIR pages I-5, II-8). Stands in close proximity to, and upstream of Russian Gulch State Park will be managed on an uneven-aged basis to develop late seral characteristics, while maintaining continuous forest canopy. In addition, a Special Treatment Area (STA) exists within 200 feet of the State Park, within which management restrictions apply (Title 14 CCR 895.1 and 913.4). Prior to the conduct of timber operations near suspected or known habitat for listed wildlife species, survey will be conducted and the timber operations will be planned and conducted to avoid "take". The vast majority of the Mendocino Woodlands STA will be managed to develop late seral habitat conditions, and future evaluation will consider the potential for designation of additional area for future recruitment of habitat for the marbled murrelet.

Response to Comment 76
The past clearcutting studies there have demonstrated how clearcutting can be done without causing significant environmental impacts. Future management in the Caspar Creek watershed will continue for research purposes and will be generally consistent with the management plan. A large portion of the North Fork of Caspar Creek (about 1200 acres) was designated as an experimental forest by the Board in 1991. Management of the North Fork of Caspar Creek is subject to the provisions of CEQA, the management plan, DEIR and RDEIR, as is the remainder of the State Forest. This area is exempt from the timber harvest planning process, but is not exempt from the assessment of environmental impacts. No timber harvesting is currently planned for the North Fork, so there were no specific harvesting plans to include in the DEIR/RDEIR analysis. The general programmatic analysis in the DEIR and RDEIR was applied to the North Fork. Any individual projects will be subject to environmental analysis.

Response to Comment 77
At this time, no additional campsites are anticipated in the western portion of JDSF. However, sites may be considered in the future. This consideration would include an assessment of potential impacts to the marbled murrelet and other resources in the area. Garbage collection containers are provided at all campgrounds, and Department personnel are assigned to maintain the campgrounds in a refuse free condition.

Response to Comment 78
Mr. Campbell states that management activities such as logging should be minimized in the western portion of JDSF, as well as in other areas, such as much of the Chamberlain Creek watershed.

Although no specific explanation of the concern is provided, the Board assumes that this concern relates to the broader issues of habitat and aesthetics, as previously stated by Mr. Campbell in the letter. Please see previous responses to concerns related to habitat and aesthetics.

Response to Comment 79
Mr. Campbell states that road related activities in the western portion of JDSF should "generally pertain to decommissioning damaging and unneeded roads". As provided in the Road Management Plan (ADFFMP Appendix IV), the road system at JDSF will be inventoried, and a priority schedule will be implemented for road maintenance, road improvement, and the decommissioning of damaging and/or unneeded roadways. However, many miles of existing and necessary roadway will be maintained to facilitate access for recreational and management purposes.

Response to Comment 80
A proposal to evaluate the potential for developing additional future habitat for the marbled murrelet is included in the DEIR (Section VII.6.6.4). The management of stands nearby or adjacent to these areas will not create significant impacts to the marbled murrelet. At present, these areas are not known to be habitat for the species. Any future timber operations in proximity to potential marbled murrelet will include survey and avoidance of occupied habitat, in order to prevent a "take" of the species.

Response to Comment 81
The use of off-road motor vehicles is prohibited within JDSF, with the exception of use by forest management personnel. The Department maintains a security patrol to help deter illegal vehicle use within the State Forest, and attempts to maintain a system of locked gates in areas with native surface roads that are subject to damage during periods of wet weather. Significant impacts to rare plants as a result of illegal vehicle use are not expected to occur.

Response to Comment 82
Hunting is prohibited in the Mendocino Woodlands STA, within the state parks, and in other areas where prohibited by state law and local ordinance. The Department may also prohibit hunting in areas where it is determined to represent a "take" of the marbled murrelet. With these exceptions, hunting is regulated by the Department of Fish and Game. At the present time, no murrelets are known to utilize the stands on JDSF as habitat. If murrelets are detected, they will be protected from "take", which could include a prohibition of shooting in the vicinity.

Response to Comment 83
The DEIR correctly describes JDSF relative to the remainder of the region in regard to the recovery of listed species (Section VII.6.6). It is recognized that the state forest can contribute to the habitat availability for many species, including species normally associated with older forest. Please see prior responses regarding the "mature forest" concern. The ADFFMP proposes to manage JDSF in order to promote recovery of aquatic systems, while maintaining and creating habitat for listed species.

Response to Comment 84
Characterization of the Contribution to Recovery of Marbled Murrelet Habitat management measure (DEIR Page VII.6.6-118) as a “dismal sham” is clearly hyperbole as is the assertion that it is the intent of management to “log the bulk of mature trees at JDSF within the next five to ten years.” It is precisely the recognition of the tenuous status of modeled marbled murrelet populations in Recovery Zone 5, cited by the commenter and described in the DEIR, that the Department and the Board have identified areas for marbled murrelet habitat recruitment that have the greatest likelihood of occupancy and in as short a time frame as possible. The Department and the Board have also committed to working with State and federal wildlife agencies and other sources of marbled murrelet expertise to validate the proposed management measure or modify it as necessary within the first 18-24 months of plan implementation. Lastly, the Board has designated additional area to be managed toward marbled murrelet habitat, located in the upper Russian Gulch and lower Big River area, adjacent to state parks, as mentioned in response 75 above.

Response to Comment 85
This statement represents a misunderstanding of the statements made in the DEIR. The intention of the statement is that the State Forest serves as a demonstration of sustainable forest management to the benefit of the public and the owners of private timberlands. Appropriate management of the State Forest serves as an incentive for private timberland owners to manage appropriately, in consideration of a vast number of forest resources other than timber. The statement in the EIR relating to producing more intensive operations elsewhere refers to the potential for other landowners to trade localized impacts for mitigation banking at JDSF.

Response to Comment 86
Both Alternative C1and G consider the regional setting from a habitat and species perspective, and incorporate provisions to develop additional late seral forest. Alternative G includes additional areas designated for late seral development (see response 75 above). Connectivity within and adjacent to JDSF has been considered as part of the habitat analysis that was performed for the management plan (DEIR Section VII.6.6).

Response to Comment 87
The concern is not clearly stated. The Board recognizes the role that JDSF can play in regional restoration efforts, while also recognizing that JDSF is not capable of bringing about a full recovery of species.

Response to Comment 88
Mr. Campbell is expressing a personal opinion and not an environmental concern that can be responded to.

That “streamside buffer areas” or WLPZs could exhibit significant amounts of habitat edge depending on adjacent upland forest conditions is broadly recognized. Depending on the adjacent silviculture, these areas may not be considered as potential high quality marbled murrelet habitat for these very reasons.

The Board is aware of the Marbled Murrelet sightings in the vicinity of JDSF and this information is documented in the DEIR.

Response to Comment 89
Mr. Campbell quotes extensively from the DEIR and DFMP but does not express an environmental concern that can be responded to.

Response to Comment 90
Specific attributes of limb structure found at murrelet nest sites are described in the DEIR on Pages VII.6.6-75-76. That the canopy closure above murrelet nest sites must be from old-growth redwood and no other tree species in order for a murrelet nesting attempt to be successful has not been documented in the scientific literature to the best of our knowledge.

California Wildlife Habitat Relationships System (CWHR) Redwood 6 is representative of forest stands where the largest tree need only exceed 24 inches DBH with an understory composed of smaller trees. Old-growth trees and stands are protected as described in the DEIR and ADFFMP. The ADFFMP/RDEIR target 33% of JDSF for management towards recruitment of late seral and older forest structure conditions (RDEIR page II-9). The potential decline of marbled murrelet habitat capability cited by the commenter is based on a reduction in Redwood 6 acreage. The modeling limitations of this CWHR habitat type relative to marbled murrelet habitat are described in the DEIR Page VII.6.6-78-79. It is also noteworthy, not withstanding species specific habitat modeling limitations, that the 7% decline is followed by a 13% increase in the 2030-2060 period.

Response to Comment 91
The DEIR has proposed a Contribution to Recovery of Marbled Murrelet Habitat management measure based on input from the US Fish and Wildlife Service, California Department of Fish and Game, and Oregon Cooperative Wildlife Research Unit and others. Habitat areas identified in that management measure will receive additional review as will other areas. The level of management the proposed murrelet habitat areas receive to speed the attainment of late seral forest conditions, if any, is dependent on the review to be conducted (DEIR Page 6.6-118-119 and 6.6-78-82). Also, see response to comment 75 above.

Response to Comment 92
Approximately 15-25% of JDSF is proposed as late seral (successional) or old-growth recruitment acreage, with an additional 10-20% designated for older forest structure. Ultimately, the importance of large second growth as an attribute to potential murrelet nest habitat recruitment will be determined as part of the Contribution to Recovery of Marbled Murrelet Habitat management measure. See response to Comment 91.

Response to Comment 93
The Board recognizes the biogeographic relevance of JDSF as a contributor to marbled murrelet recovery and other species of concern.

Response to Comment 94
Site specific impacts and identification of appropriate management measures to protect marbled murrelets or other species of concern are considered at the level of the individual project. The DEIR identifies those areas of second-growth that are adjacent to existing old-growth groves as late seral recruitment areas (DEIR Pages VII.6.3-24-26). The remainder of the comment appears to represent a management suggestion rather than a specific environmental concern that can be responded to.

Response to Comment 95
See response to Comments #1, #2, #15, #18, #70, and #118.

Response to Comment 96
The comment does not express an environmental concern that can be responded to.

Response to Comment 97
The Board will not speculate on what the commenter considers “suitable social activity” for marbled murrelets. The DEIR does not consider riparian areas and certain buffer strips that will be managed for late seral conditions as marbled murrelet nesting habitat. Existing old-growth groves are being augmented to increase effective size and reduce habitat edge influences (DEIR Page VII.6.3-25-26). Recognizing that existing old-growth groves may not provide suitable nesting habitat, per input from State and federal wildlife agencies, the DEIR has additionally proposed the Contribution to Recovery of Marbled Murrelet Habitat management measure described in the DEIR Page VII.6.6-118-119 and VII.6.6-79-82 and figure VII.6.6.8b. That unfragmented forest conditions are one of the habitat variables important to murrelet nesting success is broadly recognized.

Response to Comment 98
The commenter is correct that “young-growth”, as the term is typically defined, will not likely develop into “old-growth murrelet habitat” over a 50 to 100 year period. That outcome increases in probability to the degree that young-growth forest stands are not managed, if appropriate, to expedite the attainment of desired conditions. The DEIR/RDEIR seeks to identify those forest stands that can recruit suitable murrelet nesting habitat in as short a time frame as possible and with the highest likelihood of murrelet occupancy. The level of stand manipulation necessary to meet that objective, if any, is currently an unknown site specific determination that will be made in consultation with wildlife agencies and other sources of marbled murrelet habitat expertise.

Response to Comment 99
The landscape scale assessment developed by Strittholt et al 1999 was designed to provide a general picture of conservation value across central California. It was not designed to provide specific conservation and management measures for specific watersheds or CWE assessment areas, as stated in the DEIR Page VII.6.6-28. It was included in the Regional Setting Section of the DEIR to give the reader a landscape scale contextual view of JDSF watersheds relative to those across the region when considering a relatively small number of environmental values.

Response to Comment 100
The commenter does not describe an environmental concern that can be responded to. That JDSF would have appeared differently with a modified application of the Strittholt methodology relative to all other areas considered in the region with the same modification is speculative.

Response to Comment 101
The decision to not model the tenth criterion but to evaluate it qualitatively was made by Mr. Strittholt et al. as part of their study. The DEIR did not modify the methodology employed by Mr. Strittholt et al but reproduced their results as reported. Mr. Strittholt et al do not define "institutional barriers to management" but rather "management potential." This term referred to the degree of development of "existing management plans or conflicts". Strittholt et al note that "it is difficult, if not impossible, to assign the same type of ordinal score to this criterion" (p.2).

Response to Comment 102
The Board received input from a number of individuals and organizations as part of the scoping effort required for CEQA compliance.

Response to Comment 103
The ADFFMP proposes to complete a road inventory at JDSF (see Appendix IV). Following completion of the inventory, a priority list will be created for needed maintenance, improvement, and decommissioning. Since the inventory has not yet been completed, it would be speculative to estimate the miles of roadway that may be ultimately decommissioned. However, this effort is expected to be substantial. Over the past ten years, more than 10 miles of road have been decommissioned within JDSF. Most of the new road currently planned or anticipated is expected to be located near ridgelines and away from lower slopes and major watercourses. Most of this roadway will be designed to replace older roads located on steep slopes near watercourses, providing an improvement in environmental conditions for watershed resources.

Response to Comment 104
The potential for impacts to aquatic habitat and aquatic species associated with sediment production and increases in water temperature has been thoroughly considered. Protection is being provided through the implementation of many practices, including watercourse protection zone provisions, road construction and maintenance standards, and timber yarding provisions. Please see DEIR Section VII.6.1 for the assessment of potential impacts to aquatic species. A substantial acreage of young forest has been dedicated to the development of late seral forest, which is expected to increase the area of habitat available for the marbled murrelet. The northern spotted owl exists at a relatively high density within stands of young redwood forest. The density of owls is greater on the adjacent private industry lands, which have undergone a greater amount of timber harvest than JDSF over the past several decades. Significant cumulative impacts to the marbled murrelet and northern spotted owl are not expected to occur. Please see DEIR Section VII.6.6 for an assessment of potential impacts to terrestrial wildlife species. A provision has been adopted to develop an older forest structure zone, which will add potential habitat with unique structural characteristics and a component of large trees (see RDEIR Alternative G).

Response to Comment 105
The commenter appears to suggest that the criteria used by Strittholt to examine watershed conservation value at the landscape scale be applied to the JDSF. While the DEIR did not precisely follow Strittholt's landscape scale criteria, similar measures were applied to the analysis of

alternatives and associated determination of project impact at the scale of JDSF and the Cumulative Effects Assessment Area. The juxtaposition of late successional patches across JDSF was one of several criteria used to evaluate impact associated with each of the alternatives (DEIR Pages VII.6.6-216-240).

Response to Comment 106
Significant and cumulative environmental effects related to forest fragmentation and edge have been considered and are not expected to occur. Current and potential habitat has been evaluated. See DEIR Pages VII.6.6-216-240 for the consideration of edge and fragmentation. Widespread clearcutting is not proposed. The use of the clearcutting silvicultural system will be limited to research projects and areas where the system is necessary to successfully regenerate stands, which is not expected to occur often. See General Response 10.

Response to Comment 107
See response 103 above. Please see DEIR Sections VII.6.1 and VII.10 for a discussion of potential impacts to aquatic and other watershed resources. Significant cumulative impacts associated with the road system are not expected to occur.

Response to Comment 108
The ADFFMP proposes to retain trees the first 25 foot-wide strip of forest on either side of the stream. In addition, the 10 largest conifers and the native hardwoods will be retained. Additional conifers will be retained in order to maintain 240 square feet of basal area within the WLPZ, along with sufficient additional conifers to maintain 85% canopy near the stream, and 70% canopy further away from the stream (ADFFMP Chapter 3, Water/Lake Protection Zone Measures). The degree of temporary habitat edge created will depend upon the silvicultural system being proposed in the area adjacent to the stream zone. Little edge effect is expected when the adjacent forest is managed on an uneven-aged basis, while it is recognized that even-aged management adjacent to the watercourse protection zone is likely to create a temporary edge effect. Many wildlife species find edge to be beneficial, due to the variety of cover and foraging opportunities that are created.

As explained in Section VII.6.1 and Appendix 12 of the DEIR, the near-stream conditions on JDSF exhibit a high degree of canopy density in most areas, including some of those mentioned by Mr. Campbell. The average conifer volume present within JDSF, including the riparian zones, is significantly higher than on adjacent industry lands within the assessment area. The ADFFMP proposes to manage the WLPZ to develop late seral characteristics, including larger and older trees with a high degree of canopy closure.

Response to Comment 109
The comment does not express an environmental concern.

Response to Comment 110
This comment does not express an environmental concern.

Response to Comment 111
The Board agrees that the region surrounding and including JDSF should be managed to conserve and restore watershed and biological resources, including habitat for the marbled murrelet.

Response to Comment 112
The comment does not express an environmental concern.

Response to Comment 113
The comment does not express an environmental concern.

Response to Comment 114
Although recent survey effort has been limited, no Pacific fishers have been detected within the assessment area. Currently, the primary threat to the Pacific fisher is the reduction and fragmentation

of late-successional forests, and the associated loss of habitat components necessary for resting and denning. The species has been found in a wide variety of habitats, primarily those with a high level of large hardwoods and overstory canopy. The ADFFMP proposes to increase the area of late seral forest within JDSF, as well as increasing decadent stand elements such as snags and down logs, which are of value to the species. In addition, the creation of an older forest structure zone is proposed.

Habitat conditions for species of concern on adjacent ownerships are considered during individual project development and through the THP review process. That areas identified by the commenter as potential fisher habitat may be subject to possible timber harvest over the next 5 to 10 years does not equate to "especially heavy logging." The commenter is correct that the non-spatial CWHR model predicts a 7% reduction in habitat capability over the Current-2030 period. However, this trend is reversed with a 8% increase in modeled habitat capability in the 2030-2060 period. It is also noteworthy that the CWHR model was not applied to riparian zones (DEIR Pages VII.6.6-133-134) which are considered to be of moderate to high habitat capability for breeding, feeding or cover requirements. This habitat type is expected to remain constant or increase in extent with the proposed Alternative. Significant impacts to currently unoccupied fisher habitat capability on JDSF are not expected to occur.

Response to Comment 115

The northern spotted owl exists at relatively high populations within the managed forest landscapes of the assessment area (DEIR Section VII.6.6-95). This is likely due to the availability of prey, which is closely associated with timber harvest and other forms of vegetative disturbance. The species requires a significant habitat component with a high degree of canopy closure consisting of trees greater than 24 inches in diameter. These conditions can be found throughout much of JDSF and the assessment area. All plans to harvest timber within JDSF must be accompanied by survey for the NSO. This partially accounts for the fact that large numbers of survey detections have occurred in areas proposed for harvest, such as Brandon Gulch and Camp Three. If the species is found to be using the proposed harvest area, plans must be mitigated to avoid take of the species. Typical mitigation may include an absence of harvest or modification of silvicultural systems to avoid "take" of the species.

Timber harvest does not decimate NSO habitat. All monitored spotted owls within JDSF are known to utilize the habitat provided by managed timber stands. Vegetative disturbance is capable of producing conditions that are conducive to the production of woodrats, the favorite local food of the NSO. While large even-aged cuttings are not expected to be viable habitat for a number of years, the species is capable of foraging near stand edges. Group selection maintains a significant component of nesting and roosting habitat, while promoting the development of habitat for the woodrat, an important prey base for the NSO. The assessment performed for the species indicates that a substantial amount of habitat exists and will be maintained or created within the assessment area. Significant impacts to the species are not expected to occur.

Response to Comment 116

The Franklin study was not conducted in redwood forest. It was conducted in interior coast range forests consisting primarily of fir, pine, and hardwood. The home ranges of all owls known to exist within JDSF include varying degrees of forest edge, while retaining sufficient closed canopy forest stands necessary for roosting and nesting. Known roosting and nesting in these types of sites on JDSF demonstrates the value of the Water/Lake Protection Zones. Forest edge provides a foraging opportunity for the species.

The ADFFMP will retain and produce large, contiguous forest areas that are managed on an uneven-aged basis, maintaining a significant amount of nesting, roosting, and foraging habitat for owls, similar to the habitats that the owls utilize at the present time. In addition, stands managed on an even-aged basis are expected to develop into quality foraging habitat within a few years after regeneration. Based upon the forms of stands utilized at the present time, both the Brandon Gulch and West Chamberlain area will continue to be quality habitat for the northern spotted owl after the completion

of forest management operations, due to the retention of a significant level of canopy cover, large second-growth trees, and hardwoods. Additional quality habitat will be maintained and recruited in the late seral development areas, the older forest structure zone, and within the WLPZ. Significant impacts to the northern spotted owl are not expected to occur.

Response to Comment 117
This extensive series of comments includes many concerns that have been repeated. Please see earlier responses to these issues.

The ADFFMP proposes to retain old trees that are greater than 48 inches in diameter, along with old conifer trees that exhibit specific structural habitat characteristics, such as cavities, large limbs, and broken tops. Due to the common historic occurrence of fire and other stand disturbances, these structural features are relatively common in the old growth trees within JDSF (Marc Jameson, personal communication). As such, it is anticipated that the majority of old trees will be retained. However, there is no inventory of old trees with unique structural characteristics, so a quantitative estimate cannot be made.

Within individual areas where timber harvest is planned, the Registered Professional Forester (RPF) or designee will evaluate individual trees and determine how they will be managed. Registered Professional Foresters are well qualified to identify old trees and structural characteristics. The structural characteristics of old trees are described in the ADFFMP (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). This serves as the working policy on retention of old trees. The RPF is free to apply professional judgement while evaluating trees within stands, potentially leading to retention of trees based upon other characteristics in addition to those listed in the ADFFMP, whether the trees are old or young. These decisions are a part of the site-specific planning and assessment that occurs for individual projects.

No trees, young or old, may be removed from old-growth aggregations (ADFFMP Chapter 3, Old Growth Forest), except under the special circumstances enumerated in the ADFFMP. Small trees without unique defining characteristics, regardless of age, will be evaluated individually during the planning process for individual harvest proposals. Individual old residuals may be harvested if lacking unique characteristics, depending upon the evaluation that is performed.

Very few young trees have developed unique structural characteristics of value to wildlife, due primarily to a relatively low occurrence of fire and other disturbances that tend to create unique structural attributes. As such, most young trees of any size or age may be harvested. Young trees are evaluated individually during the harvest planning process, and some trees with unique structural characteristics may be retained, as has been done with relatively high frequency in the recent past. One of the management objectives for a productive forest, is to remove defective trees that are not growing to potential. Production and habitat are both considered during the planning process.

Mr. Campbell does not specify why he believes that the "the history of forest management has not demonstrated that the JDSF managers can be trusted" with flexibility in determining which large trees can be removed to adjust species composition and improve potential performance of LWD. In fact, the forest managers have demonstrated the ability to adjust species composition and improve growing conditions for large trees, particularly redwood, with greater potential to remain persistent as future large woody debris.

The old-growth retention provisions of the ADFFMP apply equally to all conifer species, including Douglas-fir.

Response to Comment 118
The Board agrees that Alternative F would be expected to retain most of the old trees within JDSF. Trees in young stands that are 80 to 120 years old are not known to be a rare resource within the region. Trees of this age are common within many of the state and national parks, on private lands, and within the state forest. A considerable area was logged historically between 1885 and 1925, so

trees regenerated during this period are expected to occur in an extensive area of the region. However, no inventory of these trees has been performed, and many of the regenerated trees and stands have been harvested by uneven-aged and even-aged methods. The habitat value of forested stands is best assessed through an examination of structural characteristics, as was done for the DEIR. The age of trees within a forest stand is not a reliable determinant of forest structure, due to many factors, including stocking, species competition, site productivity, and historic disturbances.

Response to Comment 119
The reference material utilized to support the EIR have been appropriately cited.

Response to Comment 120
The management of the state forest is a continuous undertaking, so many operational details remain to be planned and implemented in the future, including additional road construction. As assessment of potential impacts associated with new road construction and timber operations will be conducted as the details of these potential future projects are better known. This assessment will also consider restoration projects that have or may be conducted, such as road decommissioning. The potential for new road construction has been considered at the programmatic level. Significant impacts to habitat and aquatic resources are not expected to occur. Please see DEIR Section VII.6.1 and 10.

Response to Comment 121
A short-term harvest schedule can be found in the RDEIR , Table II.3 (or ADFFMP Table 9). Rather than speculate as to where harvest would or could occur under each of the alternatives, the short-term harvest schedule served as an estimate for consideration with all alternatives, but the form of management (i.e. even-aged, uneven-aged, harvest or no harvest, late seral development) would likely vary, and the schedule would be adjusted based upon the final alternative adopted by the Board. This is an appropriate level of specific planning for the EIR.

Response to Comment 122
Water temperature has been monitored for many years, and no significant changes have been found, relative to either forest management or annual weather and flow patterns. Recent rainfall has been high, but well within a normal range in most areas. If environmental changes are discovered that represent a significant change in conditions relative to planned management or cumulative effects, the management plan will be evaluated and appropriate amendment of the plan will be considered.

Response to Comment 123
The North Coast Regional Water Quality Control Board is expected to produce a TMDL implementation plan in the future. Forest management operations will comply with the terms of the TMDL, similarly to all other regulatory requirements. The state forest has been managed to retain or develop a very high level of canopy to protect streams from water temperature increases, and to lower water temperatures in many areas as the canopy continues to develop.

Response to Comment 124
This information is available to some extent from JDSF timber inventory data; some of this detail was lost when these data were converted to CWHR types for wildlife habitat assessment. This fine-grain of information is more applicable at the project assessment level than at the programmatic assessment level of the DEIR. The finer-grained, site-specific information will be evaluated as a part of the environmental analysis at the project level.

Response to Comment 125
Please see earlier response above to the old tree retention issue. Edge effects are created by abrupt substantial changes in either stand density general canopy height, such as implementation of an even-aged harvest adjacent to a stand of larger trees. This does not directly relate to the age of second-growth trees or the existence of scattered old trees. The potential for significant edge effects relative to timber harvest has been considered.

Response to Comment 126
Direct solar radiation and local air temperature are the major environmental factors affecting local water temperature. Other related factors include shade canopy, water depth, and flow volume. Sediment color has not been found to be a significant factor locally, but may have a very minor influence.

Response to Comment 127
The ADFFMP makes provision for a geologist to evaluate potential slide prone areas and inner gorges, and to make recommendations to maintain the stability of these areas. Most of the inner gorge that exists in the Forest is within the WLPZ. A number of potential management limitations can be applied in potentially unstable areas (ADFFMP Chapter 3, Hillslope Management to Provide for Slope Stability). While a complete inventory of these areas has not been made, the DEIR and ADFFMP include maps that depict areas with potential to be unstable (DEIR Map Figures V and W). A thorough field evaluation is made of all planned harvest areas and areas subject to projects with potential to impact slope instability.

Response to Comment 128
The specific location of possible future road construction is unknown, expect in timber harvest plans that are a matter of public record. For these plans, a cumulative impacts analysis has been performed, based upon the potential harvest area and an associated assessment area. The EIR thoroughly considers the potential for new construction, improved maintenance, and the removal of old roads. Please review DEIR Sections VII.6.1 and 10 for an assessment of potential impacts to aquatic resources and watershed resources.

Response to Comment 129
RPFs are fully capable of assessing potential impacts to recreational resources. The staff of JDSF includes many professionals that have vast experience in the maintenance and protection of aesthetic values. A substantial amount of stand management has occurred in close proximity to recreational resources, and significant impacts have been avoided through application of various forms of mitigation, including harvest buffers, modification of project location, and application of silvicultural and timber yarding limitations.

Response to Comment 130
An analysis of potential impacts to recreational resources associated with road and trails is conducted for all projects with potential to impact these resources. Buffer strips and silvicultural limitations within them represent one of many potential measures that can be implemented on a site-specific basis. The recreational buffer represents an operational requirement, but mitigation of potential impacts is not limited to the buffer alone. As new recreational uses occur, including construction of new recreational trails, an expansion of the road and trail buffer system will be considered, and included in future amendments to the ADFFMP. The potential for impacts associated with the recreational use will also be considered.

Response to Comment 131
It is expected that a recreational needs survey will be conducted prior to conduct of the next environmental analysis associated with the JDSF management plan.

Response to Comment 132
No timber harvest is currently planned for the portion of state forest within the James Creek watershed. The table is based upon the best information available at the time of preparation of the DEIR, and as modified as adopted by the Board (RDEIR Alternative G). Future environmental analysis performed for planned management in this watershed will consider all past, present, and reasonably forseeable future projects within an assessment area established for the analysis, including projects on adjacent ownership.

Response to Comment 133
While the map figures do not include the names of these areas, the two largest late seral development areas are readily inferred from the map of special concerns. Waterfall Grove is located in the upper watershed area of Chamberlain Creek, and Road 334 is a short road located near the ridge that divides the North Fork of the South Fork from the South Fork of the Noyo River. The late seral development area is located between the ridge line and the North Fork of the South Fork. Both groves are within the older forest structure zone, which covers a large contiguous area from the west to east areas of the Forest.

Response to Comment 134
Several forms of mitigation are proposed to reduce the level of impact associated with the road system, and to prevent significant cumulative impacts associated with planned future management of the state forest. These measures include improved road maintenance and road construction, decommissioning of roads with highest potential to deliver sediment to streams, road use restrictions during wet weather periods, limitations upon road construction in proximity to watercourses, on steep slopes, or on unstable areas, and consideration of potential impacts to aesthetics. Please see DEIR Sections VII.1, 6.1, 10, and 14 for an assessment of potential impacts to aquatic resources, watershed resources, aesthetic resources, and recreational resources. Significant cumulative impacts are not expected to occur.

There are no existing regulations that directly relate to the location of roads relative to ancient or mature forests. However, new road construction will be avoided within old growth groves and late seral development areas. It is anticipated that most of the new road constructed in the future will replace older roads that present a potential impact to watershed resources.

Modern road building techniques have greatly reduced sedimentation on a per unit basis, but the extent of new construction within the assessment area as a whole has been high in recent decades, so the absolute level of sedimentation at the watershed level has been relatively high. The use of roads for the conduct of timber operations began in the 1940s, but accelerated in second-growth stands during the 1970s and 1980s with the development of new timber yarding technology.

New road construction will be kept to the minimum necessary to enable replacement of older, more environmentally damaging roads, and any additional road that is considered necessary for forest management purposes, subject to the constraints represented in the ADFFMP and in existing regulation (Title 14 CCR 923).

The Board recognizes that roads and road use present a pathway for the spread of invasive species. The ADFFMP includes management provisions to prevent the spread of these species, and to reduce the magnitude of existing populations (ADFFMP Chapter 3, Invasive Weed Species). The presence and re-growth of canopy also offer an effective means to reduce the spread of many invasive species and to reduce existing populations.

Response to Comment 135
Over the past several years, approximately 10 miles of road have been decommissioned on JDSF (Marc Jameson, personal communication). Though a complete road inventory has not been completed, it is estimated that a substantial amount of additional roadway will be decommission in the future. This is likely to include many the roadways that are no longer utilized for management purposes, in addition to many miles of roadway that remain in use. A rough estimate of 50 to 100 miles has been provided (ADFFMP Chapter 3, Road Management, Abandonment), but it is somewhat speculative at this point in time. The road inventory will help to refine the estimate.

Significant impacts associated with logging in riparian areas, within or near older second growth forest are not expected to occur. Please see responses above related to management of older second growth forest. Riparian areas will be protected by a number of measures designed to promote recovery and prevent impacts associated with sedimentation, shade levels, and water temperature increases. Heavy equipment will not operate within the WLPZ, and Class III

watercourses will be protected by equipment limitation zones. These measures will reduce soil disturbance and maintain ground cover that acts as a sediment filter. The watercourse protection zones will remain heavily vegetated, and streams that represent aquatic habitat will be protected by retention or creation of a very high level of overstory conifer canopy (ADFFMP Chapter 3).

Response to Comment 136
A road inventory would be expected to occur under Alternative E and F, as it is planned in Alternatives C1 and C2. The timing of the survey may differ somewhat, based upon the specifics of the alternative and development of a detailed management plan associated with the alternative, if adopted. Each of these alternatives recognizes the potential impact associated with roads. The ADFFMP includes a road inventory (Appendix IV).

JDSF personnel are concerned and are committed to reducing the impacts associated with roads at JDSF, while recognizing that survey, maintenance, and decommissioning are costly and time-consuming management activities. Forest management priorities include new construction to support management operations, in concert with improved maintenance, road inventory, and establishment of a schedule to maintenance and road decommissioning.

Response to Comment 137
The existing roadways on JDSF are available for recreational use. Most of the existing road is depicted on Map Figure 1 in the ADFFMP. Trails are depicted on the special concern area map (DEIR Map Figure D), including those roadways that are utilized most frequently on a recreational basis. The recreational trail system is described in the recreation appendix of the ADFFMP. Each project that is planned will include a unique consideration of potential impacts to recreational and aesthetic resources. The location of future camp sites and recreational trails is speculative. Future recreation opportunities on JDSF will developed through a recreation users survey, development of a recreation plan, and consultation with the new JDSF Advisory Group.

Response to Comment 138
The vast majority of recreational use within JDSF occurs within campgrounds, and along road, streams, and trails. Large numbers of people are not known to hike cross-country, but this activity is very likely to occur on occasion. JDSF is a managed forest that is intended to demonstrate maximum sustained production, and recreation is a recognized, yet secondary use of the Forest (Board policy). People who recreate beyond the bounds of recreational facilities can expect to see various forms of forest management. Most areas that have been managed remain a valuable and beautiful resource for those that venture off road, depending upon the form of management that has occurred and the period of time that has elapsed since the disturbance. Virtually the entire forest area has been harvested in the past. The Forest has been under continuous forest management since the 1860s, and has been managed continuously as a state forest since 1947.

Response to Comment 139
The campgrounds within JDSF, including those areas utilized by equestrians, are periodically examined for the presence of invasive species. To date, new invasive species associated with equestrian use have not been identified JDSF supports the use of “weed free” straw to prevent the introduction of invasive weeds. Fortunately, the ongoing equestrian use has not resulted major invasive weed infestations as a result of feed. This is probably due to the fact weeds adapted to agricultural settings are not well adapted to the canopy shaded conditions at JDSF and that equestrians are often proactive on these issues. The primary invasive weeds in areas appropriate for equestrian travel are not palatable to horses (broom, jubata grass). Significant impacts are not expected to occur.

The Board recognizes the role of vectors in weed spread. The principle vectors (vehicles, contaminated hay, wind, animals, humans, insects, etc) for the major invasive exotic species on JDSF are included in DIEIR Appendix 7B-1. This appendix also noted whether the species is spread by seed, plant parts, or both.

The IWM strategy at JDSF recognizes understanding of the spread of invasives is important. As provided in the Administrative Draft Final Forest Management Plan Chapter 3, the evaluation of weed infestation will include an investigation of the probable cause of the infestation.

The IWM approach includes prevention and an understanding of the disturbance effects that lead to infestations. Infestations have been facilitated by both management related disturbances and the proximity of infested rural residential and other lands. The DEIR, page VII6.2-20, provides for consideration of invasives during project development; “The impacts of invasive exotics and the potential for spread will be considered during the development of individual projects.” Some management actions have potential to create conditions that are more favorable to the establishment of invasive species, such as timber harvesting, road construction, road maintenance, and recreational development. These activities can be modified, based upon local conditions, to reduce the threat of infestation. Project modification may include variations in shade retention, buffering of roadsides, and reductions in the level of soil disturbance.

Response to Comment 140
The ADFFMP includes a list of five “Fire Defense Improvements”, including shaded fuel breaks. These shaded fuel breaks would be considered for construction in defensible areas along main ridges, adjacent to high use roads and adjacent to rural residential neighborhoods (DEIR VII.8-7). The mesic climate lowers fire risk but also increases the rate at which native and invasive plants can become established on a shaded fuel break. Among the considerations for any fuel break project would be the long-term management and maintenance. Some native vegetation including ferns, forbs and low shrubs could be managed to discourage growth of vegetation that would become ladder fuels. These and other similar factors are appropriately considered on a project specific basis.

Significant impacts associated with the risk of fire are not expected to occur (DEIR Section VII.8.1). There have been very few large fires recorded within JDSF since the 1940s. This is due to many factors, including an aggressive suppression program, a relatively cool and damp climate, and an aggressive prevention program. JDSF management staff regularly observe the Forest during the conduct of management activities, including security patrol. In addition, there are two conservation camps located wholly within JDSF, with crews that perform work projects throughout JDSF. JDSF is readily accessible to fire control personnel, due to the open roadways that exist. This is a primary factor that enables small fires to be extinguished. Historically, under old-growth conditions, fires were frequent relative to today, occurring in most areas on less than a 20 year frequency (Peter Brown and William Baxter, Fire History in Coast Redwood Forests of the Mendocino Coast, CA, Northwest Science, October 2002). Most recent fires have burned less than an acre, with the largest fire during the past 10 years being approximately 20 acres in size.

Forest canopy regrows quickly in this area, cooling the ground surface and increasing the moisture content of forest fuels. Timber operations occur on a small proportion of JDSF on an annual basis, and the extent of vegetation "browning" due to herbicide use is very low. Herbicide use targets certain species, and never browns entire hillsides.

Logging machinery can pose a fire hazard risk. Forest practice regulations have been adopted by the Board to prevent fires associated with the use of these machines in the forest (Title 14 CCR, Article 7, Hazard Reduction and Article 8, Fire Protection). Each proposal to harvest timber is accompanied by an assessment of potential impacts, including those related to the risk of fire. Each of the alternatives, except Alternative A, involves the maintenance of roads, though the anticipated future miles of open road is lowest in Alternative E.

Trees utilize ground water during the growth process. Simultaneously, they shade the soil surface and the understory. The Board will not speculate concerning Mr. Campbell’s use of the phrase "developing a plumbing system to provide more ongoing flow of cool clear water". This is not a recognized effect produced by trees, though trees can affect groundwater (primarily by depleting it and reducing the amount of precipitation that reaches the forest floor) and groundwater flow patterns (e.g. creating soil pipes).

Slash reduction near roadways is a common mitigation measure for individual timber harvest operations, depending upon the needs identified in individual areas. Broadcast slash fires are very infrequent, not having been utilized within JSDF over the past 10 to 15 years. Slash is commonly piled on or near log landings, and is often burned. Burns are conducted according to the conditions of permits, or in compliance with applicable regulations. Slash piles are most frequently burned after significant rainfall, which renders adjacent areas less prone to fire, and fire control lines are placed around the burn piles prior to ignition.

Response to Comment 141
At JDSF, vegetation becomes reestablished rapidly following timber harvest. The DEIR includes discussion of the fire and fuels issues (VII.8-5&6). Most of the forest falls into high fuels ranking which is related to the forested condition and productive soils. The fire potential is mitigated by relatively wet climate and lower than average frequency of severe fire weather.

The hazards section of the DEIR (VII-8) includes discussion of risk of wildfire to the forest and measures to protect JDSF. The proximity of the Pacific Ocean and its resulting summer fog pattern dominate any minor microclimate changes in the forest structure at JDSF.

Response to Comment 142
Please see earlier responses to the issues of edge effects and use of herbicides. Significant impacts associated with fire are not expected to occur. Even-aged management is known to produce heavy accumulations of slash. However, this slash tends to decompose rapidly, returning nutrients to the soil. Regrowth is rapid, and is often accompanied by the planting of redwood and Douglas-fir seedlings. The regrowth of young redwood forest tends to be quite dense, with up to 1000 or more trees per acre. Generally, within a period of 5 to 10 years after establishment, the regeneration is thinned in order to concentrate growth potential on a lesser number of trees. This type of activity has been on-going at JDSF for over 40 years, with no significant incidence of fire within this type of stand. This is primarily due to the fire prevention and suppression practices that are normally employed, in addition to the inherent climate conditions that are present. Please see the assessment of fire hazard (DEIR Section VII.8.1).

Response to Comment 143
Intensive vehicle and machinery activities tend to occur only along roadways used in conjunction with timber operations, and along a few of the more heavily utilized recreational access roads. While the use of machines along these roadways introduces some risk of fire, it also provides for ready identification and suppression of fire. The characterization of the DFMP as "promoting intensive vehicular and machinery activities, in the majority of JDSF" ignores the fact that these activities do not occur simultaneously, but may occur periodically over a long period of years. See also responses above to this and similar concerns.

This statement includes statements that have been made repeatedly by Mr. Campbell. Please see responses above. The management of JDSF does not generally target the larger trees within harvest units. In general, uneven-aged management involves the partial harvest of trees throughout the diameter range, while even-aged management may remove most of the trees of all sizes.

Response to Comment 144
The Board generally agrees with this statement. Smoking and the use of equipment around dead vegetation increases the risk of fire. The Department does not practice brown and burn management. Please see responses above for citations of the analysis of potential impacts due to fire. Significant impacts are not expected to occur.

Response to Comment 145
The risk of catastrophic fire has not been demonstrated to be of such a magnitude as to impact the age of trees grown and harvested within JDSF. No assessment has been made of the various potential ages of trees in relation to fire risk. Forest stands are dynamic and variable. It is virtually

impossible to create or maintain an even-aged condition over the long term. In time, natural stand dynamics, intra stand competition, and other stand development characteristics tend to produce an uneven-aged condition, as can be seen in most old growth forests. While the risk of catastrophic fire may be somewhat less in an old growth forest that is subjected to periodic under-burning, when compared to a managed forest, no significant cumulative impacts related to fire risk are expected to occur as the result of management in conformance with the provisions of the ADFFMP. These are somewhat speculative issues, due to the general absence of a catastrophic fire history in this area subsequent to the 1940s. Please see the assessment of impacts due to fire (DEIR Section VII.8.1).

Response to Comment 146
The potential for impacts related to fire has been assessed. Significant impacts are not expected to occur (DEIR Section VII.8.1).

Response to Comment 147
The potential for impacts to watershed resources and aquatic habitats has been considered. Significant impacts are not expected to occur. Please see responses to this issue above. The TMDL process continues to evolve. As regulatory requirements are established, forest management operations at JDSF will remain in compliance. Should any new regulation require further environmental analysis, additional mitigation measures, or additional monitoring, the ADFFMP will be amended, depending upon the magnitude of the regulatory change.

Response to Comment 148
This statement is not an expression of concern. The statement describes a series of regulatory actions taken by state and federal agencies relative to the listing of fish species.

Response to Comment 149
Please see the assessment of potential impacts to aquatic species and aquatic habitat, including potential sedimentation and potential increases in water temperature (DEIR Section VII.6.1 and Appendix 12). The monitoring of selected streams for sediment and water temperature is an on-going activity at JDSF. The monitoring serves as an important tool in the adaptive management program at the Forest. Observed changes are evaluated in order to correlate them with both management actions and natural events. If environmental changes are observed that necessitate a significant change in management direction, the management plan will be amended. To-date no environmental changes of this type have been observed. Timber operations are mitigated to retain water temperature within the range favorable to salmonids, while canopy is allowed to recover in areas where water temperature is outside of the range preferred by salmonids. An analysis of water temperature monitoring data collected in relation to recent timber harvest activities, both even-aged and uneven-aged, has demonstrated that the timber operations at JDSF do not produce a significant cumulative impact upon water temperature. Significant impacts associated with sediment and water temperature are not expected to occur.

Response to Comment 150
This statement repeats concerns expressed earlier in the letter. Please see responses above.

Response to Comment 151
This statement repeats concerns expressed earlier in the letter. Please see responses above.

Response to Comment 152
This statement is repetitive of earlier statements and concerns expressed in the letter, and represents conjecture that is contrary to the stated management objectives and measures proposed in the ADFFMP. Please see the proposed management objectives and measures for the WLPZ (ADFFMP Chapter 3). Significant impacts to aquatic resources are not expected to occur (DEIR Section VII.6.1).

Response to Comment 153
The commenter's preferences for management direction are noted.

Response to Comment 154
This statement is repetitive of earlier statements and concerns expressed in the letter. As pointed out above, the eucalyptus was planted by the Caspar Lumber Company. CAL FIRE recognizes that this plantation is not native, and may attempt to remove it at some time in the future. However, no attempt will be made to eliminate the eucalyptus until a thorough environmental analysis is conducted, including assessment of potential impacts to wildlife, public safety, and watershed resources.

Response to Comment 155
This statement repeats concerns expressed earlier in the letter. Please see responses above.

Response to Comment 156
This statement repeats concerns expressed earlier in the letter. Please see responses above.

Response to Comment 157
This statement expresses Mr. Campbell's preference for the adoption of Alternative E, which he believes is the most protective of the environment.

Response to Comment 158
The forest will be managed in compliance with all applicable rules and regulations.

References

Bush, PB., D.G. Neary, and C.K. McMahon. 2000. Fire and pesticides: a review of air quality considerations. Pages 132- 136 *in* W. Keith Moser and Cynthia E Moser (eds.). Fire and forest ecology: innovative silviculture and vegetation management. Tall Timbers Fire Ecology Conference Proceedings, No. 21. Tall Timbers Research Station, Tallahassee, FL.

Ganapathy, Carissa. 1997. ENVIRONMENTAL FATE OF TRICLOPYR**,**
Environmental Monitoring & Pest Management Branch, Department of Pesticide Regulation, Sacramento, CA.(January 2, 1997)

Neary, Daniel , Jerry Michael. 1996. Herbicides - Protecting long-term sustainability and water quality in forest ecosystems. New Zealand Journal of Forestry Science, Vol. 26 pp.241-264

Schuette, Jeff. 1998. ENVIRONMENTAL FATE OF GLYPHOSATE**,**
Environmental Monitoring & Pest Management, Department of Pesticide Regulation. Sacramento, CA. (Revised November 1998)

Wofford, Pamela, Kean Goh, DeeAn Jones, Heather Casjens, Hsiao Feng,Jean Hsu, Duc Tran, John Medina, and Jane White. 2003. Forest Herbicide Residues in Surface Water and Plants in the Tribal Territory of the Lower Klamath River Watershed of California.
California Environmental Protection Agency, Environmental Monitoring Branch, Department of Pesticide Regulation Sacramento, CA. EH02-05

IV.9 Individual DEIR Mailed Comments P-184 to P-185

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Campaign to Restore Jackson State Redwood Forest
PO Box 1066
Mendocino, CA 95460

P184

RECEIVED BY
FEB 28
BOARD OF FOR... AND FIRE PR...

February 27, 2006

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460
Fax: (916) 653-0989

Subject: Comments on the Jackson State Forest Draft EIR

Dear Mr. Gentry:

12 copies

The enclosed submission (on CD in PDF format) completes my comments on the Draft EIR. My enclosed comments refer to the 2002 JDSF Final EIR and my comments on the 2002 JDSF Draft EIR, both of which were submitted separately. All my submissions should be considered as a whole.

I want to report for the record the reactions to this DEIR that I have heard from the experienced expert reviewers who cooperated with Dharma Cloud Foundation to comment on the DEIR: Peter Baye, Richard Grassetti, Jim Strittholt, and Kathy Bailey. All found the length and disorganization constituted formidable obstacles to conducting a review. Several of them said words to the effect of "commenting on this EIR was the worst reviewing experience I have ever had." One very senior reviewer wrote to me: "This has been one of the most painful reviews I have ever done in my entire career. I feel like I have to wrap my head in duck tape after each day to keep it from exploding." I, myself, found the length and complexity of the current DEIR such that I could not bring myself to read it completely, whereas I read the 2002 DEIR thoroughly.

A

The barely surmountable difficulties faced by experienced expert reviewers argues that the JDSF DEIR fails at the most basic level to meet the CEQA requirement to provide information that is accessible and digestible by the public and decisionmakers. Furthermore, the cost of printed copies (approximately $130) discouraged most people from obtaining them; but a printed copy is essential for making a comprehensive review. So, members of the general public were effectively prevented from making their own comprehensive reviews.

B

Given the massiveness of the document, the summaries are critically important for the public and decisionmakers. The summaries, though, are so superficial and the environmental impacts considered in such broad groupings that the summaries are useless for understanding the differences in the impacts of the alternatives.

C

I know that CDF labored mightily to create a comprehensive EIR. Unfortunately, the resulting document put in too much on the one hand, and did too little organizing and analysis on the other.

D

Sincerely,

Vince Taylor

Vince Taylor, PhD

Tel: 707 937-3001 Fax: 707 937-3001 vtaylor@mcn.org www.jacksonforest.org

Comments on the Draft Management Plan and Draft Environmental Impact Report for Jackson Demonstration State Forest

Vince Taylor

February 27, 2006

Campaign to Restore Jackson State Redwood Forest
PO Box 1066
Mendocino, CA 95460
www.jacksonforest.org

Table of Contents

Table of Contents i
1 Introductory Note 1
2 Qualifications As an Expert 1
3 The EIR Fails To Consider The Use Of Revenue Generated By The Forest 2
3 Alternatives Analysis Fails to Report Significantly Different Impacts 4
4 Inventory Data Deficiencies 5
4.1 Inventory Data Are Deficient Under CEQA 5
4.2 Failure To Provide Forest Stand Characteristics By Management Unit 6
4.3 Failure to Relate Timber Management Activities to Planning Watersheds 7
4.3.1 Failure To Provide Stand Characteristics By Planning Watershed 7
4.3.2 Failure To Relate Management Units To Planning Watersheds 8
4.4 Failure To Provide Information Provided In Prior Management Plans 8
4.5 Inventory Data Are Out Of Date 9
4.5.1 Deficiencies In 1997 Inventory Remeasurements 9
4.6 Forest Growth Rates Not Reliable 10
4.7 DFMP Erroneous and Misleading Growth Estimate 10
4.7.1 Not Measured Growth Or an Erroneously Calculated Value 11
5 Erroneous and Unreliable Inventory Estimates 14
5.1 Serious Errors in Inventory Estimates 14
5.2 IFI Estimates Incompatible with Self-Consistent CFI Estimates 15
5.3 CDF Responses Do Not Refute My Analysis 16
5.4 None of the Difference in CFI and IFI Estimates Is Due to Statistical Errors 17
5.5 Data Refute CDF Explanation for Increasing Volume-Diameter Ratio 18
5.6 Empirical Analysis of the 1984, 1989, and 1999 Volume Estimating Equations 19
5.7 Comparisons of Three Estimating Equations Applied to 1989 Data 20
5.8 Comparisons of Three Estimating Equations Applied to 1984 Data 23
5.9 CDF Knew the IFI Estimates Were Impossibly High in 1991 26
5.10 What Went Wrong with the IFI Estimates? 27
6 Proposed Harvest Plans Will Not Achieve Maximum Sustained Production 30
6.1 Alternative Analysis of Harvest Available for Growth 30
6.2 The Woodlands Transfer Area 30
Attachments 1
VT-1. Letter from Roger Sternberg to Chris Rowney, July 16, 2002 1
VT-2. CDF internal document, "Summaries To Be Calculated – Marc's request" ... 1
VT-3. Letter to George Gentry from Vince Taylor on the need to use updated inventory estimates in the preparation of the EIR, March 14, 2005. 1
VT-4. Volume equations used in for estimating volume from the 1989 IFI data and the 1999 CFI inventory measurement. 1
VT-5. Volume equations used for estimating volume from the 1959-1984 CFI inventory measurements. 1
VT-6. Paul Ederer article, "Forest Inventory – Managing the Numeric Monster for Forest Planning," *JDSF Newsletter # 46,* Summer 1992. 1
VT-7. *Interview of Paul Ederer,* by Vince Taylor, 4/18/2005. 1
VT-8. Paul Carroll, letter to Douglas Wheeler, Director of Resources, California Resources Agency, July 31, 1998. 1

1 Introductory Note

These comments are supplemented by comments that I made on the 2002 Draft EIR for Jackson State Forest and by the Final EIR for Jackson State Forest issued in 2002. These materials are an integral part of my present comments. Copies of these materials have been submitted under separate cover.

2 Qualifications As an Expert

I am presenting my testimony on economics and estimates of forest inventories and growth as a qualified expert.

I have a Ph.D. in economics from the Massachusetts Institute of Technology. My area of specialization was in mathematical economics and statistical analysis. I performed quantitative analysis of complex systems for over twenty years for the Rand Corporation, Santa Monica, and as a private consultant to a number of organizations specializing in policy analysis. I have extensive experience in computer-based data analysis and statistical analysis.

01 Although the inventory estimates in question deal with timber and a forest, the issues involved in determining the accuracy of the estimates are analytical and statistical. No special knowledge of forestry or silviculture, beyond that which I have acquired through reading and discussing the issues with foresters, is required. Conversely, knowledge of forestry is not a qualification for judging the accuracy of the inventory estimates.

3 The EIR Fails To Consider The Use Of Revenue Generated By The Forest

02 A fatal flaw in the EIR is the lack of any consideration of the use of revenue generated in different alternatives.

One aspect of the project (for all except Alternative A) is the generation of revenue from timber harvesting and other forest activities. This revenue goes into the Forest Resources Improvement Fund (FRIF). CDF controls the allocation of FRIF funds. Legislative approval of CDF budget allocations of FRIF has historically been pro forma. The use of
03 the revenue generated by the project is under control of the agency that manages the project; thus the revenue generated by the project is as much a part of the project as the timber harvesting activities that generate the revenue.

04 How the revenue generated is spent will have a very marked effect on the net environmental impact of the project. Yet, the EIR completely ignores exploring alternatives for the use of the funds. This prevents the decisionmakers, who could direct CDF to spend the funds generated in certain ways, from having the information necessary for informed decisionmaking, and it prevents the EIR from adequately considering alternatives that would reduce the environmental impacts of the project.

This is not an abstract problem. For example, the alternative that comes closest to what I would like to see for the forest is Alternative E, which is termed "Exclusive Late Seral
05 Development." In my proposals for management of the forest, I have emphasized late seral development, but I've also recommended that funds generated by timber activities be spent only within the forest on:

1) repairing and decommissioning roads (to reduce stream sedimentation), and other environmental restoration projects,
2) research on issues related to restoration of forest health and demonstration of timber practices compatible with restoring and maintaining healthy forest ecology, and that a portion of the forest be devoted to conducting scientific experiments on a broad range of forestry questions, including even-age management research on a small scale,
3) expanding recreation opportunities, and
4) adequately operating and maintain the forest.

06 If the alternatives analysis had integrated the spending aspects of my forest recommendations, including limiting timber harvesting to the amount needed to fund the programs conducted in the forest, a much different alternatives comparison would have resulted. Call the alternative with my funding/research aspects included "Alternative E-X" (the "X" alluding to eXpenditures). If this were to be developed as a management plan, actual levels of revenue and expenditure by purpose would be specified in the alternative, together with quantitative measures of environmental benefits.

Under Alternative E-X:

1) All of the important aspects of the stated mission for the forest would be fulfilled.

2) The major cause of stream degradation, sub-standard roads, would be aggressively remedied.
3) Research activities would be guaranteed funding.
4) Forest operation and maintenance would be guaranteed adequate funding.
07 5) Timber harvesting, with its potentially negative environmental impacts, would be limited to the amount needed to finance forest activities and programs.

08 In contrast, under Alternative C-1, the EIR's "proposed project:

1) There is no consideration of how funds generated will be spent. The project provides **no guarantee that any of the funds generated by the forest will be spent within the forest.**
2) Although the current, inadequate operating budget is likely to be maintained, that is not guaranteed.
3) Even in the critical area of road repair and decommissioning, the plan has no fixed schedule. All that is scheduled is 5 years for a "road inventory," with no commitment to fixing problems on any time schedule or at any expenditure rate.
4) Research activities are not funded by forest revenues; thus the level of research is unspecified and not amenable to evaluation.
5) Timber activities would be many times (perhaps 5 or more times) larger than needed to pay for the forest budget, with commensurate negative environmental impacts.

09 A valid CEQA alternatives analysis would find Alternative E-X to be environmentally superior to Alternative C, no matter what mitigations are proposed, along every axis of measurement.

10 The BOF has the authority to control the expenditure of funds generated within a state forest, because CDF operates under its oversight. It has historically ceded this authority, without review, to CDF. This does not excuse the Board from its statutory obligation to consider all aspects of projects on state forests, including the generation and use of
11 revenue. Because the present EIR does not present the Board with information needed to decide on the environmental effects of alternative revenue expenditures, it fails to meet CEQA at a fundamental level.

3 Alternatives Analysis Fails to Report Significantly Different Impacts

12 The alternatives analysis in the present EIR are so poorly constructed, though, that even if the EIR had considered Alternative E-X, it would probably have concluded that there were no significant differences between Alternative E-X and Alternative C-2.

12 Consider: in the Executive Summary, the first impact treated in Table 1.2 is "Even-aged timber harvests would have a substantial adverse effect on scenic vistas." Table 1.2 says that this impact in C-2, which uses even-age management on 29% of the forest area, will have the same "less than significant" impact as Alternative E, which has NO even-age management.

13 This example illustrates a fundamental flaw that pervades the Alternatives analysis summarized in Table 1.2. Charitably, the EIR uses impact categories that are so gross in scale that they lump significantly different impacts into the same category, denying
14 decisionmakers important information. Less charitably but more likely, it appears that the constructors of the EIR made subjective judgments, unsupported by any quantitative measures, about the environmental impacts of the alternatives, always concluding that CDF's preferred alternative, C-2, had less-than significant environmental impacts.

15 To continue the example, Alternative E should be credited, at the least, with "no impact," and more reasonably, "beneficial" impact, because it would allow past even-age operations to heal. The type of bias shown in the cited example pervades the EIR summary tables, creating the illusion that there is little difference in the environmental impacts of the alternatives. That the environmental impacts of C-2 and E are
16 indistinguishable is prima facie false. The EIR fails to provide the information required for informed decisionmaking.

4 Inventory Data Deficiencies

17 The forest inventory and growth data presented in the DFMP and DEIR are erroneous, seriously misleading, and wholly inadequate in detail and organization.

18 The deficiencies in the data and its presentation and analysis cause the DEIR to fail to meet the minimum obligations under CEQA to provide a basis for informed decisionmaking and public participation in the development of the Management Plan.

The DEIR is deficient in the following ways:

19 1. The lack of inventory data at the planning watershed level;
20 2. The lack of any measurements of **inventory growth** since the new inventory system was introduced in 1989. All growth estimates used in the EIR and DFMP are derived from mathematical models, using parameter values that are not derived from actual measurements of timber growth in JDSF;
21 3. The inventory **data** on which the EIR relies is out of date;
22 4. The inventory **estimates** on which the EIR relies are inconsistent with 25 years of prior estimates and significantly in error. These deficiencies and their implications are 23 considered in a Section 6. The errors in the recent inventory estimates are so large that the estimates cannot serve as a basis for policy or analysis. The forest has no valid current inventory, making it impossible create a valid management plan or 24 perform a valid CEQA analysis.

25 Because it relied on erroneously high values for inventory and forest growth rate, the DFMP set harvest rates that would exceed forest growth rates. The DFMP does not, therefore, meet the Forest Practice Rules requirement for maximum sustained production.

4.1 Inventory Data Are Deficient Under CEQA

A cumulative impacts analysis is one of the cornerstones of the EIR project analysis required under CEQA. For the JDSF EIR, the project is a Draft Forest Management Plan (DFMP) that envisions large-scale harvesting of timber across the landscape of Jackson 26 State Forest. Accurate and adequate data on current timber inventories and growth, as well as data on past harvests, is the essential foundation for a valid analysis of the cumulative impacts of future harvesting activities:

27 • Sound analysis of cumulative environmental impacts requires that the analyses be done by management compartment (unit). Because of the variability of terrain, trees, streams, botanicals, and wildlife within a single watershed, management units are generally sub-watershed units. The impacts of the timber harvests in the DFMP will 28 occur in the sub-watersheds, and those combined sub-watershed impacts will constitute cumulative impacts. For example, impacts of timber harvest in the DFMP on spotted owls, marbled murrelets, or water quality all occur at the sub-waterhed 29 level. The project's impacts on these environmental values cannot be known without baseline timber stand data within individual watershed planning units. The local impacts must then be combined to get the overall plan impact. The DFMP and DEIR provide inventory and growth data only for the forest as a whole, thereby precluding determining the DFMP's local and overall impacts.

30 • The DFMP projects timber harvests, timber growth, and timber inventories one-hundred years in the future. Initial errors in inventory and growth rates translate into a multiple of these errors in the projected values, as compound growth rates expand their magnitude. The cumulative impacts of proposed harvest plans would be much different if actual initial inventories and growth differed from those used in the
31 analysis. Informed decisionmaking requires current data and confidence in the accuracy of the initial estimates.

Following sections detail the legally fatal deficiencies in the presentation of data in the DEIR and DFMP.

4.2 Failure To Provide Forest Stand Characteristics By Management Unit

32 The DFMP and EIR fail to present timber stand characteristics by management unit. This failure would make the DFMP ineligible for approval under the California Forest Practice Rules (FPRs) for Non-Industrial Timber Management Plans (CCR 1090.5).

33 Legally adequate environmental evaluation of Jackson Forest certainly should meet or exceed the standards for Non-Industrial Timber Management Plans (NTMPs). The Board of Forestry set these standards to ensure that it was provided the information required to
34 determine whether a plan would conform to the rules of the Board. The requested information relates to evaluating the environmental impact of the NTMP to determine if it conforms to Board rules. If this information is necessary for an NTMP, it is necessary for a legally sufficient EIR.

Forest Practice Rules, Section 1090.5, states the rationale for the information required to be included in an NTMP:

> The plan shall serve three functions: **1)** to provide information the Director needs to determine whether the proposed NTMP conforms to the rules of the Board; **2)** to provide information and direction for timber management so it complies with the rules of the Board and the management objectives of the landowner; and **3)** to disclose the potential effects of timber management to the public. **For the plan to serve these functions, it shall, as a minimum, contain the following information:**

Among the information required in the plan are:

> **(g)** A description by management unit(s) of the timber stand characteristics including species composition, age classes, projected growth, present stocking level, present volume per acre, size class distribution, stand management history, and potential pest or protection problems. The description shall provide the basis for the information provided.
>
> **(h)** A description by management unit(s) of the proposed management objectives, including a discussion of projected timber volumes and sizes available for timber harvesting.
>
> **(i)** A description by management unit(s) of proposed activities to achieve the management objectives. This must include: 1) projected frequencies of harvest, 2) silvicultural prescriptions for harvesting, 3) type of yarding systems to be used for each area; 4) anticipated interim management activities which may result in rule compliance questions (i.e. erosion control maintenance).

[Emphasis added]

The emphasized text shows that all information on forest stand characteristics and management activities are required to be by management unit in an NTMP.

The DFMP (Chapter 3, pp. 49 to 55) discusses the establishment of management units within JDSF, with uniform silvicultural methods to be applied within each management unit. There are 25 management units enumerated in the DFMP.

35 **It seems incredible, but the DFMP and DEIR for Jackson Forest contain no forest stand information by management unit.** The only information on timber stand characteristics in the DFMP is presented in Appendix V. Estimated volumes of timber are given only for two species classes (conifers and hardwoods) and two geographical
36 regions (east and west ends of the forest). No information is provided on age or size distributions, even for the forest as a whole.

37 Registered Professional Forester, Roger Sternberg, in commenting on the 2002 DEIR for JDSF, identified the lack of detailed information by management unit. He noted the requirement for this information in NTMPs and said, "... [T]his is basic information needed by present and future forest managers to guide their actions and for the public to understand how the Plan is going to be implemented."[1] Mr. Sternberg's complete letter is attached (Attachment VT-1)

38 The lack of this information is particularly egregious because CDF and the Board of Forestry, have had over three years to correct the deficiency identified by Mr. Sternberg, but they have done absolutely nothing. The current DEIR contains no additional data on forest stand characteristics by management unit. The DFMP is unchanged for 2002.

Perhaps CDF deceived itself into believing such information is not required by its response to Mr. Sternberg: "The level of detail presented in the DEIR, as well as the DFMP and Alternative "A" [Option A?], is appropriate for the program level DEIR... Providing the level of detail requested is not reasonable given the size of JDSF and the
39 policy level direction provided in the DFMP."[2] But, the level of detail in question is what is needed for adequate ecological management of the forest and to perform an adequate cumulative environmental impacts analysis for the management plan.

The lack of forest stand information by management unit is in itself enough to reject the DEIR for failing to meet the CEQA requirement to provide the information needed for informed decisionmaking.

4.3 Failure to Relate Timber Management Activities to Planning Watersheds

40 The DFMP and DEIR fail to show how projected harvest activities in management units would cumulatively impact the biological values in planning watersheds.

41 ### 4.3.1 Failure To Provide Stand Characteristics By Planning Watershed

The DEIR and DFMP fail to provide detailed timber stand data by planning watershed. The DEIR's analysis of cumulative biological effects is done within a framework of

planning watersheds. For example, the discussion of *Aquatic Resources* in Chapter VII.6.1 is conducted in terms of planning watersheds, identifying 17 planning watersheds in JDSF. Chapter VII.10, *Hydrology and Water Quality,* states that a cumulative watershed effects assessment area has been delineated for this EIR that contains 32 planning watersheds, 17 of which contain some part of JDSF. Chapter VIII, *Cumulative Effects,* presents information on past and planned timber harvesting activities by planning watershed. See for example, Tables VIII.3, VIII.4, VIII.9, and VIII.10.

42 The initial description of the forest characteristics by planning watershed is an essential foundation for a cumulative impacts analysis of the proposed management plan. This is true for all biological impacts, but especially so for habitat impacts. The impact of a given harvest plan on habitat depends upon the stand structure, tree ages, and density. The absence of this description makes a meaningful analysis impossible.

4.3.2 Failure To Relate Management Units To Planning Watersheds

43 If an initial description of forest stands by planning watershed were provided, the impact of proposed harvest activities within each planning watershed would the next step in a cumulative impacts analysis. Unfortunately, planning watersheds do not coincide with the DFMP's management units. An examination of Figure 7 in the DFMP, *Timber Management Areas*, shows that some management units span several watersheds, while
44 some watersheds are spanned by several management units. Because the DEIR does not show the relationship between management units and planning watersheds, the impacts of harvesting activities in management units cannot be allocated to the appropriate planning watersheds, and sub-watershed-specific impacts that contribute to overall cumulative impacts of the plan cannot be determined. This failure to address the Plan's proposed timber harvest at a sub-waterhsed level results in an inadequate impact assessment – an
45 assessment so coarse that it fails to identify most of the project's actual impacts. Because the plan includes numerous specific THPs, as identified in the EIR's cumulative impacts assessment, the baseline conditions in each of those THP areas must be described in order for an adequate assessment of the project's impacts can be prepared.

4.4 Failure To Provide Information Provided In Prior Management Plans

46 The forest stand information in the current DFMP does not provide even the degree of detail given in past management plans. Every previous JDSF management plan, going all the way back to 1964, presented tables and charts showing inventory estimates (volume and growth) and trends by forest compartment (not necessarily management units) and tree type, distribution of acreage by age-class of trees, stems per acre for each diameter class, amount of inventory in each diameter class, inventory of trees by species, sawtimber growth by merchantability class and diameter class. The DFMP does not present any of these charts and tables.

47 Although the detail of past information might not suffice for a valid Plan and cumulative impacts analysis, continuing these series in the current DFMP would have allowed the public and decisionmakers to see trends in the composition and totals of the forest inventory. Their absence prevents informed decisionmaking.

4.5 Inventory Data Are Out Of Date

48 The timber stand information in the DEIR is not only fatally deficient in detail, but is also out of date. The starting point for analyzing environmental effects of timber harvesting in the EIR must be current timber inventory data.

Even for the much more limited task of setting the "allowable cut", Board of Forestry policies require that for state forests: "Allowable cut levels must be derived from pertinent current inventory and growth data."[3] [Emphasis added.]

49 The DFMP and DEIR are based on forest inventory data that is now 16+ years old. The inventory data reported in the DFMP and in the DEIR was derived primarily from the initial, 1989 plot measurements made under a new "Intensive Forest Inventory" (IFI) system. Under no reasonable interpretation could this inventory data be considered "current."

50 The DFMP inventory data is outdated according to the design of the system under which it was collected. The design of the IFI system called for measuring 10% of the plots each year; thus no plot data would be more than 10 years old, and the average inventory data would be 5 years old.[4] Thus, by the IFI's design criteria, the 1989 inventory plot data are at least 7 years out of date and on average they are 12 years outdated. (CDF did install and measure some new plots in 1997, but these amounted to less than 20% of total plots. See discussion later in this section).

51 Allowing inventory data to age to 17 years without remeasurements is also outside of the normal standards followed by industrial timber companies. The two largest timber companies in Mendocino County, Mendocino Redwood Company and Campbell Management Company, both work on their inventory measurement continuously. The Campbell company measure 10% of their inventory plots each year, and the Mendocino Redwood Company measures some plots each year and redoes the assignment of vegetation strata in their plots every 10 years .[5]

I forewarned the Board of Forestry about the inadequacy of the inventory data and the need to base the EIR on an updated inventory at the scoping hearings for the EIR held in March, 2004. I followed this up with a detailed letter on March 18, 2004. I concluded my letter by saying, "Accurate inventory estimates are a prerequisite for legally adequate consideration of cumulative impacts. Delaying the preparation of a new inventory will merely delay the time at which a legally adequate EIR can be prepared."[6]

52 According to information provided by CDF, a new set of inventory measurements was made in 2004-2005. None of these data are reported in the DEIR. Reliance for project description on 16+ year-old inventory data is especially unacceptable when current data was available or would have been available very soon.

4.5.1 Deficiencies In 1997 Inventory Remeasurements

Recognizing the impact of logging on inventory composition, CDF reviewed the set of inventory plots in 1996. They deleted over 548 of the original 2054 plots established in 1989, primarily because the plots had been logged and "therefore no longer represented

the new conditions," but also because some plots could not be located (DEIR, Appendix 7A, p. 4).

To address the loss of data samples, CDF installed and measured 390 new plots in 1997. **The surviving 1,506 plots established in 1989 were not remeasured in 1997.**[7]

53 Although CDF refers to the "1997 update of the inventory," it is important to understand that this "update" had 1997 plot data only on the 390, non-randomly placed new sample plots. The remaining plots were "grown" from 1989 to 1997 using standard industry computer growth models.

Thus; the so-called "1997 IFI inventory" is in actuality no such thing. It is primarily a computer projection of 1989 data forward to 1997. The parameters used in the computer projection have never been validated against measured growth data for JDSF collected since 1989 (see below); thus it is impossible to know the degree of accuracy of the projections..

54 Furthermore, the non-random deletion and replacement of plots destroyed the statistical usefulness of the overall plots for estimating total forest inventory. If the original plots were a representative sample initially, they no longer were after the plot replacement. Thus, any estimates of forest inventory based on the modified set of plots could not be analyzed for statistical reliability.

4.6 Forest Growth Rates Not Reliable

55 CDF has never published any data for a re-measurement of the 308 "permanent plots" in the IFI system that were among the total of 2054 plots set up in 1989. These permanent plots were intended to provide statistically reliable estimates of forest growth rates (as contrasted with the detailed "vegetation" strata to be provided by the larger sample of

56 replaceable plots). Thus, the new IFI inventory system has not provided any estimates of forest growth based on actual measurements of trees.[8]

57 Therefore, all "growth estimates" in the Draft Forest Management Plan (DFMP) and EIR are based on computer forest-growth models whose results have never been calibrated against actual JDSF inventory growth data collected since 1989. Such non-validated, parameter-driven estimates could be significantly in error. Because no data are available for calibration, there is no way that decisionmakers can estimate the reliability or the extent of possible errors in the growth estimates.

58 The lack of reliable, measured growth estimates makes future projections highly uncertain. The DFMP looks at forest conditions 100 years in the future. An overestimate of the annual growth rate by one percentage point would lead to overestimating ending forest inventories by 170%. Future inventories might actually be lower when the (erroneous) projected inventories show an increase. Accurate and reliable growth rates are essential for determining Long Term Sustained Yields.

4.7 DFMP Erroneous and Misleading Growth Estimate

The DFMP cites as "the most reliable evidence of forest growth on JDSF. ... an unconstrained [before harvests] estimate of annual growth of approximately 65 million board feet, or approximately 1300 board feet per acre per year."[9]

The DFMP states that the cited timber growth estimate was actual measured growth: "The plot system was measured in 1989 and again in 1999. The difference between the measurements, accounting for harvest, produced [the figure cited]."[10]

59 As shown in the next section, the statement made above is erroneous. The most likely possibility is that the figure of 65 million board feet did not come from actual measurements, but from a computer growth model, uncalibrated with JDSF data.

60 Alternatively, the figure was derived incorrectly, by adding harvest volume to calculated growth.

61 Stating that the estimate reflects actual measurements is an especially egregious misstatement, because it lends unjustified credence to a growth estimate that is hugely greater than any other estimate of Jackson Forest growth made by CDF over the years. From 1956 through 1984, gross conifer volume was estimated to grow about 33-35 million board feet per year.[11] Growth was estimated at 42.9 million board feet in 1993, based on the analysis of 1989 inventory system and data. Its import is further heightened by its placement at the beginning of the section in the DFMP on *Growth and Harvest* (DFMP, p. 48).

62 Although the DFMP does not rely on the 65 million board foot figure for setting future harvest plans, it adds credence to the statement in the DFMP that it used a "conservative estimate of growth" as the starting basis for determining the annual harvest.

63 The starting figure used in the DFMP is an annual harvest of 39 million board feet to achieve long term sustained yield. This does seem greatly less than the 65 million board feet cited previously. It is not conservative, however, when compared to the IFI growth estimate of 42 million board feet per year (gross), because harvest are presented on a net basis, and net volume is about 10% lower than gross volume; thus the 42.9 million board foot gross estimate would, in itself, just support an annual harvest of 39 million board feet – there would be no "conservative" margin in the harvest amount.

The DFMP recognizes that an initial growth figure needs to be adjusted downward by various other factors before determining an annual harvest that will not cause declining inventories within the areas of the forest where harvesting is permitted. More will be said about this later in the comments.

64 The point to be made here is the careless way in which CDF presented an erroneous and outrageously exaggerated figure as a confirmed, measured, actual figure. Given this, how can any of the data presented in the DFMP be considered reliable? Without reliable data, supportable estimates of environmental impact are impossible.

4.7.1 Not Measured Growth Or an Erroneously Calculated Value

The assertion that the DFMP growth figure of 65 million board feet per year is based on measurement is erroneous and very seriously misleading. The figure could have been derived from one of two analyses, one a computer projection and the other involving a major error in elementary algebra.

65 1. An internal document from JDSF files show that the cited growth estimate could have been developed from a computer-based model that *projected* the growth,

rather than from actual measured differences in tree volumes between the two dates:

> This model [CRYPTOS] allows the user to grow a stand ... for one or more five year increments.... In this case, each stand was simply grown for 5 years and the mortality function in the model was allowed to operate. The default values in the model were used – that is, no growth calibration factors were added to the run. [12]

66 Note that default values were used. No actual growth data were used to calibrate the model. These calculations are highly dependent on the values of parameters used in the model, and these parameters were not based on empirical data from JDSF.

67 In its response to comments on the 2002 DEIR, CDF denied that its estimate came from a computer model.[13] It reiterated that it was derived from measurements. If so, the details of the calculations leading to this result should be included in the EIR, to allow the public to determine the validity of this incredible estimate.

68 2. A second internal (draft) document from JDSF files suggests how, if the cited estimate was based on actual measurements, it was calculated erroneously.[14] The document describes the methodology used to calculate the growth in inventory between 1988 and 1998. It calculates the inventories in the CFI sample of plots for 1988 and 1998 excluding any trees that were harvested in the period. It provides summary tables for estimated harvests in the period and estimated volume growth excluding harvested trees.

69 The table of estimated growth gives the figure of 45,490,671 board feet as "Gross Annual Total Forest Growth (trees present during both inventories plus ingrowth during the period)." A previous table estimated average annual harvest in the period 1989-98 to be 25 million board feet.[15] The table calculates the "Total" growth by **adding** the harvest rate to the growth rate, obtaining a value of 70 million board feet. This is an elementary error in logic and or algebra.

70 Harvests subtract from **inventory** not add to growth. By the logic used by CDF, the bigger the harvests, the bigger the forest growth. But this is absurd. The unharvested trees will grow at the same rate (all else being equal), regardless of the harvest. The bigger the harvest, the fewer unharvested trees left to grow, and the smaller will be the forest growth.

71 The estimated forest growth, before allowing for harvests, equals the first figure given, 45+ million board feet per year. Estimated forest growth, allowing for harvests, is calculated by **subtracting** the harvest rate.

There are serious questions about the reliability of the estimate of 45+ million board feet. They relate to the questionable nature of the inventory estimates from which it was derived. These questions are addressed at a later point.

The table that I have is marked "Draft." It's growth estimate of 70 million board feet is somewhat higher than the cited figure of 65 million board feet but almost

72 certainly explains how the latter figure was obtained. I request that the summary tables for the analysis that yielded the cited figure be included in the Final EIR.

---

[1] Roger Sternberg, letter to Chris Rowney commenting on the 2002 DEIR for JDSF, July 16, 2002, p. 2. Sternberg's letter in its entirety is attached as VT-1A

[2] *Letter RS-249,* "Response to Comment 249.1," *Final Environmental Impact Report for Jackson Demonstration State Forest,* September 2002, p. IV-297.

[3] *Policies of the Board of Forestry and Fire Protection,* Section 0351.4 A.

[4] John Griffen, internal JDSF memo to Hal Slack, December 1, 1993: "The original plan allowed for remeasuring one tenth of the plots every year so that no data would be older than ten years..."

[5] Paul Ederer (Campbell) verbal communication, summer 2005, confirmed by email, February 22, 2003; John Nickerson (Mendocino Redwood Company), verbal communication, June 10, 2005.

[6] Letter to George Gentry from Vince Taylor, March 14, 2004, attached at VT-3.

[7] The only remeasurements made since 1989 was of the approximately 140 plots corresponding to the earlier CFI inventory plots. The CFI system was to be replaced by the IFI system because the CFI system was deemed inadequate for providing the level of detail needed for watershed planning.

[8] It seems incomprehensible that at least this small subset of plots was not remeasured prior to preparing the EIR; but if so, the results have never been published.

[9] *DFMP, op. cit.,* p. 48.

[10] *Ibid.*

[11] Exhibit VT-IN-5, in Vince Taylor, *Comments on the Draft Management Plan and Draft Environmental Impact Report for Jackson Demonstration State Forest,* July 18, 2002 (hereafter, *Taylor Comment 2000*).

[12] *NOTES ON AND RESULTS FROM FOREST GROWTH CALCULATIONS,* no author, from JDSF files, 11/30/2000, reproduced as Exhibit VT-IN-6 in *Taylor Comment 2002.*

[13] Final Environmental Impact Report, op. cit., p. IV-269.

[14] The document is headed by a sheet with the title *SUMMARIES TO BE CALCULATED – MARC'S REQUEST.* The summary table is dated 6/22/00 and is marked Draft. It is attached as VT-2

[15] This estimate is substantially less than the harvests reported by JDSF for this period, which averaged 32 million board feet (gross). The discrepancy between actual reported harvests and those estimated from sampled inventory data is evidence that the inventory data is unreliable and untrustworthy.

5 Erroneous and Unreliable Inventory Estimates

73 The inventory and growth estimates used in the DEIR are seriously in error. Irrefutable evidence shows that the DFMP and DEIR cited inventory and forest growth values are substantial overestimates.

74 The overestimates of inventory and growth, coupled with inadequate consideration of constraints on harvesting within areas of the forest, lead to the DFMP proposing harvest levels that may well exceed the constrained growth of the forest. The possibility of these overestimates is sufficiently high that the DEIR should have considered their implications for environmental impacts. By failing to consider the possibility that the DFMP could lead to declining inventories, forest density, and tree ages on a substantial portion of the forest, the DEIR fails to adequately describe the environmental impacts of the Plan.

This section provides evidence that the estimates of inventory and growth in the DFMP are seriously overstated. Section 7 analyzes the setting of the harvest level (allowable cut) in JDSF and shows that the harvest level in the DFMP likely exceeds the growth that is available for harvesting.

5.1 Serious Errors in Inventory Estimates

75 In my comments on the 2002 DEIR for Jackson State Forest, I provided substantial evidence that estimates of inventory in Jackson Forest based on the 1988-89 plot measurement and IFI estimating equations are very much greater than the true values.[16]

My 2002 comments are included as part of these comments. Here I will emphasize the main points of 2002 comments, add to them where I have more information or clarifications, and, where appropriate, respond to CDF's responses to my comments in the 2002 Final EIR. In all other respects, the 2002 comments are an intrinsic part of these comments.

Since 2002, I have performed additional analyses that demonstrate, beyond any doubt, that the IFI inventory and growth estimates are seriously in error. These analyses are presented later in this section.

76 **The inventory estimation errors are so great that the description of the setting of the project used in the DFMP and DEIR is fatally deficient. The errors are responsible for setting harvest levels that seem likely to significantly degrade the areas of the forest where timber harvesting is not prohibited or restricted. The environmental consequences of such harvesting more than forest growth are nowhere considered in the DEIR. The overharvesting also violates the Forest Practice Rules for Long Term Sustained Yield; thus the DFMP is legally invalid.**

Background: JDSF installed a new inventory system (IFI or Intensive Forest Inventory system) in 1989-90 to replace the former CFI (Continuous Forest Inventory) system. The new system estimated 1990 inventories approximately 50% higher than the 1984 CFI estimate. The corresponding estimate of forest growth was 34 percent greater.

5.2 IFI Estimates Incompatible with Self-Consistent CFI Estimates

CDF has made various attempts to justify the higher estimates as more accurate than the previous, 1984 estimate. None of these attempts succeed in answering a fundamental challenge to the credibility of the new estimates: "How can the vastly higher recent estimates of forest inventory and growth be reconciled with the much lower, stable, **self-consistent** estimates that were produced over 25 years by the previous inventory system?"

77

- The previous CFI inventory system was in operation for 25 years, with remeasurements made every 5 years.
- During this entire period, JDSF policy was to cut in a 5-year period all of the growth estimated for that period, based on measured inventory and growth rates.

78

- If harvest amounts equal growth amounts, the inventory will remain constant. This was roughly the case in JDSF from 1959-1984. Thus, the CFI growth, harvest, and inventory numbers were generally ***self-consistent***[17].

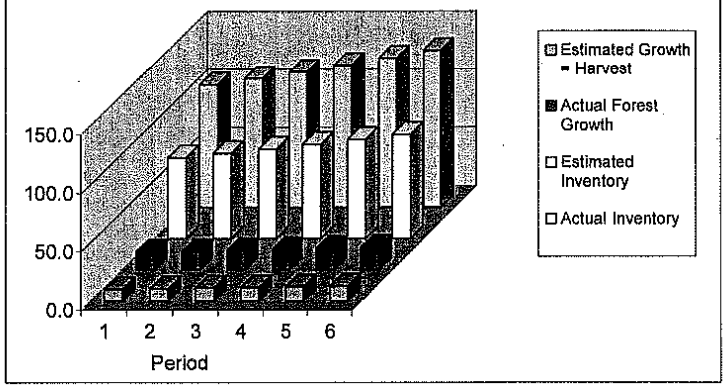
79

- The first IFI inventory estimate, made just 5 years after the last CFI inventory, was 50% higher than the last CFI estimate, and the estimated forest growth rate was approximately the same as the CFI growth rate. But forest growth greater than the CFI estimate is **inconsistent** with the estimated constant inventory over time between 1959-1984.

80

- If actual growth had been higher than estimated growth during the CFI period, only part of the growth would have been cut, and so inventories would have increased significantly from period to period. This result is shown graphically in Figure 6.1.

Figure 6.1: Forest Growth When Actual Inventories and Growth 50% Greater than Estimated -- Harvest Equals Estimated Growth



Even though in this illustrative projection, the policy is to cut estimated growth, estimated inventories keep growing because actual growth is greater than the cut.

Estimated inventories keep growing because they are the same percentage of the growing inventory level. This example uses numbers that approximate the percentage difference between the IFI and CFI inventory estimates.

81 As long as actual inventories are greater than estimated inventories, estimated inventories will increase over time when harvest is set equal to estimated growth. But, **in JDSF estimated inventories actually declined from 1969 to 1984, by 4 million board feet per year, or more than 10% of the average annual harvest. This fact supports an argument that CFI inventory and growth estimates were higher than actual forest values. There is no credible way that this decline in inventories could have occurred if actual growth and inventory values during this period were those estimated by the IFI system.**

5.3 CDF Responses Do Not Refute My Analysis

In the 2002 Final Draft EIR, CDF responded to my analysis, but never addressed it directly; thus the conclusion was uncontested. Instead, CDF made numerous irrelevant assertions, none of which are germane to the analytical point made in the previous section. Below are quoted excerpts from their responses, followed by my comment

- *This comment, and other related comments...presents no analysis of the actual inventory data... This speculative line of theorizing about likely problems with JDSF's inventories are groundless. They are also wholly irrelevant because the inventory data are hard facts, not subjective opinions.*[18]

82 In this and other comments, CDF makes irrelevant and erroneous assertions. It does not argue that my analysis contains any errors in logic or computation.

83 The comparison of the CFI and IFI results is not speculative theorizing, but logical analysis of the data.

84 What the analysis shows is that the two sets of estimates cannot both be correct, and that the 25 year history of the CFI estimates supports the accuracy of CFI estimates. The IFI estimates have no history to support their validity. Only one set of whole-forest inventory measurements has been done under the IFI system. It's self-consistency over time has not been evaluated. Nor, has CDF ever published any

85 information that evaluates its accuracy by looking at actual and predicted harvest data. That the IFI estimates are wrong is consistent with the entire history of JDSF inventory measurements.

What is obviously the case is that the "inventory estimates" are not "hard facts." Rather they are derived through a very complex process of measurement, recording, transcription, statistical methodology, and data processing. There is room for error in many of these steps, and the results are very dependent on the estimation model and

86 the statistical estimation of the parameters. Apparently, somewhere in the IFI process, errors of data processing or statistical analysis occurred, causing inventories to be overestimated.

- *The most recent 1999 CFI remeasurement supports the IFI inventory results.*

Several points are to be made:

87 1. The analysis of the 1999 CFI remeasurement has never been published; so it is impossible for the public and decisionmakers to know to what extent it validates the 1989 IFI estimates. The assertion made by CDF is unsupported.

88 2. Information supplied to me by CDF shows that the same volume estimating equations were used on the 1989 IFI and 1999 CFI inventory data, but different parameter values were used in the equation. These different parameters produce significantly different estimates of volume: the volume estimates, *from the same set of tree measurements*, differ by 16 percentage points. The 1984 CFI estimates used an entirely different set of estimating equations, and these in turn produce volume estimates that are about 16% lower than the lower IFI equation estimates.[19] See later discussion.

89 3. With so much variation between the variously derived statistical estimating equations, little confidence can be placed in the correctness of any one of the statistical results. One needs to look at the **self-consistency** of harvest, growth, and inventory measurements over time. Only the earlier CFI estimates pass this test.

4. In any event, the analysis presented later in this section shows beyond a doubt that the IFI estimates are seriously in error.

90 • *They[the IFI and CFI inventory estimates] are not directly comparable... It would be unreasonable to expect them to give the exact same results.*

The IFI and the CFI estimates attempting to measure exactly the same thing: the inventory of the forest, albeit five years apart in time. They are comparable.

I am not asserting that the two estimates should be exactly the same. That would indeed be unreasonable.

• *The underlying premise that a lack of close correspondence in estimates between previous generations of CFI data and recent IFI data in and of itself is indicative of an error in the IFI, CFI or both, is intrinsically invalid.*

91 CDF is attacking a straw man. This is not my premise. Rather, the data show that the CFI growth, inventory, and harvest estimates were internally **self-consistent** over 25 years, and I have further demonstrated that this result could not have occurred if the CFI significantly underestimated inventory and growth. This is an analytical result based on CDF's own data.

In none of their responses to my comments does CDF provide any refutation of my analysis showing that the CFI estimates are, if anything, overestimates of the actual inventory and growth and, therefore, that the much larger IFI estimates must be erroneous.

5.4 None of the Difference in CFI and IFI Estimates Is Due to Statistical Errors

The publication that CDF cites as the one that "resolves the issues" I have raised,[20] proposes two explanatory factors for the difference between the CFI and IFI volume estimates: 1) statistical error, and 2) changes over time in the relation between tree

diameter (which is measured during inventories) and tree volume (which is for the most part calculated as a function of tree diameter).[21]

Mr. Henry states that about 15 percentage points of the 40+ percent difference in the estimates is due to revised diameter-volume relations. He relies on possible sampling errors to "explain" the unexplained 25 percent difference between the 1984 and 1990 inventory estimates. He uses the statistical concepts of sampling errors and confidence levels to argue that the unexplained difference of 25 percent is within normally accepted
92 statistical probabilities. Essentially, this is an argument that the much smaller CFI sample was unrepresentative of the forest, but that the much larger IFI sample was statistically much more reliable.

However, there is no need for statistical arguments about possible sampling error. The 2050 IFI sample plots included all of the CFI sample plots; thus rather than resorting to statistical arguments, one need only to compare the results calculated for the CFI subset with those for all of the IFI plots using the same diameter-volume relations. This will provide a direct, unequivocal answer to question of whether sample differences account for the discrepancy in estimates.

This calculation was performed at my request by Norm Hill of CDF in 1998. Mr. Hill found that the estimated inventory calculated using only the CFI subset of plots was nearly identical to that estimated using all of the IFI plots.[22] ***This demonstrates that there***
93 ***was no significant difference between the CFI and the IFI plots in terms of total forest inventory.***

Sample differences do not account for any of the difference between the.CFI and IFI estimates. The entire 40-50% difference (depending upon the IFI estimate being considered) requires another explanation.

5.5 Data Refute CDF Explanation for Increasing Volume-Diameter Ratio

The only other explanation for the difference in estimates proposed by CDF was a trend toward increasing volume-height relations over time. Mr. Henry showed plots that purported to compare the diameter-height relations used by the IFI and CFI systems to estimate timber volumes. He presents an analysis of data that found a 14% increase in volume growth in a small sample of plots "just due to differences in diameter
94 relationships..." This still leaves 25-35 percentage points of the increase unexplained. I will have more to say about this later, but the underlying explanation for 14% of the difference is not supported by the data.

In my 2002 comments, I showed that the data published by CDF over 25 years contradicted CDF's "explanation" of why the volume of wood for a given diameter of tree should be greater in 1989 than in 1959.[23]

95 In its responses, CDF failed to address the empirical data and its implications, but instead said that the data concerned only "one of several factors" affecting the diameter-height (and therefore diameter-volume) relationships. But, in the publication that CDF cites as the one that "resolves the issues" I have raised[24], the only factor given as an explanation for an increase in height relative to diameter over time is the increase density of tree stands "as the young forest aged:"

> *Height growth appears to not be greatly affected within a wide range of stand densities for most species. Diameter growth, on the other hand, is relatively sensitive to changes in stand density. As stands become more dense, diameter growth per tree is reduced. The likely result is that as the young growth stands grew older and denser during this forty year period... diameter growth decreased relatively disproportionate to height growth...*[25]

96 The data presented showed that, rather than increasing, stand density steadily and significantly **decreased** throughout the period. CDF did not dispute the data. Thus, they present no grounds to dispute my conclusion:

> To the extent that stand-density changes were affecting the accuracy of CFI measurements, they should have caused a growing overestimation of inventory...[26]

97 CDF's tree-stand-density theory supports the view that the CFI system **overestimated rather than underestimated** inventory and growth in the later years. Rather than supporting CDF's position, it works against it.

5.6 Empirical Analysis of the 1984, 1989, and 1999 Volume Estimating Equations.

98 None of the explanations that CDF has given for the difference in the 1984 and 1989 inventory estimates are supportable by data or logic. After the 2002 Final EIR was published, with no meaningful refutation of my arguments, I was left not knowing what could have accounted for the difference. Certainly, sampling errors were not responsible. Although, according to CDF, 14 percentage points of the difference could be explained by newly estimated height-diameter relations, the decreasing density of forest stands

99 made this explanation suspect. According to CDF's reasoning, decreasing stand density should have lowered height and volume relative to tree diameter, the opposite of what CDF said was the case.

99a Because CDF was unable to provide an explanation, I decided to analyze the 1984 and 1989 inventory data and estimating equations myself. CDF agreed to provide me with electronic files containing the inventory data for the 1984 CFI inventory and for the IFI-CFI plots[27] measured in 1989 and 1999. The basic data provided were for tree diameters by specie, and the plots were assigned a site index class. CDF also provided the estimating equations used to derive volume from tree diameter. Each of the three inventories (1984, 1989, 1999) used a different estimating equation.

With the help of a programmer, volume estimates were made by specie for the 1984 and 1989 inventory using each of the three different estimating equations.[28] The inventory data analyzed for 1984 is the entire CFI inventory sample. The data analyzed for 1989 is the subset of the IFI inventory plots that were located within the earlier-established CFI plots.

5.7 Comparisons of Three Estimating Equations Applied to 1989 Data

Table 5.1 shows the results of applying three different volume-estimating equations to 1989 inventory data. The three estimating equations were the three different equations applied to the 1984, 1989, and 1999 inventory data.

Some observations about the data in Table 5.1:

100

- The three volume estimates are derived from the same set of data (1989 inventory). The differences entirely reflect the differences in the volume-estimating equations . It is important to keep this in mind. In the table and the following discussion, the different years mentioned don't refer to different years of data but to year in which a given estimating equation was used to analyze inventory data, e.g., the 1989 equations were used in estimating inventory from sample data for the 1989 inventory. Here we apply all three equations to one year of data in order to isolate the effect of the differences in the estimating equations.
- The estimated whole-forest conifer volume using the 1989 estimating equation (2.0 billion board feet) is in the middle of the range of estimates put forth for this value by CDF. This gives some comfort that the data sample and data processing reasonably reproduce the data and analysis used originally by CDF.

101

- The comparative estimates for minor conifers are not reliable. The species codes used for the 1989 and 1999 inventories differed from those used for the 1984 inventory. There was not available a cross-reference table; thus 1984 equations could not be accurately applied to the 1989 data, and vice versa. As these were a relatively small component of the total, the problems in this category were accepted without being resolved. Nothing should be inferred from the difference in the estimates for minor conifers. Therefore, totals excluding minor conifers are used to compare the volume estimates produced by the three different estimating equations.

102

- The volume estimating equations have a much bigger influence on the volume estimates than Mr. Henry said and that CDF cited as correct (14%). The 1989 estimating equations, which are the equations used in making the 1989 inventory estimates, produce a whole-forest conifer volume estimate that is 31.6% greater than the one produced using the 1984 equations.

103

1. The results using the 1989 and 1999 estimating equations differ substantially– yielding respectively estimates that are 131.3% and 116.6% of the 1984-equation estimate. It is important to note is that these significantly different volume-estimating equations were derived only 10 years apart. Changes in forest stand age and structure could not explain this difference. The difference must reflect differences in statistical estimations of parameters. But, no reliance can be put on a methodology that yields such significant differences as these.

Table 5.1 Summary 1989 IFI-CFI Plot Data, gross volume estimates with estimating equations from '84, '89, and '99

		Volume Estimates from 1989 Inventory Data		
		1989 Equations	1984 Equations	1999 Equations
Young Growth Redwood	*Plot Total YG RW (1/5 acre/plot)*	707,166	532,089	603,716
	Total/acre	25,438	19,140	21,716
	Forest totals (48,682 acres)	**1,238,353,698**	**931,768,384**	**1,057,197,189**
	Ratio of volume to 84 equation volume	132.9%	100.0%	113.5%
Young Growth Douglas Fir	*Plot Total YG DF (1/5 acre/plot)*	325,478	256,617	305,041
	Totals per acre	11,708	9,231	10,973
	Forest totals (48,682 acres)	**569,961,133**	**449,375,977**	**534,173,139**
	Ratio of volume to 84 equation volume	126.8%	100.0%	118.9%
YG RW & DF Subtotals				
	Plot totals (1/5 acre/plot)	1,032,644	788,707	908,757
	Total/acre	37,145	28,371	32,689
	Forest totals (48,682 acres)	**1,808,314,832**	**1,381,144,361**	**1,591,370,328**
	Ratio of volume to 84 equation volume	130.9%	100.0%	115.2%
Old Growth Redwood and Douglas Fir	Plot totals (1/5 acre)	90,430	64,570	86,036
	Total/acre	3,253	2,323	3,095
	Forest totals (48,682 acres)	**158,357,187**	**113,071,212**	**150,662,577**
	Ratio of volume to 84 equation volume	140.1%	100.0%	133.2%
Minor Conifers	Plot totals (1/5 acre/plot)	36,374	10,001	15,140
	Total/acre	1,308	360	545
	Total forest (48,682 acres)	**63,696,632**	**17,513,174**	**26,512,340**
	Ratio of volume to 84 equation volume	363.7%	100.0%	151.4%

***AllConifers*[1]**

Plot totals (1/5 acre/plot)	1,159,448	863,277	1,009,933
Total/acre	41,707	31,053	36,329
Forest Total (48,682 acres)	**2,030,368,651**	**1,511,728,748**	**1,768,545,245**
Ratio of volume to 84 equation volume	134.3%	100.0%	117.0%

All Except Minor Conifers

Forest Total (48,682 acres)	**1,966,672,019**	**1,494,215,573**	**1,742,032,906**
Ratio of volume to 84 equation volume	131.6%	100.0%	116.6%

1. The Minor Conifer Volume comparisons are not reliable.

2. The volume estimating equations are those used by CDF. The 1989 and 1999 equations are in Attachment VT-4. The 1984 equations are in Attachment VT-5.

3. The data used was supplied by CDF to me in the summer of 2005. The data are for 139 of the plots in the IFI inventory system that were established within the original CFI plots (2 of the original plots were missing data in 1989). The data are from the 1989 measurement of these plots. The electronic form of the data used in the 1990 analysis of these data was lost. The current data were reentered in 2005 by CDF personnel.

4. The processing of the data to produce volume estimates was done by Larry Bednar, Bednar Consulting, Portland, Oregon.

104 • The 1989 and 1999 relations for old growth redwood and douglas fir are suspect. The 1989 equations show 40% more volume than the 1984 equations. But, the 1984 equations were developed in 1959, when the forest had a substantial inventory of old growth trees. Now the inventory is much smaller, and height data were available for only a few old growth redwood (only 5 data points in 1999). There was also no reason to discard the 1984 equations for old growth, as the diameter-volume relations for trees hundreds of years old would not have changed in 40 years. Statistically unreliable estimates were used when a better alternative was available. This is evidence that the estimates were made by people lacking statistical expertise.

105

5.8 Comparisons of Three Estimating Equations Applied to 1984 Data

Table 5.2 is similar to Table 5.1, except that it is based on the 1984 CFI data instead of the 1989 data. Again, the three estimating equations are applied to the same, 1984 data.

Observations:

106 • The comparative estimates for minor conifers are not reliable and should not be ignored (see the observations under Table 5.1).

107 • The conifer volume estimate for 1984 data using the 1984 estimating equation (1,347 million board feet) is very close to the value reported by CDF for the 1984 inventory (1,368 million). This gives some comfort that the data sample and data processing reasonably reproduce the data and analysis used originally by CDF.

• The differences in volume estimates for the different estimating equations is about the same as with 1989 data. More on this later.

108 The data in Table 5.1 and 6.2 allow us to compare the estimated volume growth between 1984 and 1989 absent any changes in estimating equations. **The comparison leaves no doubt that the 1989 inventory was very seriously in error.**

Using the 1989 estimating equations, which CDF claims are more accurate than the 1984 equations, for both 1984 and 1989, the estimated conifer volumes are: 1,747 million board feet in 1984 and 2,011 million board feet in 1989. These values imply that net forest growth after harvest equaled 264 million board feet. Timber harvests for the five-year period beginning in 1985 were equivalent to 214 million of standing volume.[29] These results are summarized in Table 5.3.

Table 5.2 Summary 1984 CFI Plot Data, volume estimates with estimating equations from '84, '89, and '99

		Volume Estimates from 1984 Inventory Data		
		1989 Equations	1984 Equations	1999 Equations
Young Growth Redwood	*Plot Total YG RW (1/2 acre/plot)*	1,605,509	1,219,621	1,381,332
	Total/acre	22,773	17,300	19,593
	Forest totals (48,682 acres)	**1,108,643,721**	**842,178,823**	**953,843,779**
	Ratio of volume to 84 equation volume	131.6%	100.0%	113.3%
Young Growth Douglas Fir	*Plot Total YG DF (1/2 acre/plot)*	681,171	538,913	637,947
	Totals per acre	9,662	7,644	9,049
	Forest totals (48,682 acres)	**470,365,394**	**372,132,997**	**440,517,915**
	Ratio of volume to 84 equation volume	126.4%	100.0%	118.4%
YG RW & DF Subtotals				
	Plot totals (1/2 acre/plot)	2,286,680	1,758,535	2,019,278
	Total/acre	32,435	24,944	28,642
	Forest totals (48,682 acres)	**1,579,009,115**	**1,214,311,820**	**1,394,361,693**
	Ratio of volume to 84 equation volume	130.0%	100.0%	114.8%
Old Growth Redwood and Douglas Fir	Plot totals (1/2 acre)	190,987	141,534	187,966
	Total/acre	2,709	2,008	2,666
	Forest totals (48,682 acres)	**131,881,036**	**97,732,443**	**129,795,258**
	Ratio of volume to 84 equation volume	134.9%	100.0%	132.8%

Minor Conifers	Plot totals (1/2 acre/plot)	21,215	51,534	27,712
	Total/acre	301	731	393
	Total forest (48,682 acres)	**14,649,781**	**35,585,561**	**19,135,513**
	Ratio of volume to 84 equation volume	41.2%	100.0%	53.8%
All Conifers	Plot totals (1/2 acre/plot)	2,498,882	1,951,602	2,234,956
	Total/acre	35,445	27,682	31,702
	Forest Total (48,682 acres)	**1,725,539,933**	**1,347,629,825**	**1,543,292,464**
	Ratio of volume to 84 equation volume	128.0%	100.0%	114.5%
All Except Minor Conifers				
	Forest Total (48,682 acres)	**1,725,539,632**	**1,347,629,094**	**1,543,292,071**
	Ratio of volume to 84 eq. volume	128.0%	100.0%	114.5%

1. The Minor Conifer Volume comparisons are not reliable.
2. The volume estimating equations are those used by CDF. The 1989 and 1999 equations are
in Attachment VT-4. The 1984 equations are in Attachment VT-5.

3.. The data used was supplied by CDF to me in the summer of 2005. The data are for the 141 original 1/2-acre CFI plots. The data were reentered in electronic form in 2005 by CDF personnel.

4. The processing of the data to produce volume estimates was done by Larry Bednar, Bednar Consulting, Portland, Oregon.

Table 5.3. Estimated 1984-1989 Inventory Growth, using 1989 estimating equations (millions of board feet gross)			
	1984 Inventory	1989 Inventory	Estimated Growth 1984-89
All Conifers	1,747	2,011	264
Harvest 1985-89			214
Total Forest Growth			480

109 The estimated net growth plus harvests (total forest growth) in the five years 1984-89 equaled 480 million board feet! The exclamation point is appropriate. This is an outlandish figure. It amounts to 96 million board feet per year, 5.5% per year. It is more than double the 42 million board feet per year that CDF uses as the basis for estimating the allowable cut in the DFMP, a figure that is extremely questionable itself. It is ***triple*** the most reliable estimate of volume growth: 32 million board feet per year estimated by the 1984 CFI inventory.

I emphasize that the results in Table 5.3 reflect inventory estimates made with one set of estimating equations. None of the difference is due to change in the estimating equations
110 between the two inventory years. The difference reflects differences in the basic tree data collected in the two different years. Something went seriously wrong with the 1989 inventory data collection and processing.

This result, together with 25 years of **self-consistent** estimates of forest growth, harvest and inventory under the CFI system (see prior section), proves beyond any doubt that the IFI estimates are far greater than the true forest inventory values. There is no way that the CFI estimates of inventories could have declined by 4 million board feet per year from 1964 to 1984 (which they did) if actual forest growth had equaled the IFI estimate of 480 million board feet per year. The IFI estimates are seriously in error.

111 The most reliable estimates of forest inventory and growth are those produced by the CFI inventory plots and estimating equations. But these estimates are now over 20 years old and not reflective of current forest conditions. JDSF is without a valid current inventory. A legally valid EIR or management plan is impossible without a valid current inventory.

112 The IFI whole forest estimates exceed the most credible (CFI) estimates by nearly 50%. This degree of error is far outside of acceptable bounds. For instance, for SYPs, FPR 14 CCR 1991,4,5(c)(4) limits the statistical probable error for each major vegetation type to 15%, a fraction of the actual error in the IFI estimates.

5.9 CDF Knew the IFI Estimates Were Impossibly High in 1991

Paul Ederer was an aide at JDSF and worked on the data processing of the 1989 article. He wrote about his experiences in a 1992 JDSF Newsletter article, attached.[30] I also
113 interviewed Mr. Ederer in the summer of 2005.[31] Mr. Ederer reported in the article that he and his colleagues were concerned about the discrepancies between the new and old volume estimates. They did an even more careful comparison than I was able to do.

Using tree tags, they found the trees in the 1984 data that were within the 1/5-acre circular IFI-CFI plots. They then "processed the data sets identically."[32] He says in his article, in an extreme understatement, "The results were not what we expected..." The 1989 volume estimates were 37 percent greater than the 1984 estimates. The people doing the analysis knew that this was an impossibly great difference.

I asked Mr. Ederer, if an effort was made to determine the source of error that led to this impossible increase. He said, "No." I asked why not. He replied, "It was a hot potato, and no one wanted to touch it." In reviewing his remarks, he added, " There were probably other more valid reasons but I was blissfully unaware of the politicking going on within the agency and with other state departments."

114 The bottom line is that in 1991, CDF knew that the 1989 inventory estimates were impossibly high, but no one in the organization has been willing in the intervening 15 years to require that the impossibly high estimate be explained. Since 1998, I have been providing the department with analyses demonstrating the inconsistency of the 1984 and 1989 estimates and urging them to provide an explanation.[33] The only response was the analysis published by Mr. Henry[34], which itself was erroneous. CDF never went back and examined the underlying data in detail.

As Mr. Ederer said in his article, "The gain [in estimated inventory of about 500 million board feet] is every managers dream..." It was such a wonderful dream, and has been the basis for so much self-congratulatory PR about "taking a cut-over, burned-over forest and quadrupling the inventory," that management has preferred to remain in denial.

5.10 What Went Wrong with the IFI Estimates?

The public does not have to determine the source of errors that led the IFI to overestimate inventories. It is enough to demonstrate beyond a doubt that they are seriously overestimated.

For CDF's benefit, I make the following observations:

- The volume estimating equations are undoubtedly the most important source of error (though not the only one). The underlying equations were developed by Wensel and Krumland of UC and calibrated for JDSF using a 1983 Fall and Buck study. This is a good set of credentials for accuracy, but some cursory analyses suggests that the underlying equations (before including the effects of estimating diameter-height relations) contribute to the erroneously high estimates.

115

116

- Almost certainly there are problems in the way these equations were applied. The equations have height and diameter as two independent variables, and the values for the parameters were estimated by Wensel and Krumland from data that had values for both height and diameter. The parameter values are subject to statistical errors.

117 CDF, though, measured diameters and did not measure heights in its plots, except for a small subset of trees. It then used the small subset of trees to develop and estimating equation for height as a function of diameter and tree species. Herein lie multiple problems.

118

- First, it is statistically questionable to use a statistically derived value to replace an independent variable in an equation that itself has parameter values that were statistically derived. This compounds errors in the estimation process. A more statistically robust and accurate estimation equation would be to correlate directly **volume** with diameter measurements, rather than first estimating height from diameter and then plugging the height value (along with the diameter value) into a volume estimating equation.

119

- Second, the estimated equations for height-diameter relations were evidently not stable and solid. The 1989 estimated height-diameter relation yielded volume estimates that were much different than the ones in 1989. Compared to the 1984 equations, the 1989 equations produced volume estimates that were 32% greater, whereas the 1999 volume estimates were 16% greater. This wide variability casts doubts on the design and conduct of the estimation procedure.

120

- Third, the height-diameter estimation model did not include site class as a variable. This is a significant deficiency, because site class importantly affects height relative to diameter. The CFI equations, which had only diameter as the dependent variable (with the influence of height captured in the correlation of diameter with volume) included site class as a significant factor.

- There were evidently problems with the data collection and processing for the 1989 IFI inventory. The unsupportable estimated growth estimate from 1984 to 1989 still exists, though somewhat smaller, if the 1984 estimating equations are applied to both years of data. Growth after harvest is 12% for the five years. Total forest growth including harvests equals 366 million board feet, or 27%. This is outside the bounds of possibility. The expected outcome would be no net growth after harvest, as was the intent of the cutting policy in this period.

  One way to get at this would be to compare the 1984 and 1989 tree data plot by plot to see where and how the spurious "growth" arose.

121

- The processing of the huge amounts of data for 2050 plots of the 1989 inventory overwhelmed the rudimentary computer facilities of JDSF. The problems were detailed by Mr. Ederer, the JDSF aide, in his newsletter article. He eloquently and with feeling described the nearly insuperable problems of processing the multiple data values for each of the 50,000 trees in the sample 80286 (AT) computer. He details these in a 1992 JDSF Newsletter article, A reading of this article will convince anyone that errors were almost certain. In a personal interview, Mr. Ederer, went into more details about the complexities and difficulties of processing the data.[35] At the end, he summarized, ""Let me say that the data processing was fraught with possibilities for errors."

---

[16] Vince Taylor, *Comments on the Draft Management Plan and Draft Environmental Impact Report for Jackson Demonstration State Forest,* July 18, 2002 (Hereafter, *Taylor Comment 2000*).

[17] If anything, the CFI inventory system appears to have overestimated growth in its last twenty years, because inventories declined by 78 million board feet between 1964 and 1984, or 4 million board feet per year. As harvests were set equal to estimated growth, the decline in inventory implies that estimated growth exceeded actual growth.
[18] Response to Comment 241.4, *JDSF 2002 Final EIR*, p. IV-266.
[19] See 5.1 and the accompanying discussion later in this section.
[20] Response to Comment 241.6, *JDSF 2002 Final EIR*, p. IV-267.
[21] Norm Henry, "JDSF Forest Inventory - Transitioning form the Old to the New", *JDSF Newsletter*, Spring/Summer, 1999
[22] Letter to Marc Jameson, Forest Director, JDSF, from Vince Taylor, Dharma Cloud Foundation, April 22, 1998, 7 pages. See Table 2. The new diameter-volume relations were used for both sets of plots. Attachment VT-IN-1 in Taylor Comments 2002.
[23] *Taylor Comments 2002*, Section 2.3.4
[24] Response to Comment 241.6, *JDSF 2002 Final EIR*, p. IV-267.
[25]Norm Henry, *op. cit.*, p. 6. Attachment VT-IN-11 in *Taylor Comments 2002*.
[26] *Taylor Comments 2002*, p.9.
[27] The IFI-CFI plots were IFI circular plots of 1/5 acre that were located in the centers of the ½ acre rectangular CFI plots. There were 141 plots in 1984 and 1989. In 1999, one of the plots could not be found. CDF conjectured that the plot had been logged and thereby obscured.
[28] Estimates were also produced for the 1999 data, but I did not have time to create summary tables from the individual plot and specie data; thus I did not compare results of the 1989 inventory estimates with the other ones.
[29] JDSF harvests from 1985 through 1989 in millions of board feet at the mill were: 32.7, 25.2, 37.7, 24.4, 33.0; total = 181 million board feet. Gross standing volume harvested was approximately 214 million board feet. Gross standing volume equals 1.18 net volume delivered to the mill, according to John Griffen, head of timber sales, JDSF, private conversation, January 1998.
[30] Paul Ederer, "Forest Inventory - Managing the Numeric Monster for Forest Planning," *JDSF Newsletter*, #46, Summer 1992. Included herein as Attachment VT-6.
[31] *Interview of Paul Ederer*, by Vince Taylor 4/18/05. Included herein as Attachment VT-7
[32] Ederer, *op. cit.*, p.5.
[33] See *Taylor Comments 2002*, Attachments VT-IN-1 and VT-IN-2.
[34] Norm Henry, *op. cit.*
[35] Ederer, *op. cit.*, p.5

6 Proposed Harvest Plans Will Not Achieve Maximum Sustained Production

The law requires JDSF to demonstrate that its proposed harvest plans will achieve maximum sustained production of high quality timber products (MSP). JDSF has elected to make this demonstration under the rules of subsection (a) of the relevant Forest
122 Practice Rule (14 CCR 913.11). The DFMP relies on the analysis in an unapproved Option A document filed in 2000 to show that this condition is met.

The Option A analysis uses the erroneous, highly inflated IFI inventory and growth rates to project the 100-year long term sustainable yield (LTSY) that sets the upper bound of harvests under Option A. The LTSY assumes a beginning inventory of 2.09 billion board
123 feet (all species). The modeled growth in the first decade, excluding hardwoods, appears to barely exceed the projected harvest of 39.2 million board feet per year. (Figure 6, JDSF Option A). Given the 50% overstatement of initial inventories, the projected harvest certainly exceeds the **actual** growth of the forest.

124 The most credible estimate of conifer forest growth is the 1984 CFI estimate. 29.6 million board feet (net).[36] The allowable cut, which makes additional adjustments, was set at 28.5 million board feet.[37] Even before adjusting this figure to reflects areas of the forest where harvesting will not occur or is constrained and reduce, it is below the 31 to 33 million board feet established as the allowable harvest in the DFMP.

Adjustments to reflect no harvest and limited harvest areas reduce the amount available for harvesting significantly. The Option A analysis designated 8.4% of the forest as "No Harvest."[38] The DFMP discussed possible operational constraints not incorporated in the Option A analysis and set the allowable cut between 15 and 20% less than the Option A projected harvest rate.

Adjusting the 1984 CFI allowable cut (28.5 million board feet) for "no harvest" areas (8.4%) and operational uncertainties (15-20%) yields growth available for harvest of 22 to 21 million board feet. The harvest levels proposed in the DFMP are 50% greater than
125 these values. The proposed harvest levels fail to meet the requirements of LTSY by a wide margin. The DFMP is legally defective.

6.1 Alternative Analysis of Harvest Available for Growth

In my comments on the 2002 EIR, I analyzed the growth available for harvest with methodology used by CDF in previous management plans.[39] This methodology has merit of making explicit the assumed impact on harvest of restrictions in harvesting in areas of
126 the forest. This analysis, which assumed "no harvesting" in Woodlands Transfer Area (see below), estimated the growth available for harvesting would be 18 million board feet. This is practically identical to the allowable harvest rate estimated by the methodology used in the DFMP, adding to the credibility of the estimate.

6.2 The Woodlands Transfer Area

127 The DFMP and the DEIR should examine, as one of the sub-alternatives of the proposed management plan, the case where timber harvesting is not allowed in the Mendocino Woodlands Recreational Demonstration Area (Woodlands Transfer Area) transferred into JDSF from federal ownership. If harvesting is not allowed there, the forest available for

harvest would be reduced by an additional 4646 acres (9.5%). The growth available for harvest would be 19 to 18 million board feet.

128 The act of Congress authorizing the transfer stated in part: "Every such deed or lease shall contain the express condition that the grantee or lessee shall use the property exclusively for public park, recreational, and conservation purposes. ..." {Act of Congress of June 6, 1942[56 Stats. 326: 16 U.S.C. 459t].} On the face of it, this act would appear to prohibit timber harvesting, which does not appear to fit into the "exclusive uses" required by the transfer deed.

129 The state of California has maintained that it is authorized to do timber harvesting in the Woodlands Transfer Area because of an opinion letter from the U.S. Attorney General's Office.[40] Paul Carroll, who has represented Dharma Cloud in earlier suits concerning JDSF, issued an opinion letter on this issue to an unrelated client. His opinion was that the clear language of the law states that any use must be compatible with all three of "exclusive uses."[41] Clearly, under this interpretation, timber harvesting is not permitted.

130 Recent history suggests that litigation over the law governing the Woodlands Transfer Area is a possibility. The DFMP and the DEIR should explicitly consider this possibility.

---

[36] "The New Inventory - What It Tells Us So Far," JDSF internal document, 1993; Attachment VT-IN-5 in *Taylor Comments 2002*. The forest growth in 1984 was down from the from the 1979 inventory value: 29.6 versus 31.8 million board feet (net conifers).

[37] Memorandum by Forest Tilley, JDSF Forest Manager, November 15, 1985.

[38] *JDSF Option A Plan*, May 2000, Table 6.

[39] *Taylor Comments 2002*, Sections 3.3.3 and 3.3.4, pp 29-30.

[40] See for example, "Letter VT-241 - Response to Comment 241.28," *Final Environmental Impact Report for Jackson Demonstration State Forest*, September 2002, p. IV-275.

[41] Paul Carroll, letter to Douglas Wheeler, Director of Resources, California Resources Agency, July 31, 1998. Included herein at Attachment VT-8

Attachment VT-1

Attachments

VT-1. Letter from Roger Sternberg to Chris Rowney, July 16, 2002
VT-2. CDF internal document, "Summaries To Be Calculated – Marc's request"
VT-3. Letter to George Gentry from Vince Taylor on the need to use updated inventory estimates in the preparation of the EIR, March 14, 2005.
VT-4. Volume equations used in for estimating volume from the 1989 IFI data and the 1999 CFI inventory measurement.
VT-5. Volume equations used for estimating volume from the 1959-1984 CFI inventory measurements.
VT-6. Paul Ederer article, "Forest Inventory – Managing the Numeric Monster for Forest Planning," *JDSF Newsletter # 46,* Summer 1992.
VT-7. *Interview of Paul Ederer,* by Vince Taylor, 4/18/2005.
VT-8. Paul Carroll, letter to Douglas Wheeler, Director of Resources, California Resources Agency, July 31, 1998.

Attachment VT-1

July 16, 2002

Mr. Chris Rowney, Program Manager
Demonstration State Forests
California Department of Forestry
and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460

Dear Mr. Rowney:

I am submitting the following comments on the Draft Jackson Demonstration Forest Management Plan and Environmental Impact Report at the request of the Sierra Club California. I have been asked by the Sierra Club to do an independent assessment of certain elements of the Draft Plan and EIR. The following comments are based upon my own professional judgment and experiences on-site at Jackson Demonstration State Forest (JDSF).

I am a Registered Professional Forester and have been a private consulting forester since 1998. During the period of 1998-2001, I also was the part-time Executive Director of the Mendocino Land Trust. Prior to that I was the Director of Forestland Conservation for the Pacific Forest Trust in Boonville, California. I have a Master of Forestry degree from Yale University and ran my own forestry business in Vermont for seven years.

General Comments and Observations

As a mountain biker, I use JDSF on a regular basis. Overall, I have found most of its forest management to be compatible with my recreational activities. JDSF is a valuable recreational resource to me and to many others of the public who take advantage of its trails and roads.

Some years ago, I reviewed the 1983 JDSF Plan and found it to be lacking in addressing non-timber values like wildlife. It is good to see a considerable change since then, with the new Plan paying much more attention to wildlife, watershed protection, and late seral forest management.

The level of stocking at JDSF – 43,000 mbf/acre – is far greater than not only private industrial, but also most private non-industrial timberlands in Mendocino County. Over the last 50 years, JDSF has taken a poorly managed, understocked forest and developed it into a very impressive forest. In large part this is due to its conservative level of harvests, which consistently has been lower than growth rates (p. 22, Jackson

Demonstration Forest, Option A Plan for Achievement of Maximum Sustained Production of High Quality Timber Products, 5/9/00). It is important to note that JDSF is continuing to harvest conservatively -- between 1.55 % 1.65% of inventory per year, which will build inventory over the next decade.

Most recently, while biking in JDSF, I happened to notice the large woody debris (LWD) placed in Hare Creek. This work was so well done that to the casual observer, the LWD looked as if it was naturally occurring. It is this kind of exemplary work that should be a standard for all management and research activities on JDSF.

For the sake of brevity, I have enumerated the following additional comments and recommendations on both documents.

1) Insufficient Data: As a forester, I find that the information provided on silvicultural practices and stand characteristics is insufficient to ensure attainment of enunciated objectives in the Draft Plan and EIR. In general, the documents do a good job qualitatively describing desired outcomes, but don't provide fundamental quantitative information.

To be specific, the various silvicultural systems are briefly described, defined by acreage and are mapped. Yet basic information on timber stand characteristics including species composition, age classes, projected growth, present stocking level, present volume per acre, size class distribution, residual volumes under uneven-aged management, and similar characteristics projected over the planning horizon by management compartment is missing. While the Draft Plan may not be required to provide this information, as is the case for the preparation of Non-Industrial Timber Management Plan (California Forest Practice Rules, Section 1090.5), this is basic information needed by present and future forest managers to guide their actions and for the public to understand how the Plan is going to be implemented.

As someone who strongly supports JDSF's mission to demonstrate sustainable timber and non-timber resource management, I find that this lack of information weakens the case that JDSF will be practicing forest ecosystem management. At a time when JDSF's management is being severely criticized and public confidence seems low, more information, versus less, is needed.

JDSF managers express a legitimate concern that the more detailed the information provided in the Plan, the more constraints will be placed on their management. Noss et al (The Redwood Forest, 2000), in fact emphasize the need for managers to retain flexibility in managing large tracts of forestland:

> *Historically, silviculture has focused on site-specific or stand specific prescriptions. It has become increasingly clear, however, that to meet conditions of ecological sustainability, managers must look beyond the individual stand-specific treatments that will ultimately achieve desired future conditions on the landscape scale. The "big Picture" view so necessary for conservation of the biological values of redwood forests (see chap. 7) therefore is also necessary for improved management of redwoods for timber. A big-picture approach requires the flexibility to apply a broad range of stand-specific management treatments and a decision-analysis process adequate to determine the appropriate mix of management activities across the landscape and through time.*

In crafting the Draft Plan, JDSF staff has put considerable effort into presenting this "big picture," but the picture as currently written is incomplete, because it doesn't project what will be happening spatially or temporally in individual management compartments. Flexibility of management will not suffer by providing this data so long as a range of silvicultural prescriptions can be applied in each compartment.

In an effort to garner more information, CDF staff referred me to the JDSF Option A Plan, which was used to fulfill the requirements of the California Forest Practice Rules to "disclose sustainable management, a balance growth and harvest over time, and protect public trust resources" (p.3). The Option A Plan provides helpful information including Table 5 (Inventory, growth, harvest over time, conifer and hardwoods), but it and most of the other data in the Option A apply to the Forest as a whole. Sample yield streams for some of the silvicultural prescriptions to be used on the Forest were also helpful, but are generic in nature and don't indicate where the final outcomes will occur.

Recommendation: Include information on stand characteristics per the requirements in preparation of a Non-Industrial Management Plan. Provide harvest and growth, stand, and age class distribution tables on a management compartment basis that indicate the forest condition now and on a decadal basis.

Recommendation: CDF staff has informed me that the Option A Plan will be revised to be consistent with the Management Plan. Since the data in the Option A Plan are used as the basis for projecting Long Term Sustained Yield, they should be incorporated as an Appendix to the Plan or EIR.

2) Forest Cover and Wildlife Habitat: In the past, JDSF has used the WHR classification system and has created a map of WHRs for the forest. The Draft Plan recognizes the problems associated with the WHR system and, as a result, JDSF has created its own Forest Cover Types, which are more applicable to present stand conditions. Although there is a map of Forest Vegetation (Figure 7) in the Draft Plan, it does not specifically identify areas containing JDSF Size Class 6 or 6M, which have the most likelihood of having late seral forest characteristics.

Recommendation: Develop maps of JDSF Forest Cover Types today, 10 years, 50 years, and 100 years. This will add critical information for future forest managers and help the public to understand the "big picture" envisioned in the Draft Plan. The maps should illustrate changes in habitat connectivity throughout the Forest. Note that the current scale of the map of Forest Vegetation is so small that it is very difficult to interpret. Maps at a larger scale should be produced and made available at various public locations. This recommendation exceeds the Department of Fish and Game's recommendation for a new type map (page 5, Draft EIR, Vol 2.).

3) Watercourse and Lake Protection Zone Standards: On page 69 of the Draft EIR, the Plan states that a minimum of 240 square feet of basal area will be retained in WLPZs in Class I and II watercourses. Flexibility to allow for thinning in lesser-stocked sites to hasten late seral forest characteristics should be incorporated into the Draft Plan. While the present standards call for a no cut zone of 25' along Class I watercourses and canopy retention levels, there is no indication of the diameter distribution that managers should be trying to attain in riparian management zones.

In The Redwood Forest, Noss et al reached the conclusion that:

The greatest scientific shortcoming in the current California Forest Practices Act from the perspective of riparian and aquatic resources, is its reliance on the conceptual approach to stream buffer protections used in the CDF stream classification system.

Of particular concern is the lack of substantive protection for headwater channels feeding into Class I watercourses (pages 190-191). Similar concerns have resulted in adoption by the Arcata City Forest of watercourse standards exceeding the Forest Practice Rules. Recently, the Mendocino Redwood Company has applied standards for Class IIIs on one of its Timber Harvest Plans that exceed the Rules.

Recommendation: Provide for some flexibility in basal area retention standards to hasten late seral forest development. Define diameter distribution guidelines that comprise the basal area standard.

Recommendation: Adopt management standards for Class III watercourses that address serious concerns about preventing fine sediment migration into aquatic habitat.

Recommendation: Conduct long-term paired watershed studies in which the standards recommended for WLPZ protection submitted by NFMS to the Board of Forestry (December 1999) are applied versus the standards proposed in the Draft Plan. This research would provide a scientific basis for the determination of the adequacy of riparian area management zones.

4) Snag Retention and Recruitment: Pages 16 and 62 of the Draft Plan discuss snag retention and recruitment, recognizing the deficiency of snags in "special wildlife concern areas." The Plan defines goals for recruitment, however, there is no explicit statement discussing how snags will be recruited, e.g., through green tree retention.

Forest managers and wildlife biologists go back and forth over the issue of how many snags need to be retained to provide wildlife habitat for species inhabiting the coastal redwoods. How were the goals for snag retention determined for the Plan? Is "at least one snag per acre 30" DBH" adequate throughout the Forest?"

Recommendation: Conversations with JDSF staff indicate that all snags will be left in harvest areas unless they pose a safety, fire hazard, or pose a problem for harvesting. This should be explicitly stated in the Plan. Snags that are felled for the above reasons should be left on the ground until levels of down woody debris are sufficient.

Recommendation: Snag recruitment methods should be defined.

Recommendation: Levels of snag retention and recruitment methods should be researched on the Forest in conjunction with the Department of Fish and Game. In the meantime, it would seem prudent to increase goals per the Department of Fish and Game's recommendation (page 6, Draft EIR, Vol 2.)

5) Late Seral Forest Management: The Draft Plan states on page 47 that:

Uneven-aged management will eventually produce multi-aged stands with varied levels of large trees and structural habitat elements, many of which will be characterized similarly to WHR 6 habitat as currently defined."

However, if one of the silvicultural prescriptions modeled in the Option A Plan is to be implemented, approximately 3,133 acres of stands to be managed under group selection will not have any structural retention. This represents one-third of the total of the acreage to be managed under group selection. Further, the group selection prescription identified in the Option A Plan calls for reducing a stand currently stocked with 53mbf/acre down as low as 17.7 mbf. The combination of these two factors seems to conflict with the late seral forest management goal in uneven-aged stands.

As it currently stands, the Plan does not provide enough information to determine how the above stated goal will be met and on what scale.

Late successional/seral forest development of the various management alternatives is analyzed by Dr. Dale Thornburgh in the Draft EIR (Appendix 8A-26 thru 8A-37).

Dr. Thornburgh's assessment of Alternative C (JDSF Draft Plan), is that in 100 years and after 4 cutting cycles, stands that are currently 40-60 years old will "be progressing towards optimum conditions that are found in late successional forests." It is unclear whether Dr. Thornburgh's analysis applies to JDSF's uneven-aged management areas or to the late seral management areas identified in the Draft Plan.

Recommendation: The Plan should map second growth forests containing late seral forest characteristics using the JDSF Vegetation Type system and identify the impacts over time of proposed harvests on a management compartment and on a landscape basis. Information should also be provided on the specific effect of the Plan on older second growth forests (80-100 years).

Recommendation: The Plan should clarify whether Dr. Thornburgh's analysis applies to uneven-aged management areas in general or only to specific late seral management areas. If the latter is the case, then it would be very helpful to have Dr. Thornburgh comment on the proposed uneven-aged management silviculture in the Draft Plan and how well it will produce multi-aged stands with WHR 6 habitat characteristics referred to above.

Recommendation: Designate Late Seral Management for inner gorge areas (2,012 acres) to increase level of protection for riparian and aquatic resources

6) Old Growth Forest and Old Growth Trees: There appear to be as many definitions of old growth forests as there are forest ecologists. This lack of clarity shouldn't, however, preclude JDSF from selecting one. Without such a definition, limited management activities in old growth stands will not have a clear goal to attain.

The Plan specifically notes that individual old growth trees will be retained throughout the Forest (page 60), which will provide important structural diversity and provide additional wildlife habitat. However, the one criterion of a DBH greater than 48 inches seems to be questionable, particularly in relationship to Douglas-fir old growth, which tends to have smaller diameters than redwood old growth.

Recommendation: Define old growth forests. Noss et al (page 88) provide an excellent summary of the various definitions.

Recommendation: Change the diameter criterion for old growth conifers to 36 inches DBH.

7) Even-aged Management: According to CDF staff, 15% of even-aged managed stands will be in the 50-year or under age class at any one time. This information is important to note as it suggests that the even-aged management proposed in the Draft Plan should retain habitat connectivity.

Again, confirmation of this statement needs to be made via the provision of more data on a management compartment basis.

On page 12 of the Option A Plan, the following statement is made:

One of the Board of Forestry and Fire Protection polices for State Forests is to maximize the mean annual increment of high quality forest products.... On most sites, redwood does not appear to have a point of culmination of mean annual increment (CMAI) within a 100-year rotation age,... Most redwood stands are of mixed species composition, containing varying proportions of Douglas-fir, a species which does not exhibit a well-defined CMAI rotation in most cases. The practical interpretation of this policy directive has been to set even-aged rotations to at least 80 years on all site classes.

The Draft Plan, however, states that on the West End of the Forest, rotation ages of 60 – 90 years of age will be applied (page 54).

Recommendation: The Plan should clearly state the rationale for conducting even-aged management with a rotation of 60 years and why the change from the original minimum of 80 years occurred.

8) JDSF Budget and Staffing

Recommendation:

- Based on a $10-15 million annual budget, it is recommended that 10% of revenues be reserved specifically for JDSF-based research, demonstration, educational, and acquisition programs, and to hire a wildlife biologist.
- The Plan should call for an annual financial report to be made available to the public. Further, a report should be made yearly on the expenditure of JDSF timber revenues for such programs as the California Forest Improvement Program (CFIP). In this way, both managers and the public will be able to see the level of investment in the Forest on a programmatic basis and where overall revenues are expended.
-

I would also like to take this opportunity to thank the JDSF staff for providing information to me. Marc Jameson, Bill Baxter, and Craig Pederson helped me to better understand the management objectives and practices proposed in the Draft Plan and EIR.

Sincerely,

Roger Sternberg
RPF #2620

Attachment VT-2

CFI SUMMARIES TO BE CALCULATED - marc's request*

1. GROWTH BY SPECIES (ACCOUNT FOR HARVEST)
Use only trees which are present at both measurement points - this would exclude ingrowth or missed trees. Make conditional statement in systat to delete all trees which do not have dbh and height measurements in both time periods. Expand these to a per acre value

2. 10 YEAR HARVEST
delete all trees that are harvested in 1998 but were also harvest trees in 1988. Then delete all trees but ones with a harvest code remaining in the 1998 data set.

3. GROWTH/INVENTORY BY WATERSHED OR REGION
Use GIS to list all plots by watershed and do each separately

4. MORTALITY BY SPECIES

5. LWD BY TYPE
6. GROWTH BY SILVICULTURAL TREATMENT

7. SITE INDEX BY PLOT/SOIL TYPE
*CHECK ANOMALIES IN PLOT GROWTH - REFER TO OLD SUMMARIES WHICH ARE NOW REVISED AND GIVEN TO MARC ON 10/18/1999.
OTHER
1. GROWTH BY TYPE AND BY SPECIE
STANDING GROWTH
INGROWTH
GROWTH BY DIAMETER CLAS

GIS ACRES FROM SOIL INFO

SITE
1 - 165.6 - 0.4%
2 - 24909.4 - 51%
3 - 14940.6 - 31%
4 - 7697.2 - 16%
5 - 938.4 - 1.6%

1

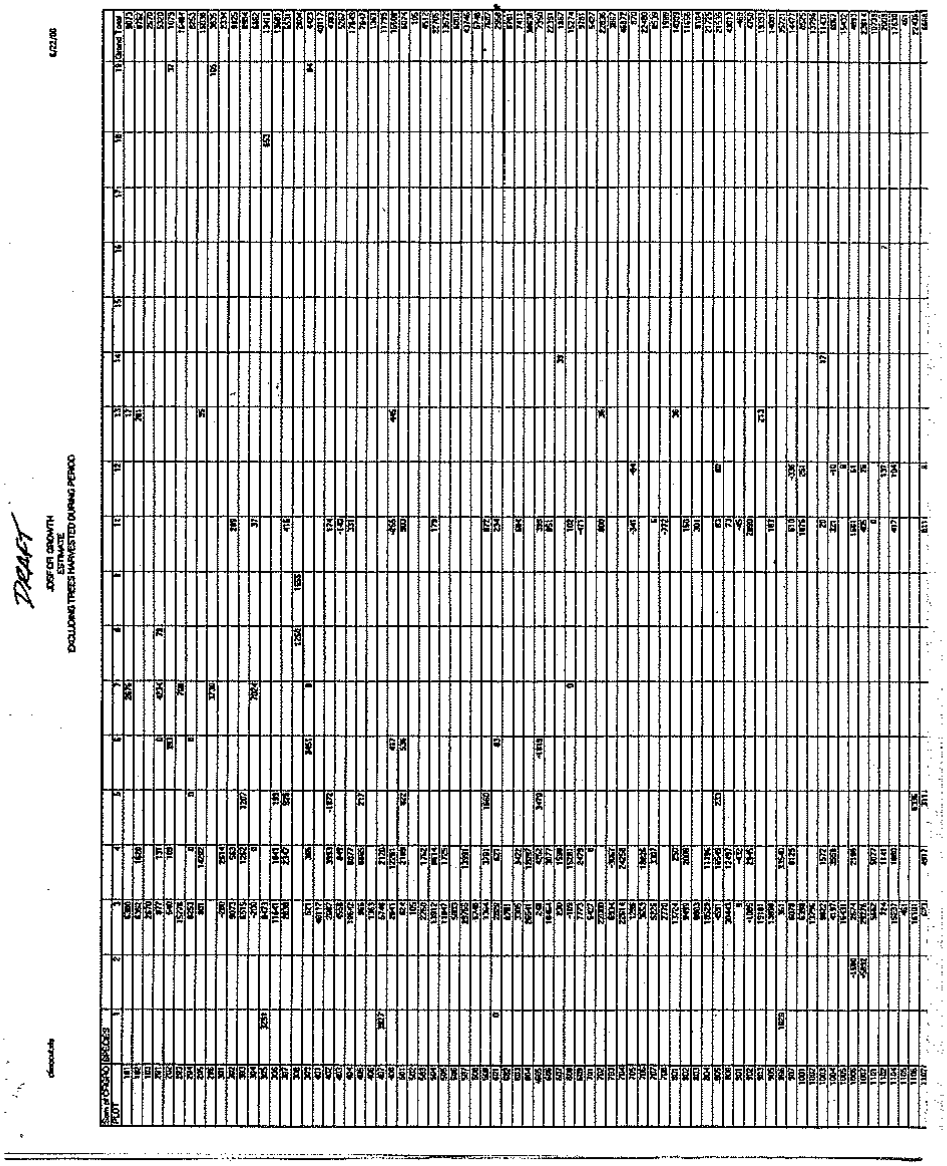
Attachment VT-2

JDSF HARVEST ESTIMATE
1980-1998

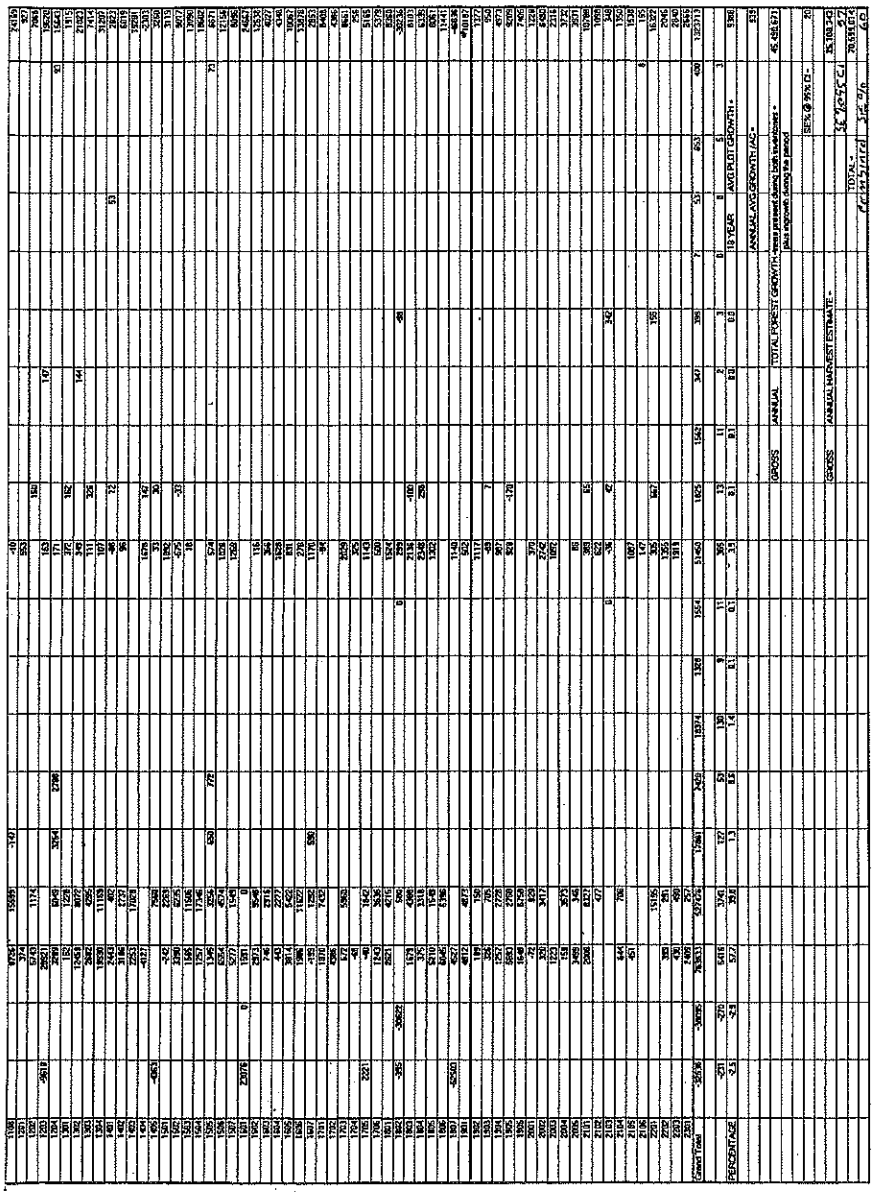
1998-99 CFI PLOT DATA

Sum of BFVOL/AC	SPECIES	OAK	DD	YE	YD	YS	OC	TD	MADRONE	SH	GH	
PLOTNO	1		2	3	4	5	6	11	12	14	19	Grand Total
103	16315.35341		2498.852028									18814.19544
301			5483.23902	7219.634756								12712.87378
303					4958.504992							4958.504992
402				12259.02536								12259.02536
403			16272.96076	7619.407365			3161.578696					26953.94682
503			12516.38651	16778.23318								29296.6197
506			12832.24362									12832.24362
601	15435.19032		17895.76246				565.4111282					33896.3627
602			17501.51862									17501.51862
603			23633.89209						804.6189012			24438.51099
703			913.6354173	680.8808755								1594.516293
804			28218.17324	60639.0818								88857.25505
901			26023.26582	891.045107								26914.33092
904			103024.1083	646.3996714								103670.508
905			56130.35727	22548.63592			2037.806894					80714.80018
906				13859.97779				159.5454167				14019.5232
1002			21773.82039									21773.82039
1004			8202.756301				315.1741716					8517.933473
1103			7303.918023				432.2861338					7736.204157
1105		33882.79081	15438.92536	32499.4935	961.4786348	1528.375717	4768.782394			2532.677783		91600.5243
1106			5338.076175	8265.415042								13603.49022
1203			267.5513106									267.5513106
1303				4620.794859								4620.794859
Grand Total	31750.54973	33882.79081	381079.4447	188626.025	5909.963626	1528.375717	11281.04052	159.5454167	804.6189012	2532.677783	657555.0524	
AVG VOL/AC HARVEST	225.1812037	240.3034816	2702.691097	1337.773227	41.91477749	10.83954409	80.00737855	1.131527778	5.706651703	17.96225378	4663.51101	
HARVEST FOR PERIOD	10,911,380	11,644,146	130,981,600	64,823,139	2,031,022	525,241	3,876,838	54,829	276,515	870,379	225,976,089	
ANNUAL HARVEST = (9 YEARS)	1,212,376	1,293,794	14,551,289	7,202,571	225,669	58,360	430,760	6,092	30,724	96,709	25,108,343	
NET	1,091,138	1,164,415	13,096,160	6,482,314	203,102	52,524	387,684	5,483	27,651	87,038	22,597,509	
	48456 ACRES											

Attachment VT-2



Attachment VT-2



Attachment VT-2

Campaign to Restore Jackson State Redwood Forest
P.O. Box 1789
Fort Bragg, CA 95437

Attachment VT-3

March 18, 2004

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460
Fax: (916) 653-0989

Subject: Scoping Comment on Jackson State Forest EIR

Dear Mr. Gentry:

In my oral comments at the Board of Forestry meeting in Fort Bragg, I supported the need to re-open the management plan to correct major deficiencies. This letter supplements my oral presentation.

I repeat two of the major points briefly here:

- The 2002 DFMP states (p.3) "This plan builds on the 1983 plan by elevating wildlife, watersheds, and ecosystem processes to a level of importance equivalent to the timber management and research, demonstration and education programs." The public and current environmental laws require that JDSF's management plan do what is stated.

  The proposed DFMP, however, does not do what it states it does. Timber harvesting is the dominant part of the plan. Little if any attention is paid to any of the non-timber values enumerated in the quoted sentence. Thus, the DFMP fails to meet its own statement of intent. It also fails to provide what 5,000 members of the public said they want, nor does it meet current state environmental objectives

- The DFMP fails completely to recognize the key role of Jackson State Forest for conservation and habitat in the region. The surrounding industrial timberlands contain only very young trees and badly degraded streams questionably supportable of salmon recovery. As a publicly owned forest with substantial stands of mature second growth and less degraded streams, JDSF can provide habitat otherwise absent in the region. The DFMP fails to evaluate regional ecosystem needs and incorporate them in the plan.

I want to enter into the record at this early point my strong recommendation that the Board order JDSF to:

1. Obtain an objective, third-party evaluation of the accuracy of the IFI inventory system and fix any errors that the evaluation finds.
2. Perform a new whole-forest IFI inventory.

With respect to 1), I have repeatedly provided JDSF with evidence of serious errors in the IFI inventory estimates. This evidence is contained in my comments on the earlier JDSF

Tel: 707 964-5800 campaign@jacksonforest.com www.jacksonforest.com

Attachment 3

EIR and in our court challenge to the EIR. I incorporate that evidence in this letter by reference. The evidence I have submitted has been ignored or dismissed, but it has never been satisfactorily answered. I would greatly prefer that the dispute be resolved out of court than in court, but I am determined that it be resolved.

With respect to 2), the last whole-forest IFI inventory was done in 1989, fifteen years ago. Management planning needs to be based on up-to-date inventory information. There is no empirical data on growth and changes in inventory at the detailed level provided by the IFI inventory system. Inventory estimates projected by computer models from 1989 to 2004 will have no empirical test of validity and cannot be considered reliable.

The IFI system replaced the earlier CFI system, used from 1959 to 1984. The CFI system was replaced because it could not provide the detailed small-area inventory data required to do adequate analysis and planning by watershed and sub-watershed.

An inventory estimate using a small subset of the 2500 plots in the IFI inventory system evidently was done in 1999. The 1999 inventory estimate was based on the 141 plots of the IFI system that were in the earlier, CFI inventory system. The 1999 quasi-CFI inventory cannot provide reliable, detailed small-area inventory data.

Accurate inventory estimates are a prerequisite for legally adequate consideration of cumulative impacts. Delaying the preparation of a new inventory will merely delay the time at which a legally adequate EIR can be prepared.

Sincerely,

Vince Taylor, Ph.D.
Executive Director

Tel: 707 964-5800 Fax: 707 937-6202 campaign@jacksonforest.com www.jacksonforest.com

DRAFT 4/3/00

Attachment VT-4

```
COMPUTE 1999 TREE HEIGHTS AND VOLUMES

BASIC
USE 'C:\Forest Inventory\HJWCFI\CFIS10158.SYS'
SAVE 'C:\Forest Inventory\HJWCFI\CFIS10168.SYS'
IF (SPECIES =1) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(5.046 - 2738350000*(DBH99^(-6.938)))
IF (SPECIES =2) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(5.046 - 2738350000*(DBH99^(-6.938)))
IF (SPECIES =3) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(6.881 - 6.248*(DBH99^(-0.335)))
IF (SPECIES =4) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(6.331 - 5.725*(DBH99^(-0.435)))
IF (SPECIES =5) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(5.713- 8.267*(DBH99^(-0.725)))
IF (SPECIES >5) AND (SPECIES<10) AND DBH99<31 AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(3.549 +
0.019*(DBH99^1.287))
IF (SPECIES =5) AND (MEASHT$<>'MH') AND (DBH99>30) THEN LET HEIGHT99=4.5+EXP(6.881 - 6.248*(DBH99^(-0.335)))
IF (SPECIES =11) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(5.717 - 3.333*(DBH99^(-0.370)))
IF (SPECIES >11) AND (MEASHT$<>'MH') THEN LET HEIGHT99=4.5+EXP(4.710 - 2.857*(DBH99^(-0.578)))
RUN

IF SPECIES = 1 THEN LET VOL99 = EXP (-8.2233+1.6117*LOG(DBH99)+1.6021*LOG(HEIGHT99))
ELSE IF SPECIES = 2 THEN LET VOL99 = .0004714*DBH99^1.725*HEIGHT99^1.909
ELSE IF SPECIES = 3 THEN LET VOL99 = .0003347*DBH99^2.012*HEIGHT99^1.664
ELSE IF SPECIES = 4 THEN LET VOL99 = .0004714*DBH99^1.725*HEIGHT99^1.909
ELSE IF SPECIES = 5 THEN LET VOL99 = .00009784*DBH99^1.767*HEIGHT99^2.128
ELSE IF SPECIES = 6 THEN LET VOL99 = .00009784*DBH99^1.767*HEIGHT99^2.128
ELSE IF SPECIES = 7 THEN LET VOL99 = .00009784*DBH99^1.767*HEIGHT99^2.128
ELSE IF SPECIES = 8 THEN LET VOL99 = .0003347*DBH99^2.012*HEIGHT99^1.664
ELSE IF SPECIES = 9 THEN LET VOL99 = .0003347*DBH99^2.012*HEIGHT99^1.664
ELSE IF SPECIES = 11 THEN LET VOL99 = .0007933*DBH99^2.3095*HEIGHT99^1.2107
ELSE IF SPECIES = 12 THEN LET VOL99 = .002526*DBH99^1.7264*HEIGHT99^1.2646
ELSE IF SPECIES >12 THEN LET VOL99 = .003747*DBH99^2.2444*HEIGHT99^0.8136

IF DBH99<11 THEN LET HEIGHT99=20
IF DBH99>10.9 THEN LET HEIGHT=5
LET ACRVOL99 = VOL99*HEIGHT99
LET NACVOL99 = ACRVOL99*((100-DEFPCT)/100)*0.93
IF NACVOL99 = . THEN LET NACVOL99 = ACRVOL99 * 0.93


COMPUTE 1988 HTS AND VOLUMES

BASIC
IF (SPECIES =1) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(5.815 - 8.488*(DBH88^(-0.584)))
IF (SPECIES =2) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(43.946 - 40.550*(DBH88^(-0.019)))
IF (SPECIES =3) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(6.119 - 6.172*(DBH88^(-0.472)))
IF (SPECIES =4) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(5.970 - 5.801*(DBH88^(-0.638)))
IF (SPECIES =5) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(5.364- 9.360*(DBH88^(-0.980)))
IF (SPECIES >5) AND (SPECIES<10) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(4.705 - 5.288*(DBH88^(-0.974)))
IF (SPECIES =11) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(4.353 - 7.604*(DBH88^(-1.356)))
IF (SPECIES >11) AND (MEASHT$<>'MH') THEN LET HEIGHT88=4.5+EXP(4.233 - 11.886*(DBH88^(-1.658)))
RUN

BASIC
IF SPECIES = 1 THEN LET VOL88 = EXP (-8.2233+1.6117*LOG(DBH88)+1.6021*LOG(HEIGHT88))
ELSE IF SPECIES = 2 THEN LET VOL88 = .0004714*DBH88^1.725*HEIGHT88^1.909
ELSE IF SPECIES = 3 THEN LET VOL88 = .0003347*DBH88^2.012*HEIGHT88^1.664
ELSE IF SPECIES = 4 THEN LET VOL88 = .0004714*DBH88^1.725*HEIGHT88^1.909
ELSE IF SPECIES = 5 THEN LET VOL88 = .00009784*DBH88^1.767*HEIGHT88^2.128
ELSE IF SPECIES = 6 THEN LET VOL88 = .00009784*DBH88^1.767*HEIGHT88^2.128
ELSE IF SPECIES = 7 THEN LET VOL88 = .00009784*DBH88^1.767*HEIGHT88^2.128
ELSE IF SPECIES = 8 THEN LET VOL88 = .0003347*DBH88^2.012*HEIGHT88^1.664
ELSE IF SPECIES = 9 THEN LET VOL88 = .0003347*DBH88^2.012*HEIGHT88^1.664
ELSE IF SPECIES = 11 THEN LET VOL88 = .0007933*DBH88^2.3095*HEIGHT88^1.2107
ELSE IF SPECIES = 12 THEN LET VOL88 = .002526*DBH88^1.7264*HEIGHT88^1.2646
ELSE IF SPECIES >12 THEN LET VOL88 = .003747*DBH88^2.2444*HEIGHT88^0.8136
IF DBH88<11 THEN LET HEIGHT88=20
IF DBH88>10.9 THEN LET HEIGHT=5
LET ACRVOL88 = VOL88*HEIGHT88
LET NACVOL88 = ACRVOL88*((100-DEFPCT)/100)*0.93
IF NACVOL88 = . THEN LET NACVOL88 = ACRVOL88 * 0.93
RUN

IF NACVOL88 = . THEN LET NACVOL88 = 0
IF NACVOL99 = . THEN LET NACVOL99 = 0
LET NACGRO = NACVOL99 - NACVOL88
```

Marc: Did use different ht/dia. coefficients for 1988 + 1999 and then applied those heights to the standard set of volume equations we use now.

Norm

Note: Obtained from CDF. The handwritten note at the end is from Norm Henry, who was the inventory analyst at JDSF at the time, to Marc Jameson, Jackson Forest Director.

Attachment VT-5

CF1 ① volume formulas

TABLE A.1

JACKSON STATE LOCAL VOLUME TABLES [1/]

~~Merchantable Cubic Feet~~ $v_1 = a_1 + b_1 \cdot d_i + c_1 \cdot d_i^2$ ← SCRIBNER BOARD FEET

~~Scribner Board Feet~~ $v_1 = a_2 + b_2 \cdot d_i + c_2 \cdot d_i^2$ ← MERCH CUBIC FEET

CF1	IF1 SPECIES	VS	AGE	SITE	BOARD FEET a_1	b_1	c_1	CUBIC FEET a_2	b_2	c_2	
2	Douglas Fir	4	YG	I,II	156.087	-33.6927	2.47545	-8.1280	0.16200	0.254435	
2	Douglas Fir	4	YG	III-V	139.386	-29.3080	2.03223	-9.7284	0.86453	0.184100	×
102	Douglas Fir	2	OG	-	1293.277	-110.7644	3.39810	83.7489	-7.83002	0.371421	×
1	Redwood	3	YG	I,II	166.090	-31.2456	1.82285	6.8793	-2.14501	0.248695	×
1	Redwood	3	YG	III-V	(142.130	-26.8349	1.58044)	(8.5681	-2.18287	0.229721)	×
101	Redwood	1	OG	-	362.238	-49.1316	2.00178	17.8595	-4.20614	0.297759	✓
12	Beach Pine	7	-	-	217.061	-38.0766	2.01718	16.3833	-3.47671	0.288064	
12	Bishop Pine	7	-	-	217.061	-38.0766	2.01718	16.3833	-3.47671	0.288064	
103	White Fir	5	OG	-	1293.277	-110.7644	3.39810	83.7489	-7.83002	0.371421	
	White Fir	5	YG	-	-143.866	-4.6394	1.93271	-35.3049	2.46767	0.232820	
6	Hemlock	6	-	I,II	166.090	-31.2456	1.82285	6.8793	-2.14501	0.248695	
6	Hemlock	6	-	III-V	142.130	-26.8349	1.58044	8.5681	-2.18287	0.229721	
39	Nutmeg	19	-	-	217.061	-38.0766	2.01718	16.3833	-3.47671	0.288064	
21	Cypress	8	-	-	217.061	-38.0766	2.01718	16.3833	-3.47671	0.288064	
31	Alder	13	-	-	366.980	-58.2037	2.61454	51.2392	-7.71842	0.405272	
32	Bigleaf Maple	17	-	-	78.440	-14.4223	0.86620	9.3576	-1.24704	0.120120	
37	Willow	16	-	-	366.980	-58.2037	2.61454	51.2392	-7.71842	0.405272	
36	Canyon Live Oak	15	-	-	163.337	-23.7085	1.09907	26.6426	-3.12197	0.166925	
33	Tanoak	11	-	-	-25.431	-3.6834	0.65936	-21.5157	0.96750	0.133158	
38	Pepperwood	14	-	-	326.409	-45.4436	1.70399	58.0630	-7.64679	0.295748	
34	Chinquapin	19	-	-	-25.431	-3.6834	0.65936	-21.5157	0.96750	0.133158	
35	Madrone	12	-	-	-143.437	10.0495	0.2903	12.8973	-2.61390	0.240116	
~~34~~	Wax Myrtle	19	-	-	78.440	-14.4223	0.86620	9.3576	-1.24704	0.120120	
39	Eucalyptus	18	-	-	366.980	-58.2037	2.61454	51.2392	-7.71842	0.405272	

[1/] Extracted from Jackson State Forest inventory program written by Lee. C. Wensel

Attachment VT-6

FOREST INVENTORY-MANAGING THE NUMERIC MONSTER FOR FOREST PLANNING

Paul Ederer, Forestry Aide, IFF Tech.

In 1988 , a thirty years old continuous forest inventory (CFI) system was radically changed as Jackson Demonstration State Forest (JDSF) joined the high tech information age by implementing a new state of the art forest inventory system. The original system of 141 rectangular 1/2 acre plots established in 1958-60 on a regular 3/4-mile grid was laid to rest, replaced by a new system of 2350 circular 1/5 acre plots (fig. 1) randomly located according to forest cover types. A more detailed description of the new system is available in newsletter No. 28, January 1988. Data collection for this new system began in the summer of 1988 and was completed in the spring of 1990. The analysis phase started just as forestry in California began to experience sweeping changes that are still shaking the dust out of the old forest practice rules. With the anticipated changes in rules and their focus towards a regional outlook and a even timber flow, the new intensive forest inventory (IFI) data has assumed a highly significant role in forest wide planning.

IFI is equipped to supply most of the information required by pending rule changes. Increasing concern over how timber harvesting affects other forest resources both immediately and over time has resulted in more and more information being demanded of forest managers. CFI was limited in the amount and detail of information that could be obtained, especially with regard to timber stand distribution information at the management compartment and watershed level. It also lacked the capacity to link with a growth projection model.

Of course all this new information has costs attached to it. The increased number of plots to be measured and subsequent additional data analysis burden mean less time for other staff duties. The lack of staff time necessitated bringing in outside contractors which can distance the managers from the reality of the source of the numbers generated. In balancing these trade-offs, it was decided to contract the data gathering and do the analysis in-house. With field work finished by spring of 1990, a temporary forestry aide was hired to start clicking on the computer. Most of the data entry was completed by the contractor but inserting site index and hand checking for suspicious values was left to JDSF.

The IFI system has the capability to interact with any statistical and data managing program. Inventory data is read into our statistical program where it is manipulated and transformed before being written to IFI for final processing. Two important pieces of information were required before that could be done: 1) a height/diameter relationship had to be developed since heights were only taken for a small sample of the total trees ; and 2) a radial growth model had to be developed from a subsample of cored trees for IFI to project diameters to a common year.

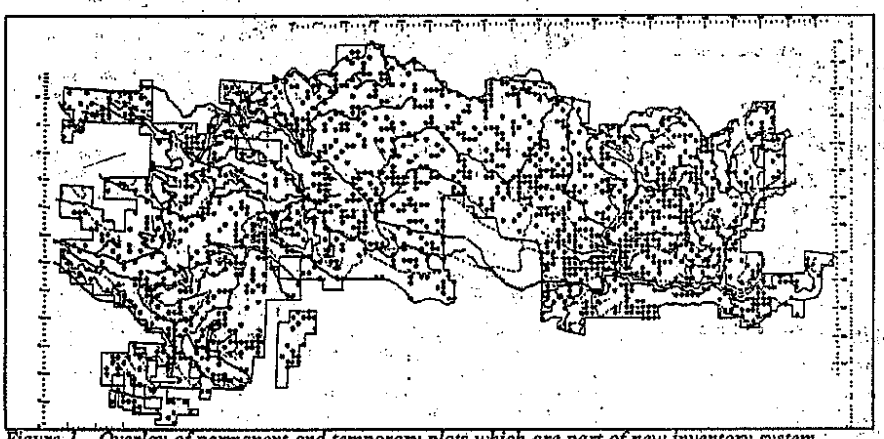


Figure 1. Overlay of permanent and temporary plots which are part of new inventory system

The height/diameter relationship was assumed to be non- linear and modeled using the following non-weighted equation:

HEIGHT = 4.5 + EXP(b1 + b2 * (DBH^b3))

as suggested by Forest Service Research Note PSW-408. Both equations

JDSF Newsletter #46 Page 4 Summer 1992

Attachment VT-6

mentioned in the report were tried but the one shown here produced a consistently better fit with our data. Separate coefficients were developed for old and young redwood, whitewoods (Douglas-fir, grand fir) and minor conifers. Hardwood heights were not taken so coefficients from the minor conifers were used instead. Each species group was further stratified by five aggregations of 69 different stand/density codes and 3 aggregations of 12 soil/site index codes.

Ten year radial growth data was collected as it was anticipated that not all 2350 plots would be measured in a single year requiring some growth factor to adjust dbh to a common year for estimating total forest growth. Since there was no equation to directly predict radial growth, a basal area growth (BAG) variable was created. An equation taken from Research Bulletin 51 published in1985 by the Oregon State Uuniversity Research Lab was used to predict BAG. A simpler version of the equation was used as some of the information needed for the full equation was not available. BAG was envisioned as the "doughnut" of new growth formed by the difference in basal area in a 10 year period. A conversion equation was used to change the BAG variable to a radial growth value usable by the IFI. Again the data was stratified by the same species groups and stand/density, soil/site codes as were the height data. Where there were not enough data to be confident in predictions, each species group was combined by soil/site codes and then stand/density codes.

All this data manipulation exposed several problems with both the computer and programs. Most of the initial work was done using a 80286 (AT) computer, frequently pushing it to the limit of its capacity. The major problem was the size of the data file. Having input data on over 50,000 individual trees, the "monster" file created occupied 12 megabytes (mb) worth of space on the hard drive. After performing a few data transformation operations in which backup files are automatically written, the hard disk would be filled. The computer was then unable to complete the assigned task or old files would have to be deleted to make room for the new. Even with a data compression program the file could not be squeezed onto one floppy disk, requiring an hour long multi-step procedure to save a file. The file size was also a hindrance to data checking; no reasonable way was found to check it manually so a technique had to be developed for the computer to do it. The problem arises in the difficulty of having the computer program error check certain items and how to anticipate every possible error condition. The data management program used was usually up to the task, but it was not always obvious how to get it done, necessitating many calls to the company.

A frustrating time ensued as errors like plot data being triplicated or deleted from the file crept in during the processing phase before being noticed. The causes for the errors then had to be determined and eliminated. A program upgrade process was also endured as it required switching between two versions of the statistical program for certain analyses. The new version was significantly better visually and procedurally than the old, so we used it as much as possible. The newer version lacked some vital routines however, resulting in extra time spent converting the data between versions with the risk of errors or the program crashing.

The system was upgraded to a 80386 model computer with the newest disk operating system (DOS 5.0) installed which lessened data storage problems and significantly increased the file processing speed. At this point in the inventory cycle, the data management program is completely operable in its new version. A future addition of a tape backup system for the hard drive will provide easy data storage and mitigate the fear of a major data loss.

As reported by the old inventory system, gross softwood volume on the forest has fluctuated around 1.36 billion board feet (standard error of 8.4%). The new inventory system indicates the Forest contains 1.87 billion board feet (standard error of 1.9%). The gain is every forest managers dream but at this time we view the new number with a cautious eye. One probable cause for the difference is the volume equations that were developed for the new system. As a check we did a comparison of the 141 old CFI plots in 1984 and 1989. Using tagged tree numbers, we were able to reconstruct the 1989 circular plots in the old 1984 rectangular plots and then process the two data sets identically. The results were not what were expected, with the '89 data suggesting 2.2 billion b.f.and the '84 data indicating 1.6 billion b.f. Some increase would be anticipated but a 37 percent increase is suspicious.

During the time this article is being written the California State Board of Forestry is considering monumental changes to the regulations that govern how timber is managed in the State. Several versions of different rules are being considered, but one main focus is on sustained yield and long term timber management. Emphasis on forest wide planning will require managers to have information at their finger tips on sustainable productivity, growth rates and growth potential, area in each timber type, diameter and age-class distribution and more.

For future management decisions an accurate estimate of inventory is required. A minor error projected over the 100 year planning period could cause major deviations between paper planning and on the ground realities. As this is the first test of a completely new and integrated system, problems were bound to occur and lessons learned in this cycle will be applied to the next . It is unknown how the pace of computer development will proceed but for this type of project bigger and faster computers are needed. The trend is for more and more information to be collected and used in addressing new forest practice rules so the demand for computer power will increase. We estimate having to track up to 4,400 different possible stand conditions. An obvious area to streamline is data entry. The forest is currently testing a

programmable data recorder that will eliminate the re-entry of data from field forms to computer disk. The recorder will be able to check data as it is entered and eliminate most typographical errors .

The space age could make its mark on JDSF if a Global Positioning System (GPS) is used for accurately locating plot centers (see Newsletter No. 40). There has been a problem in assigning the plot to the correct forest cover type for analysis. With GPS linked to a Geographic Information System all inventory data could be easily accessed and stratified by management area, watershed or whatever unit was desired by managers. At some organizational level this type of system will be a necessity in order to meet the demands of the new forestry regulations.

This paper is dedicated to the entire staff at Jackson Demonstration State Forest whose knowledge and friendship has been inspiring.

Attachment VT-7

Interview of Paul Ederer, by Vince Taylor 4/18/05

Paul Ederer worked for JDSF as a Forestry Aide during the time that the 1989 IFI inventory data were being processed. He now works for Campbell-Hawthorne timber company. The primary purpose of the interview was to learn from him about the processing of the 1989 JDSF inventory data and to get his view of the possible causes of the big discrepancy between the 1984 inventory estimate and the 1989 estimate.

The notes have been reviewed by Paul and approved for submission to the Board of Forestry (see Attachment 1, e-mail excerpts).

Notes on conversation with Paul Ederer on 4/18/05

I met with Paul at the café at the Fort Bragg Depot at 3:00 p.m. on April 18, 2005.

I started by asking him about his current employment, what he did, and whether he'd worked for GP previously. He work primarily on forest restoration, but during the slow season (Spring), he does THP preparation. Today he worked above Cleone in an area filled with brush (but with a million dollar view). He enjoys his job and finds Campbell good to work for, now that they have adjusted to the realities of the property they bought. He told me quite a bit about how Campbell conducts its inventory, which I will record at another time.

Paul did work for GP briefly, 1993- 1999, but worked for Simpson 1992-1993 in Arcata after leaving JDSF.

Paul worked for JDSF starting in 1990. It was his first job after college (OSU). He was hired as a Forestry aide, to help with processing the first IFI (Intensive Forest Inventory) data, collected in 1988-89. He said that his first task was to visually scan a mountain of computer scatter plots (he indicated with his hand a stack of papers perhaps three feet high) for "outliers," data points that are so far from the norm as to be suspicious. He said he recalls the task as being extremely tedious and boring. This was only the first of many aspects of the data processing of that suggests room for error. It is only human to start glazing over and not really seeing when one is repeating boring tasks for long periods of time.

Paul wrote an article for the JDSF Newsletter in Spring 1992 describing his experiences.[1] He finished working for JDSF in Spring 1992. He worked seasonally May to November.

---

[1] Paul Ederer, *Forest Inventory – Managing the Numeric Monster for Forest Planning,* JDSF Newsletter, No. 46, Spring 1992.

In his article, Paul described the data-processing problems caused by the huge size of the data file, relative to the computer capabilities of that time. In our conversation he expanded on the difficulties:

- The computer was so slow that he would often start a run in the morning and then go out to the woods for the day. When he returned in the afternoon, the computer would still be working.
- The files had to be broken down into many small segments (up to 100), generally according to a stand type or forest compartment. Each segment then needed to be processed separately, involving numerous manual steps and relying up entering keystrokes tied to macros (recorded sequences of keystrokes) that had been previously prepared by someone else. There was no way of knowing what was going on in the computer, what calculations the computer was performing. The intermediate results for all of the segments then needed to manually combined to get a final whole-forest result.
- One of the steps involved in breaking down the data file was to save a copy of the file (onto a floppy disk) and then to work with the copy. Some plots got entered into the working database multiple times. This error was not detected by JDSF staff but by people using the data at Humboldt State University, who noticed that plot numbers were appearing multiple times and/or that certain plot numbers had unreasonable numbers of trees. [Comment by Paul: This was more of a joint effort where we became aware of and fixed some problems and Humboldt State staff were able to find and correct more.]

  Paul thought that the multiple entries might have occurred when saving the files. "The computer was so slow in responding to the save key that I could easily have thought that it didn't register the keystroke; so I could have hit the save key a second time or more."
- Paul summarized the situation, "Let me say that the data processing was fraught with possibilities for errors."

Paul also talked about the estimates that were derived from his (and others') efforts:

- The final figure that was generally accepted by the staff was 42,000 bf/acre. There was a lot of discussion among the staff. The consensus was that this number "passed the sniff test." But, there was also a feeling that the true number could have been significantly higher or lower.
- An initial estimate was 50,000 bf/acre. This was viewed as suspiciously high, and in looking for reasons, they found the duplicated plot entries (apparently thanks to HSU). This correction (and possibly others) led to reducing the estimate to 42,000 bf/acre. [This was still almost 50% greater than the estimate of the 1984 CFI estimate made 5 years earlier.[2]]

I queried Paul about a comparison that he reported in his article. To try to understand the discrepancy between the old (1984) and new (1989) estimates, they compared inventory

[2] The 1984 CFI estimate was 28,000 bf/acre; thus the new IFI estimate was about 50 percent higher.

data from 1984 and 1989 on a set of plots that were in both inventories (the original CFI inventory plots). They "created" data subplots within the 1984 CFI data that corresponded exactly to the new, smaller IFI plots that were placed within the old CFI plots.[3] They then could compare the inventory estimates on an identical set of plots for 1984 and 1989. "We were able to ... process the two data set identically."

I asked Paul whether "identical processing" meant that they used the same height-diameter and volume equations on both sets of data. "I am virtually sure that we did. It was a very complicated process involving a lot of steps. I don't think we could have done anything else."

It is an understatement to say, as Paul did in the article, "The results were not what we expected, the '89 data suggesting 2.2 billion b.f. and the '84 data indicating 1.6 billion b.f." Over a five-year period, one would have expected very little change in the inventory estimates. Over the prior 20 years estimated inventories from the CFI system had changed very little during each 5-year interval. In his article Paul concluded, "Some increase would be anticipated, but a 37 percent increase is suspicious."[4]

I asked Paul what he and others thought could explain this difference. He replied that they didn't really have an explanation. They felt their job was to pass on this result to the higher-up managers, and it was up to the managers to act appropriately on this information. He said that later when nothing was done that he was disappointed. "I can tell you, if I was a manager and was given this major unexplained discrepancy, I would have told my staff that I wanted them to dig into it and provide me with an explanation." Why didn't this happen, I asked. He replied, "It was a hot potato, and no one wanted to touch it." "There are probably other more valid reasons but I was blissfully unaware of the politicking going on within the agency and with other state departments."

I want to emphasize that the result of this comparison is so contrary to expectation that it completely undermines the credibility of the data processing procedures used to compute the estimates for the whole forest based on the 2350 sample plots of the entire IFI system. The comparison was of samples taken on the same plots only five years apart, supposedly using exactly the same computational procedures and equations. Harvesting was taking place during this period at approximately the forest growth rate, so there should have been only a small change in the estimated inventories between 1984 and 1989 – not the 37% difference found. Something was radically amiss with the computational process. Paul's earlier remarks about the incredible manual complexity of the process and lack of any means of validating the results give ample explanation of how the computations could have been wildly wrong.

---

[3] There were 141 ½-acre rectangular plots in the CFI system. The IFI sample plots included 1/5-acre circular plots placed within each of the CFI plots. JDSF went back to the CFI plots and, using tagged tree information, reconstructed the circular IFI plot within the 1984 CFI data.

[4] The estimate for 1984 using the IFI system is also significantly higher than the estimate of 1.37 billion b.f. made by the CFI system in use in 1984.

To his knowledge, and as far as I have been able to determine, no one has ever gone back and checked the IFI estimates using more robust computers and applying error-checking and validation procedures.

Attachment VT-7

Attachment 1: Approval by Paul Ederer to submit his interview.

From: Vince Taylor [mailto:vtaylor@mcn.org]
Sent: Tuesday, November 29, 2005 6:34 PM
To: Paul Ederer
Subject: Jackson EIR

Dear Paul,

…
Secondly, **I'd like to submit our interview, minus your comments, as part of my submission on the EIR. Do I have your permission?**

…
Thanks,

Vince

Subject:
RE: Jackson EIR
From:
"Paul Ederer" <PEderer@campbellgroup.com>
Date:
Wed, 30 Nov 2005 09:11:15 -0800
To:
"Vince Taylor" <vtaylor@mcn.org>

Vince, Next week we will start tree planting and I will be unavailable for any comments. **It's Ok to submit my interview.** …
Paul

Attachment VT-8

PAUL V. CARROLL
Attorney at Law
5 Manor Place
Menlo Park, California 94025
telephone (650) 322-5652
facsimile (same)

July 31, 1998

Douglas Wheeler, Director of Resources
James Branham, Chief Deputy Director of Resources
California Resources Agency
1416 Ninth Street, Room 1311
Sacramento, CA 95814

Re: Mendocino Woodlands Recreational Demonstration Area

Dear Gentlemen:

I write in regard to the 5,426 acre Mendocino Woodlands Recreational Demonstration Area on behalf of the Big River Watershed Council.

This beautiful area of California is comprised of the 780 acre Mendocino Woodlands Outdoor Center, a surrounding 2,550 acre special treatment area, and an additional outlying area of 2,155 acres, adjacent to Russian Gulch State Park. The special treatment and outlying areas are currently under the control of the California Department of Forestry as part of the Jackson State Demonstration Forest. I understand, though, that plans are afoot to transfer the special treatment area from CDF to the California Department of Parks and Recreation. The Big River Watershed Council applauds this transfer.

But I write now to urge you to also transfer the remaining 2,155 acre outlying area to the Department of Parks. Such a transfer makes sense from both legal and environmental perspectives. CDF's use of the land for logging violates the plain language of the Congressional enactment authorizing the land's conveyance to the State of California. Transferring the land to the Department of Parks would honor Congress's intent, and greatly benefit the environment, creating a continuous expanse of state park stretching from the Pacific Ocean through the Russian Gulch State Park and on to the Woodlands Outdoor Center.

The Mendocino Woodlands Recreational Demonstration Area was transferred by the

United State to California in 1947. The transfer was authorized by an earlier act of Congress ("Act") that stated in pertinent part: "Every such deed or lease shall contain the express condition that the grantee or lessee shall use the property exclusively for public park, recreational, and conservation purposes. . . ." (Act of June 6, 1942 [56 Stats. 326; 16 U.S.C. 459t].) The quitclaim deed transferring the land expressly derived its authority from the Act, and California accepted the transfer under the same authority, expressly agreeing to take the land "for public park, recreational, and conservation purposes."

Members of the public have expressed their concern over the conflict between the Congressional directive to use the land for "public park, recreational, and conservation purposes," and CDF's use of the land for logging. Recently, Richard Wilson, the Director of CDF, responded to these concerns by letter dated September 24, 1997. Mr. Wilson pointed out that the Director of the National Park Service and the Assistant Secretary of Interior, in 1942 and 1947 respectively, were of the opinion that logging was consistent with the Act and its limitations on the use of the land.

Mr. Wilson quoted from the October 31, 1946, letter of the then Assistant Secretary of the Interior, Girard Davidson. I, too, will quote part of this letter, because it vividly illustrates how the Act was misinterpreted by those meant to enforce it. The Assistant Secretary's letter provided: "I believe that the State can appropriately determine in future years the extent to which the area should be used for (1) public park, (2) recreational, or (3) conservation purposes, or for any combination of these purposes, and that so long as the area is used for one or more of those purposes, the conditions stated in the proviso quoted above will be met."

The Assistant Secretary's interpretation—that the land could be used as a public park *or* for recreational purposes *or* for conservation purposes—is contrary to the plain language of the Act. Congress did *not* provide that the land could be used for "public park, [or] recreational, [or] conservation purposes." To the contrary, it provided that the land was to be used for "public park, recreational, *and* conservation purposes."

The Assistant Secretary's substitution of the disjunctive "or" for the conjunctive "and" was a serious legal error. In the construction of a statute, such as the Act at issue, the terms "and" and "or" have well defined legal meanings, which often determine the larger meaning of the statute. Congress's use of the conjunctive "and" means that all three uses—public park, recreational, and conservation—must be honored by the State. (*Lusardi Construction Co.* v. *Oubry* (1992) 1 Cal.4th 976, 988 [construing statute according to Legislature's use of the disjunctive "or"]; *People* v. *Skinner* (1985) 39 Cal.3d 765, 775 [Legislature's use of "and" to be construed conjunctively unless it appears clear that the word has been erroneously used]; *Melamed* v. *City of Long Beach* (1993) 15 Cal.App.4th 70, 79 ["and" should be interpreted to connote a conjunctive meaning].)

This interpretation is further bolstered by the three stated purposes for which the land was to be used—*public park, recreation*, and *conservation*. These terms and the ideas they embody are mutually inclusive and reinforcing: they all point to a conservationist ethic.

Logging, therefore, is not compatible with the plain, unambiguous language of the Act. Mr. Wilson erred in relying upon an individual's interpretation of the statute, rather than on the statute itself.

Transferring both the outlying and special treatment areas avoids Mr. Wilson's erroneous legal interpretation and the future possibility of litigation. In light of the language of the Act and the identical language of the quitclaim deed, CDF is without legal right and jurisdiction to use the Mendocino Woodlands Recreational Demonstration area as a demonstration forest for logging operations. Any future logging operation on the land invites a legal challenge on this basis.

But more importantly, a transfer of the outlying area to the Department of Parks would greatly benefit the environment and those of us who cherish it. To the west, the outlying area borders Russian Gulch State Park, which reaches to the Pacific. To the east, the outlying area borders the special treatment area, which in turn surrounds the Woodlands Outdoor Center. If transferred as parkland, the outlying area would connect two areas of parkland that now remain separate. Thus joined, one could walk on State parkland from the Pacific Ocean through the changing landscape of Russian Gulch, with its coastal waterfalls and pygmy forests, on to the staircase of redwood forest, and finally into the Woodlands Outdoor Center with its beautiful, historic cabins and structures.

And the outlying area (and special treatment area) would join two parks into a larger, more complex ecosystem. The ecological benefits of preserving larger landscapes are now well accepted—the degree of biodiversity is proportional to the area of ecosystem preserved.

In light of the foregoing, Big River Watershed Council respectfully urges you to transfer the outlying area to the Department of Parks. The public would benefit from a beautiful addition to California's parkland, the natural world would benefit from preservation of a greater landscape, and the continuing controversy over CDF's unlawful logging of the land and jurisdiction over it would come to an end.

I also respectfully ask that you respond to this letter. Numerous concerned groups and individuals have a keen interest in the land and wish to know what your office intends to do.

Thank you for your consideration of this matter. I look forward to hearing from you.

Very truly yours,

Paul V. Carroll

cc: Senator Mike Thompson

Attachment VT-8

Assemblymember Virginia Strom-Martin
Richard Wilson, California Department of Forestry
Ken Jones, California State Parks
Susan Smartt, California State Parks Foundation
Sierra Club, Redwood Chapter
Mendocino Land Trust
Save The Redwoods League
Ronnie James, Mendocino Woodlands
Big River Watershed Council
Mendocino Environmental Center
Mendocino Area Parks Association
Trust For Public Lands

Mailed Letter P-184

Response to Comment A
The DEIR and RDEIR are intended as a public disclosure and decision making tool to be used by the Board to analyze the significant potential effects arising from implementing the draft JDSF Draft Forest Management Plan (DFMP) and the Administrative Draft Final Forest Management Plan (ADFFMP), to identify alternatives, and to disclose feasible measures to reduce or avoid significant impacts. The lead agency, in this case the Board, is obligated to produce a comprehensive document that addresses the full range of potential significant environmental impacts in sufficient detail that a determination of significance can be made with regard to the proposed project and the alternatives. The size of the document is largely determined by the complexity of the potential effects of the proposed project, plus the alternatives, and the requirement of CEQA that the EIR adequately address those potential effects. The DEIR is also responding to a judicial decision that required significantly expanded regional setting and cumulative effects sections.

Response to Comment B
While portions of the DEIR were technically oriented, other portions were readily understandable to lay readers. For example, the impact summary tables at the end of each resource analysis section.

Copies of the DEIR and RDEIR were made available at libraries locally, regionally, and statewide. Copies also were available at a number of CAL FIRE facilities. Free copies on CD were available on request from the Board of Forestry and Fire Protection. The document also was available for download via the Internet.

Response to Comment C
The summaries at the end of each resource analysis section were developed to demonstrate similarities as well as differences among Alternatives. Consistent with CEQA guidelines, CAL FIRE evaluated a broad range of alternatives and used a matrix to summarize the differences among alternatives (Guidelines § 15126.6d). The impact levels used to characterize effects are required in environmental impact analysis reporting. While the check-boxes alone may appear to provide a somewhat coarse (but CEQA-compliant) ranking, the text within the tables provides finer-grained information about the performance of the various alternatives at addressing potential environmental impacts. Further discriminating information about the alternatives can be found in the text portion of the various impact analysis sections.

The range of alternatives was intended to consider the impacts of a set of alternatives that more-or-less fit within the program bounds established by existing statutes and Board of Forestry and Fire Protection policies for the management of the Demonstration State Forests in general and JDSF in particular. Thus, alternatives that might have generated a wider range of potential impacts—establishing a park or developing residential subdivisions—would not feasibly attain most of the project's basic objectives (see CEQA Guidelines section CCR § 15126.6).

Response to Comment D
The Board believes that the document is comprehensive, well organized, and provides a level of analysis appropriate to a largely programmatic EIR.

General Forest Inventory and Growth Response
The commenter has provided a large number of comments to support his viewpoint. Most of these comments however, reiterate a much smaller number of arguments repeated numerous times in slightly different contexts. The basic thrust of the comments involves two assertions:

1. The estimates of growth on JDSF increased unrealistically between two inventory measurements, 1984 and 1989. The commenter believes the "old" 1959-1984 growth and yield estimates are accurate, and that the Department has overestimated the sustainable

harvest volume in the management plan/EIR by using the “new” 1989-2005 growth and yield estimates.

2. The inventory used in the management plan and EIR is outdated.

With respect to item 1, it is important to distinguish between data and subsequent estimates that are based on these data. All the inventory data measured since 1959 are accurate and remain valid today. Estimation equations using these data change over time as scientific knowledge advances. It is reasonable to expect that over a period of 45-plus years, new and better estimation equations will be developed. Such new estimation equations necessarily occur on the scene at one point in time, and thus may appear to provide estimates of total timber volume on the Forest that are inconsistent with pre-existing equations.

By virtue of incorporating both diameter and height, the “new” estimation equations are preferable to the “old” equations. This is so because the “new" equations account for changes in diameter-height relationship with changes in for example tree age and stand density.

Contrary to the commenter’s claim, self-consistency of volume estimates over time is not a reliable diagnostic of their validity. Estimation equations are by definition self-consistent. Just as the 1959-84 volume estimates were self-consistent using the same estimation equations, the 1989-2005 equations are self-consistent using the same or very similar estimation equations.

The commenter’s own analyses support the conclusion that the old growth and yield estimates are not significantly different from the new growth and yield estimates.

Finally, experts may disagree over the exact levels of inventory and growth for a forest property. Ultimately however, they share a general agreement regarding the sideboards on orders-of-magnitude levels of growth and yield in the redwood region. This agreement is based on commonly accepted standards and practice in the profession, evidenced in professional knowledge and the scientific literature. There exists a substantive body of such accumulated knowledge on the growth and yield of forest stands in the redwood region for the last 100 years, embodied in professional experience and the reviewed literature. This accumulated knowledge tells us that any well-stocked forest in the redwood region, such as JDSF, with average site II growth potential and stocking levels greater than 20 thousand board feet per acre on average, will grow at a substantially higher rate than that advocated by the commenter. The commenter’s claims regarding growth and yield on JDSF are at odds with this entire body of evidence.

The commenter goes to some lengths to make the case that the Department has not provided him with an adequate explanation of the reason for the differences between the old and new growth and yield estimates. Such an explanation only becomes important if it has been determined a priori that one of the growth and yield estimates are correct and the other is incorrect. The commenter states that they cannot both be correct.

The Board believes they both are correct. The Board believes that approaching the analysis with the mindset that some of the equations and growth and yield estimates that have been used on JDSF during the 45-plus years of inventory efforts are incorrect, correct or inconsistent is a bit disingenuous. The Board has determined that the “old” growth and yield estimates are valid under the range of conditions for which they were developed. Differences between “old” and “new” growth and yield estimates are within the range of what can be expected when adopting new estimation equations and inventory sampling designs. The “old” and “new” growth and yield estimates are not inconsistent. The new equations and associated growth and yield estimates used in this Management Plan/EIR constitute an improvement over the old equations and inventory estimates. They are accurate and they constitute the best available information at this time.

Consequently, a detailed investigation of what may have caused the differences between the “old” and “new” growth and yield estimates becomes moot. The Board believes that this is not a necessary

or instructive course of inquiry. The Department has outlined a suite of possible factors, including growth and other structural changes, a change in inventory design, forest development, a change in volume and height equations, sampling error and possibly other unknown factors. The Board believes that any combination of these factors can explain the differences between the 1984 and earlier growth and yield estimates and the 1989 and more recent growth and yield estimates.

With respect to item 2, the inventory used to support the management plan and EIR is approaching the end of its useful life span, but careful updates for growth and harvest have preserved its accuracy. Subsequent inventories, one conducted in 1999 and two conducted in 2005, corroborate the inventory used in the management plan and EIR.

Response to Comment 1
In addition to a knowledge of mathematics and statistics, a relevant educational background combined with a mature depth of experience relating to forest structure and development, growth and yield and silviculture, is essential in order to objectively assess a complex set of forest inventory and growth analyses. Many of the theoretical and practical implications of the art and science of forestry and its many subtleties can only be gained through practical experience. The State of California requires candidates to meet significant educational and practical experience requirements before they are allowed to sit for the Registered Professional Forester examination. Many of the comments below do in fact demonstrate a lack of basic expertise in forestry (comments # 27, 30, 60, 67, 69, 70, 85, 112, 118, 119, 120, 2002 comment #241.8).

Response to Comment 2
The revenue generated from the Forest is not allocated by the department. The legislature establishes the FRIF budget allocation on an annual basis. The Department of Forestry and Fire Protection determines how the limited budget allocated back to the state forests is utilized. Any proposed changes from year to year (including personnel and operating expenses) require preparation of a budget change proposal (BCP), which is subject to approval by the Secretary of Resources, the Governor, and the Legislature.

Response to Comment 3
See response to comment 2 above.

Response to Comment 4
The DEIR/RDEIR presents an environmental analysis of the management plan proposal submitted to the Board. Funds, including those allocated to personnel and general operating expenses, are utilized to implement the management of the Forest. Alternatives for management of the Forest, which inherently entail different budget scenarios, were considered in the DEIR/RDEIR.

Response to Comment 5
Comment noted.

Response to Comment 6
See responses to comments 2 and 4 above. The Board does not have the authority to allocate or distribute revenue generated from the Forest. The Board will certify the EIR and approve the management plan for the Forest. This will provide guidance for the expenditure of the available funds that are authorized by the legislative process.

Response to Comment 7
The DEIR includes an analysis of the potential for impacts associated with management activities. The impacts associated with roads was also considered in detail. However, neither the Board nor the EIR process can guarantee the level of available funding. It is anticipated that funding will be sufficient to implement the management plan.

Response to Comment 8
It is the obligation of the Department to implement the management plan as approved by the Board. Failure to implement the plan would result in Board action to remedy the situation. The Department receives an annual allotment of funds for management of the Forest. The funds are expended to manage the Forest.

The commenter states that the budget is inadequate, but that it is not guaranteed. While the Board generally agrees with this statement, the Board anticipates that the Department will request sufficient funds to effectively manage the Forest. Failure to manage the forest as prescribed by the management plan would lead to re-evaluation of the plan by the Board.

In the absence of a completed road inventory, it is speculative to provide a schedule of operations. The level of repair, maintenance, improvement, and decommissioning need is unknown at this time. The road inventory will serve as a basis to establish a work schedule. However, implementation of the Road Management Plan will result in an improvement in environmental conditions related to roads and their usage.

For Alternative C1, the DEIR applied an additional management measure for an Accelerated Road Management Plan. This accelerated plan also was adopted as a part of Alternative G and the ADFFMP. The accelerated plan calls for completion of the inventory of roads within 3 years rather than 5. Until completion of the road inventory, JDSF will survey and evaluate all appurtenant roads as a part of each THP and then complete the identified needed road upgrades as a part of the THP.

Contrary to the stated concern, forest research is funded from revenues generated within the state forest system.

The relationship between revenue generation, timber harvest, and operating budget are somewhat speculative, and not static. The Department has recently sought to increase the budget allocation for state forest management. Annual revenue is dependent upon many factors, such as the market for timber and variations in operating costs associated with the harvest of timber. The potential impacts associated with the harvest of timber have been thoroughly considered in the DEIR and RDEIR, and significant cumulative impacts are not anticipated from the implementation of the proposed management plan.

Response to Comment 9
The Board recognizes that Alternative E may result in a lesser level of impact relative to Alternative C. However, the Board is not obligated to select the environmentally superior alternative. The Board developed Alternative G following the public comment on the DEIR. Alternative G, or the ADFFMP, provide substantial additional areas for the development of late seral forest or older forest structure and places significant limitations on the use of all forms of even-aged management.

Response to Comment 10 and 11
Please see responses 02, 04, and 06 above.

Response to Comment 12
The Board recognizes that there are differences between each of the alternatives. Alternatives C1 and C2 are most similar. An analysis of project impacts may result in a similar finding relative to level of significance, though the impacts are somewhat dissimilar. These differences are discussed in the DEIR. See also the above response to comment C.

Response to Comment 13
The Board has determined that the analysis was appropriately conducted. The comment does not include sufficient specificity to enable a reasoned response.

Response to Comment 14
The Board may rely upon both qualitative and quantitative information in the analysis of potential impacts and utilized the best information that was readily available. The management plan was prepared by professional staff, in consideration of potential impacts. The EIR constitutes the formal environmental assessment for the management plan. The Board is not surprised by the fact that most elements of the management plan were prepared in an effort to avoid significant environmental effects. Where the DEIR analysis indicates that that the DFMP could result in significant adverse environmental impacts, the DEIR develops mitigations to reduce the impact to a level of less than significant. See also the response to comment C.

Response to Comment 15
The comment does not specify a specific impact for which Alternative E should be rated as "no impact" or "beneficial" while Alternative C2 should have a different rating. Only a very general example is provided. The impact assessments in the DEIR provide multiple examples where Alternative E is found to have a lesser level of impact than Alternative C1. To list a few examples:

- Botanical Resources—fungi species and Mushroom Corners Management;
- Wildlife and Wildlife Habitat--late successional/old-growth forest, snags and down wood; other unique/special habitats and features, wildlife and communities and species habitat values; southern torrent salamander and tailed frog;
- Hazards and Hazardous Materials—impairment or physical interference with an adopted emergency response plan or emergency evacuation plan
- Heritage Resources—impacts on traditional Native American plant collecting resource areas and for increased health risks from application of herbicides.

Response to Comment 16
The EIR distinguishes between the various alternatives. The characterization of overall impact is based upon categories that reflect a range in the level of impact. The DEIR does not imply that the environmental impacts of Alternatives C2 and E, or other alternatives, are indistinguishable. Each section provides information that distinguishes elements of the alternatives.

Response to Comment 17
Please see General Forest Inventory and Growth Response, above , in addition to response to individual comments below.

Response to Comment 18
Please see General Forest Inventory and Growth response, in addition to response to individual comments below.

Response to Comment 19
This comment implies that a lack of inventory data at the planning watershed level represents a failure to meet the minimum obligations under CEQA and to provide a basis for informed decision making and public participation in the development of the Management Plan. The DEIR is a programmatic document that provides sufficient information with which to perform an analysis of potential impacts associated with the management plan. In addition, future projects will tier to the EIR. Environmental analysis will be performed for those projects. In the case of timber harvesting plans, a more detailed inventory is generally performed for the project. A later comment (see below) requests data at the stand level. The appropriate level of detail of inventory data for analysis depends on the objective. The management plan/DEIR is a forest wide planning effort, consequently the proper scale of data and analysis is the entire forest and adjacent ownerships.

Response to Comment 20
Growth estimates, as reported in the DFMP/ADFFMP and DEIR/RDEIR, were based upon field measurements, modeling, and a comparison of plots over time. The CFI plots were measured in 1989, 1999, and most recently in 2005. The growth estimates obtained from modeling and plot measurement are all within a similar range. The Forest Practice Rules require that long term

sustained yield (LTSY) be estimated, which normally requires modeling, since it is an estimate of future growth and yield. The complete CFI plot database is a matter of public record.

Response to Comment 21
The inventory data relied upon in the DEIR/RDEIR includes a forest-wide inventory produced in 1989, with partial replacement of plots in 1997, all brought up to present with the growth model CRYPTOS. Using simulation models to update an inventory is an accepted industry practice. In addition, as was done between 1959 and 1989, an estimate of forest-wide inventory was produced with the CFI plot system. Results of both methods are within an acceptable range. As stated on page VII.6.3-4 of the DEIR, a new forest-wide inventory was in progress while the EIR was being prepared. In addition, the CFI plot system was measured. Both of these processes occurred in 2005. The resulting estimates of forest inventory and growth are very similar to the earlier estimates, and within an acceptable range of statistical confidence.

Response to Comment 22
The inventory information upon which estimates of growth and inventory are based are current, and based upon sound methods and analysis. Sixteen years of subsequent measurements support the inventory information on which the EIR relies.

Response to Comment 23
A statistical analysis has been performed on the property-wide inventory, and has been found to be well within acceptable limits. The methods used to calculate growth conform to industry norms, and are well supported in the literature.

Response to Comment 24
An estimate of current inventory was produced by projecting the Intensive Forest Inventory (IFI) plots to the present in the growth model CRYPTOS. In addition, the CFI plot system was utilized as a check upon forest-wide inventory in 1999 (see ADFFMP Chapter 2, Resource Inventories, Data and Information Management), and a new set of inventory plots (approximately 5,000 plots) was installed during 2005. The results obtained from these inventories are very similar and within an acceptable range.

Response to Comment 25
The planned harvest rates are well below the estimated growth rates for the forest. Harvest during the first decade is expected to vary between 20 and 25 million board feet per year, while the level of growth is at least double this value, resulting in a very conservative level of harvest.

Response to Comment 26
The Board agrees that accurate and adequate estimates of current inventory and growth, as well as information on past harvests, are important to the analysis of cumulative effects as the result of probable future timber harvest.

Response to Comment 27
The management plan/EIR is a forest wide planning effort, consequently the proper scale of the cumulative impacts analysis is the entire forest and adjacent ownerships.

An analysis should be based upon information that is readily available. In this case, a substantial level of analysis was conducted at the sub-watershed level, depending upon the detail of information known. Please refer to DEIR Sections VII.6.1 through VII.7 for examples. See also Section VIII, Cumulative Effects and Volume 2, Appendices and Volume 1B, Map Figures for localized information considered in the assessment at various levels of detail.

What is meant by the term "management compartment (unit)" is unclear. Management compartments/units as used in forestry often differ from sub-watershed units. Management units as the name implies, tend to follow logistical and operational boundaries. Watersheds are defined by geographical boundaries. Management units often cross watershed boundaries. An analysis of

impacts to watersheds, wildlife, and other resources is reflected in other forms of data, including forest vegetation and habitat types, forest canopy coverage, slopes, soils, and geology, just to name a few. Timber inventory and growth were utilized primarily as a means to estimate future forest structure, harvest, and growth. The inventory also served as a basis for long-term habitat development projections (DEIR page VII.6.6-134).

Response to Comment 28
Impacts are capable of occurring at many spatial levels, including specific sites within watersheds, between multiple watersheds, forest-wide, or even regionally. The DEIR provides a fairly coarse assessment of impacts, due primarily to the fact that specifics at the project level are not yet known. As each project is planned, a more refined analysis will occur, and projects will be modified, mitigated, or eliminated based upon the outcome of the analysis. This approach is appropriate for a programmatic EIR.

Response to Comment 29
Please see the responses above.

Response to Comment 30
The Board is in general agreement with this statement. However, it is not the intention of the EIR to provide an analysis of impacts extending 100 years into the future. It is recognized that the inventory, and subsequent analysis and projection will periodically be revisited. Plans may be adjusted based upon changes. The management plan for which this EIR was produced will remain effective for approximately 10 years, after which a new plan will be prepared for review by the Board. At that time, new inventory and growth information will be incorporated into the plan. The purpose of the 100-year planning interval is to investigate the long-term effects of planned actions in the next one or two decades. Existing trees may take an additional 60 to 80 years to grow to fully develop, and the 100-year look-ahead is necessary to gain an idea of the long term steady-state behavior of the forest ecosystem under proposed management. The interval for analyzing potential error is the next one or two decades, not 100 years.

Response to Comment 31
The Board is in general agreement with this statement. The level of confidence that one has with initial estimates may vary depending upon what information is being considered, why it is being consider, and the purpose for which the data was developed.

Response to Comment 32
A non-industrial timber management plan (NTMP) is a document established by the Board of Forestry, and prepared for the harvest of a finite parcel of land where the operational specifics and environment are known in detail (Title 14 CCR 1090). It is a plan that, once approved, has an infinite life span. It allows periodic timber operations after submittal of a notice that is not subject to approval subsequent to the initial approval of the NTMP (unless substantial environmental changes have occurred). For this reason, the level of timber inventory and growth information required is fairly detailed. An NTMP is currently restricted to ownerships of 2,500 acres or less. It is illuminating to note that Option A plans and sustained yield plans, that do not have an infinite life span, do not require stand characteristics by management unit.

The DEIR is a programmatic document. Subsequent timber harvest will require the preparation of a timber harvesting plan (THP), which will include an analysis of environmental impacts, and is subject to agency and public review. At that time, detailed timber inventory and growth information may be required by the reviewing agencies, to enable a viable review of the impacts assessment performed by the Department.

Response to Comment 33
Please see response to comment 32 above. The level of information required for any subsequent THP, and for the accompanying analysis of LTSY, will be quite detailed (see Title 14 CCR 1034 and 913.11).

Response to Comment 34
The primary purpose of timber inventory and growth information required for an NTMP is to enable the Department and the public to assess sustainability and compliance with the concept of maximum sustained production (MSP), which is demonstrated through compliance with the Forest Practice Rules (Title 14 CCR 913.11). In the case of this DEIR and management plan, the level of forest inventory information submitted is sufficient to enable an assessment of sustainability at the forest level.

Response to Comments 35-38
No rationale is provided for why a management unit level of detail is desirable. Such detail would only be beneficial if it were necessary for the analysis supporting the Management Plan and EIR. The Management Plan/DEIR is a forest-wide planning document, and there is therefore no reason to break down inventory information by management unit. The Management Plan/EIR is a landscape level analysis that relies less on traditional timber-oriented management units for planning, and more on desired forest structures and habitat at a landscape level. The classification of the vegetation for habitat analysis purposes has been updated since the DFMP was produced (see DEIR Map Figure K).

The EIR includes a project description and an assessment of impacts. The assessment of forest habitats is often closely associated with structural attributes such as average tree diameter, the presence of understory, canopy closure, and trees species present. The forest habitats present are described and depicted (DEIR page VII.6.6-2, Regional Extent of Wildlife Habitats, and Map Figures J and K). Timber volumes are generally computed in an effort to estimate harvest and growth potential, and are not normally necessary nor utilized for assessment of watershed and wildlife impacts. Indirectly, stand structure is projected in the habitat analysis.

Mr. Sternberg's comments appear to have been quoted out of context. The request for a highly detailed inventory picture by management unit must be seen in the context of an NTMP, where management units are relatively fixed, and a high degree of regulatory relief is traded for a highly prescriptive set of inventory information. The fact that it is required by the forest practice rules in NTMPs is irrelevant because of the different approval life span for NTMPs and the different approach taken in the documentation, review, and approval on individual THPs.

The DEIR/RDEIR and DFMP/ADFFMP report an appropriate level of inventory information to enable those that review the management plan and EIR to gain an understanding of the plans for future management, and to understand the analysis of environmental effects. The underlying forest inventory information is more than adequate to support the Management Plan/EIR analysis. The detailed forest inventory information, consisting of over 5,000 inventory plot records, a database, manuals, data analysis, and reports, was not included in these documents, but serves as a basis for both planning and analysis, and will continue to be utilized by the Department as management proceeds. The inventory is available for examination by the public upon request. Substantial quantities of this information have been provided to the commenter.

Response to Comment 39
See response 38 above. The Board disagrees with the opinion regarding the level of detail needed for an adequate cumulative environmental impacts analysis. The commenter does not define what he means by "adequate ecological management", however, the intent of the management plan and DEIR is to provide an assessment and plan for future management that complies with all legal mandates and prevents significant adverse cumulative effects.

Response to Comment 40
The DEIR includes an assessment of watershed effects at the sub-watershed level (Section VII.7 and 10, Section VIII, Cumulative Effects). Biological impacts are assessed at the forest and assessment area levels (sections VII.6.6 and VIII), partially due to the fact that wildlife populations are not confined to single watersheds or sub-watersheds. In addition, throughout the EIR and the

management plan, management planning and implementation processes are specified and described in consideration of potential impacts at the project level and project assessment area level.

Response to Comment 41
See responses 35, 36, and 38 above.

Response to Comment 42
Terrestrial habitats within JDSF are depicted in DEIR Tables VII.6.6.1 and VII.6.6.2, and on Map Figure K. These habitats conform to the California Wildlife Habitat Relationships System (CWHR), which was utilized in an analysis of potential impacts to terrestrial wildlife species. The basic structural components of each CWHR habitat type can be found in the CWHR manual (Mayer and Laudenslayer 1988). The JDSF inventory, combined with a delineation of unique vegetation polygons, served as a means to determine the CWHR habitat types. The potential impacts associated with timber harvesting plans will be assessed to a level of detail that is greater and more site-specific than can be done in this programmatic EIR. This constitutes an appropriate tiering of analysis.

Response to Comment 43
The assessment of watershed effects conformed generally to planning watersheds (see response 27 above). Habitats and home ranges for many terrestrial wildlife species do not conform to planning watershed boundaries, necessitating an assessment at a scale that often crosses planning watershed and ownership boundaries.

Response to Comment 44
Please see responses above.

Response to Comment 45
The analysis in the DEIR utilized information, to the extent known, on the existing conditions (e.g., CWHR habitat classifications), locations, and proposed management of the THPs identified in DEIR. This information was used in models that made projections of wildlife habitat and peak flow effects, for example. Baseline vegetation and habitat conditions, for example, are provided in Map Figure K and related tables found in DERI section VII.6.6.

Response to Comment 46
This is not an environmental issue. Management plans for JDSF have been prepared periodically since the 1950s. These plans have characterized the forest in varying ways, generally providing a brief description or numeric characterization of timber conditions within major watershed areas. However, the information was generally based upon the CFI plot system, which included approximately 141 individual plots. The basis of information reported at the watershed level was often based upon a very small number of plots, which tends to make the information of limited value on a statistical basis. For most of the past management plans, no environmental analysis was required, nor performed.

Two facts explain the seeming difference in format with past management plans: first, past management plans were developed before the widespread use of computers. Because working up estimates was laborious and expensive, the best way to disseminate inventory information was to include a selection of the most widely used tables and graphs in hard copy form in the management plan. With the widespread use of computers today, the full range of such reports can easily be produced at will from the inventory database, and there has been a gradual trend away from including large numbers of hard copy inventory reports in the management plan itself.

Second, the extensive menu of classic timber-centric inventory reports in past management plans are reflective of a much greater focus on forest products commodity production. As the focus has gradually changed to include a much greater emphasis on other forest values, such as wildlife habitat, these charts and tables have become less important parameters in the Management Plan.

Response to Comment 47
See response 46. The comment does not explain why the lack of timber resources tables of past management plans prevents informed decision-making. The Board is confident that the inventory information provided in this programmatic Management Plan/EIR, with its depth of related wildlife and habitat information, provides a valid basis for analysis and decision-making.

Response to Comment 48
The inventory used to support the ADFFMP and DEIR/RDEIR is current in the sense that it accurately captures the current resource conditions. It is approaching the end of its useful life span, but careful updates for growth and harvest have preserved its accuracy. The inventory was projected to the present by use of the growth program CRYPTOS. Using a simulation model for short-term updates of an inventory is an accepted industry practice. In addition, the CFI plot system has been measured on a periodic basis, producing an estimate of periodic annual growth and a check upon forest-wide inventory. The IFI plot system has been replaced by approximately 5,000 temporary plots, installed during 2005. In addition, the CFI plot system was remeasured during 2005. The results of both measurements are consistent with the projections.

Response to Comment 49
See response 48. In forestry, where trees can take over a century to grow to maturity, an inventory that is 16 years old can easily be considered current and provide accurate estimates, given careful updates for harvest and growth to the present. Three subsequent independent inventories, a CFI remeasurement in 1999, a CFI remeasurement in 2005 and an intensive forest inventory in 2005, all support the inventory used as a basis for the management plan/EIR.

Response to Comment 50
The IFI plot system that was initially installed in 1989 was not intended to be partially replaced on an annual basis. The partial replacement strategy was abandoned in favor of periodically installing a completely new inventory. Given JDSF's role as a research destination, there are compelling arguments for a complete replacement inventory strategy, as well as demonstrating the application of different inventory systems. A new inventory was successfully completed in 2005.

Response to Comment 51
A 16 year-old inventory, although nearing the end of its useful life span, is not outside of normal standards in forestry. Many different inventory systems are used throughout California. There are trade-offs in every mode of managing inventory systems. Stand-based inventories, systems with partial annual replacement, and systems with complete periodic replacement all have advantages and drawbacks associated with them. All continue to be used widely, and no one system is recognized as superior to all others. A few of the many considerations in selecting an inventory system includes management objectives, cost and the existence of other inventory systems such as a CFI. One point to note is that neighboring forest properties to JDSF have changed ownership frequently over the years. The landowners held up as an example are both working to install relatively new inventories, and do not have the background and historic record of inventory that exists at JDSF. The measurement intervals mentioned for these companies are plans for the future, not proven track records. With one or two exceptions, no other forest landowners in the State have the track record of data measurement over the number of years found at JDSF.

The inventory estimates utilized in the DFMP/ADFFMP and DEIR/RDEIR are accurate. The CFI plot system was measured in 1989, 1999, and 2005. The IFI system was installed in 1989 with partial plot replacement in 1997. The IFI system was projected forward by CRYPTOS, while taking both harvest and growth into account. The results of this projection compare favorably with more recent CFI and IFI inventory measurements. A set of 5,000 temporary inventory plots was installed in 2005, with inventory results comparing favorably with the projections of prior inventory efforts.

Response to Comment 52
The on-going inventory effort is discussed within the DEIR (page VII.6.3-4). The new inventory was started and the field work completed in 2005; however data processing and analysis were not

completed until well after completion of the DEIR. The 2005 forest resource inventory corroborates the results of the updated 1989 inventory used as a basis for this DEIR. As a research forest, JDSF constantly collects and updates resource information data. Resource inventories for large forested properties are in a constant state of update and refinement, while the analysis performed for the EIR incorporates the best readily available information. Recent inventory estimates remain consistent with prior estimates.

Response to Comment 53
This statement is essentially correct. Please see DEIR Appendix 7A, page 4, where the projection process is described. This is not an environmental issue.

Response to Comment 54
The 1997 replacement plots were put in as near the old deleted plots as possible to preserve the original sampling design of the 1989 inventory. The statistical usefulness of the inventory was retained.

Response to Comment 55-56
The available plot data is a matter of public record. The Department does not normally "publish" plot data. The 308 permanent plots were originally planned to augment the CFI plots but were not remeasured. The original CFI plots were measured in 1989, and provide detailed estimates of forest growth based on actual measurements of the same trees at two points in time.

The CFI system is current and viable, and continues to be measured on a periodic basis. Growth estimates have been produced every 5 years, based upon actual field measurements. The latest 2005 CFI supports the figures used in the management plan/EIR. See discussion of CFI above.

Response to Comment 57
See responses above. The commenter overlooks the fact that JDSF was a prime contributor of growth and yield data used in constructing the CRYPTOS growth model, which was used for the Management Plan/EIR analysis. The model is therefore in a very real sense calibrated to JDSF. The growth projections were validated against data collected in 1999 and 2005. Years of empirical experience with the growth model on JDSF has proven its reliability.

Response to Comment 58
It is recognized that estimates of timber inventory and growth extended over a 100-year period may have a lower level of reliability than current estimates. No one should expect CRYPTOS or any other growth model to give exact long-term projections. All growth models accumulate errors over time. Evidence from studies with cross-sectional data however, have shown that forestry growth models, when used correctly, can be surprisingly accurate even for long-term projections. Another factor to consider is that the 100-year projections used for sustainability analysis is primarily a look-ahead of the likely long-term steady-state consequences of continuing planned management for the next 10-20 years out over the lifetime of a stand of trees, and less a prediction of what will actually happen 100 years hence. Model consistency is therefore a consideration in addition to accuracy. The projections of inventory and yield in this Management Plan/EIR use the best available data and methods. The data used constitute some of the most detailed and accurate time series of data available. The Board believes that the inventory and growth estimates are accurate.

Response to Comment 59
The annual growth estimate, stated in the ADFFMP (Chapter 3, Sustained Yield Timber Production on JDSF), is based upon the difference between the two most recent successive CFI plot measurements, while taking mortality, ingrowth, and periodic harvest into account.

Response to Comment 60
The commenter states that it is incorrect to add harvest volume to calculated growth. He subsequently seems to utilize this procedure in his own analysis in comments 108-110. It is

appropriate to add harvest to net increase in volume between two points in time to arrive at a measure of growth. The growth was correctly calculated and reported.

Response to Comment 61
Past estimates of growth, primarily those made between 1959 and 1984, are not an environmental issue related to the EIR. The most recent estimate of inventory that the commenter apparently supports was made 22 years ago. As is shown later, the CFI estimates are internally consistent when the estimation equations are used correctly.

Response to Comment 62
The Board agrees with this statement.

Response to Comment 63
The DFMP does not propose an annual harvest of 39 million board feet. The ADFFMP, based on Alternative G proposes that annual harvest be between 20 and 25 million board feet per year (net scale) during the first decade. The RDEIR provides an estimate of LTSY that is over 50 million board feet/year at the end of 100 years (Alternative G). This estimate of long term sustained yield is constrained by operational limitations and other forms of mitigation. This is not intended to represent an estimate of total gross growth on the Forest. The modeling conducted in order to estimate LTSY predicts that an average annual harvest during the first decade is sustainable. Assuming that harvest and growth proceed as predicted in the model, this level of harvest will ultimately lead to a higher sustainable level of harvestable growth during the last decade of the planning period.

The difference between standing gross volume and net scaled volume can vary significantly for individual trees or stands, but estimates for the entire forest are less than 10 percent, depending upon the purpose being considered. It is normal practice to report expected harvest yields in net terms.

Response to Comment 64
See responses above. CAL FIRE has demonstrated that the estimates are backed up by objective data and reasonable assumptions. The growth estimate is in fact a confirmed, measured, actual figure.

Response to Comment 65
See comments 59 and 60. The growth figure is based neither on a computer growth projection, nor is it a major error in elementary algebra. The quoted passage was not the basis for the growth estimate. The DFMP growth figure of 65 million board feet was based on the difference between successive continuous forest inventories measured at two points in time, accounting for ingrowth and harvest. These methods can be found in many forest measurements textbooks.

Response to Comment 66
The CRYPTOS growth model that was used was developed with a significant amount of data from JDSF. See the response to comment 54, above. The growth model, as utilized by the Department, returns results that compare favorably with field measurements.

Response to Comment 67
The details of the calculations used to arrive at the growth estimate of 65 million board feet is standard methodology in forest inventory, and was therefore not described in the EIR. The commenter has been provided with all the CFI data for JDSF and is therefore in a position to validate the calculation.

It should be noted that the growth estimate, 65 million board feet, cannot be considered incredibly high. The level of growth achieved on JDSF is commonly observed throughout the region, but not often at the forest-wide level. This can be attributed to good growing sites, a high level of stocking, and an historically low rate of harvest relative to other regional ownerships.

Response to Comment 68
Statements from internal agency documents are quoted out of context. The Department, and other entities that address complex technical problems and issues, often communicate internally, and often produce hypothesis tests or preliminary analysis in many forms, and for many reasons. If anything, the document cited serves to demonstrate the value of free discussion of technical forestry issues among JDSF staff.

Response to Comment 69
The process of computing growth has been correctly applied. In a later comment (comment 108-110, table 5.3), the commenter uses the same methodology that he criticizes here. It is appropriate to add harvest to net increase in volume to arrive at a measure of growth. The growth was correctly calculated and reported by the Department.

Response to Comment 70
It is appropriate to add harvest to net increase in volume between two points in time to arrive at a measure of growth. See responses 60 and 69 above.

It is well known in the forestry profession and in the received literature that opening growing space through harvesting can increase the growth on the remaining trees.

Response to Comment 71
See responses to comment 60, 69 and 70 above. The concept is fully described and explained in the Forest Measurement literature.

Response to Comment 72
The derivation of estimates included in the DEIR has been described above. The results cited in the DEIR and management plan are calculated using standard practice in the forestry profession. The commenter has been in receipt of all CFI plot data for JDSF for many years. The CFI data is a matter of public record. All results can be reproduced using standard practice and methods in the forestry profession.

General response to section 5, comments 73-121
The commenter presents various trend analyses of historical published inventory results that purport to show unrealistically high growth rates between 1984 and 1989. He explores this result further by re-estimating 1984 and 1989 inventories, but the results are invalid due to mathematical errors and questionable assumptions. When the data are analyzed correctly with defensible assumptions, these historical data in fact show a consistent pattern of reasonable growth rates.

Response to Comment 73
See previous responses to this concern.

Response to Comment 74
The inventory and growth estimates are accurate. The projected timber harvest rate is well below the level of growth, resulting in an increasing timber inventory over time. (See DEIR Table VII.6.3.1)

Response to Comment 75
In the previous Final EIR, the remarks were refuted by substantial evidence from the record (see comment letter VT-241 and the response in the 2002 FEIR; these materials are reproduced in the FEIR in response to comment letter P-185 from Mr. Taylor). The responses remain valid.

Response to Comment 76
This concern is based upon an apparent misunderstanding of forest inventory and growth processes. As stated above, and within both the DEIR/RDEIR and the DFMP/ADFFMP, projected growth is much greater than projected harvest.

Response to Comment 77
Many potential reasons for a change in growth and inventory from 1984 and before to 1989 and after are evident. The inventory plot design changed in 1989. New volume equations were adopted. Forest structure changed as a result of growth over the 47-year life span of the CFI system. The reader should keep in mind that the CFI plot system and coincident analysis documentation were initiated 47 years ago, and science and professional knowledge has made major advances in this period. The 1989-2005 sequence of CFI data constitute a 16-year sequence of equally stable, self-consistent data. Many improvements have been made since 1959, and the Board is confident in the current methods.

Response to Comment 78
Comment noted. It should be noted that any set of forest inventory estimation equations are by definition self-consistent.

Response to Comment 79
The concern being expressed is unclear. The Department stands by the entire set of CFI remeasurements, ranging from 1959 through 2005. The data are valid. Estimation methods and assumptions used to develop forest inventory estimates have changed over the 47 years that the inventory system has been in place. When examined with a consistent set of methods and assumptions, the entire data set display a sequence of self-consistent and reasonable growth and yield estimates.

The conclusion that 1959-84 inventory estimates as estimated in past years are the true and accurate measure of growth and yield, simply because they are self-consistent, is inappropriate. The 1989 through 2005 estimates are also self-consistent, over a period of 16 years. In addition, improved estimation methods have been developed that, when applied to all the data, do not show a conflict between the 1984 and earlier versus the 1989 and later inventories.

Response to Comment 80
Comment noted.

Response to Comment 81
This concern is unclear. Actual inventories did not decline between 1969 and 1984. All the inventory data measured since 1959 are accurate and remain valid today. Estimation equations using these data change over time as scientific knowledge advances. It is reasonable to expect that over a period of 45 years, new and better estimation equations will be developed. The entire CFI sequence is self-consistent and is consistent with the IFI data used as a basis for the management plan and EIR.

Response to Comment 82
The statement is not an expression of environmental concern. The Department provided a rebuttal of the previous set of comments (see response to comment 75, above). A large number of these comments consisted of selective quotes taken out of context from historical Department documents. These remain unsubstantiated speculation.

Response to Comment 83
The statement is not an expression of environmental concern. The analyses previously presented by the commenter in 2002 were speculative, selective, and unsubstantiated.

Response to Comment 84
The Board finds that CAL FIRE's estimate of inventory and growth is accurate and was appropriately determined. The commenter received electronic copies of the raw data from the Department for years1959 to 1999, along with all the necessary documentation to replicate the Department's inventory estimates. The entire CFI sequence is self-consistent and is consistent with the IFI data used as a basis for the management plan and EIR.

Response to Comment 85
The Department has not published comparisons between actual harvest data and that predicted by the 1989 inventory. Such a comparison would not be statistically meaningful. Even with the large number of plots in the IFI, too small a number of plots would fall in individual harvest units to permit a meaningful inference. The methods used by the Department to predict harvest volumes within individual timber sale areas vary from the CFI system, involving a much more intensive local inventory. In addition, there are the potentially confounding localized effects of defect, breakage, mis-manufacture, clearing for road construction, clearing for cable corridors, and other related issues. Some of these factors can result in a difference between predicted and actual timber volume removal. Additionally, it is recognized that local tree dimension/tree volume relationships can be quite variable at the stand level.

Self-consistency is a feature of all forest inventory estimates by definition, and therefore has little utility as a validation measure. It is only one piece of the overall validation effort. Other validation aspects exist, such as check cruising, comparison against published data, and verification by authoritative growth models.

The Board agrees that inventory estimates are not hard facts. The Department's statement, however, was that inventory <u>data</u> are hard facts.

Response to Comment 86
The commenter states that “apparently, somewhere in the IFI process, errors of data processing or statistical analysis occurred, causing inventories to be overestimated.”

Based on earlier comments, this impression is apparently due the fact that the estimates of growth on JDSF increased noticeably between two inventory measurements, 1984 and 1989. The commenter feels the “old” 1959-1984 growth and yield estimates are accurate, and that the Department has overestimated the sustainable harvest volume in this Management Plan/EIR by using the “new” 1989-2005 growth and yield estimates. All the inventory data measured since 1959 are accurate and remain valid today. Estimation equations using these data change over time as scientific knowledge advances. It is reasonable to expect that over a period of 45 years, new and better estimation equations will be developed. Such new estimation equations necessarily occur on the scene at one point in time, and thus can be expected to provide estimates of total timber volume on the Forest that appear to be inconsistent with pre-existing equations. JDSF has revised their estimates numerous times over the 45-plus years history of the CFI system and will continue to do so as better methods are discovered and advances are made in developing better estimation equations. Differences in volume and growth estimates introduced by new and better estimation equation equations do not constitute evidence that the new equations are incorrect. Nor do they indicate that the old equations were “incorrect”; they constituted the best available information at the time and remain valid estimators for stands maintained at a constant stage of development. The differences simply reflect the fact that we develop better knowledge of forest growth and yield over time.

Response to Comment 87
The commenter alleges that because the Department never published the 1999 CFI inventory estimates, it is impossible for the public and decision-makers to know to what extent the 1999 CFI validates the 1989 IFI. The Department, and other similar entities, do not publish inventory estimates as stand-alone reports. Rather, they are used for decision support and research projects. These data are readily available however. The plot data is a matter of public record available to anyone. The Department has provided the commenter with a complete set of the CFI plot data in electronic form, including the 1999 remeasurement.

Response to Comment 88
The commenter alleges that the Department used different volume equation forms in the 1989 and 1999 CFI inventories. The same volume equations were used in 1989 and 1999. The Department previously provided the commenter with a reference to the appropriate volume equations used for both the 1989 and 1999 CFI.

An essential concept to recognize is that JDSF is a research forest. A large number of exploratory analyses and projects are undertaken that may or may not result in official estimating equations. Preliminary work products are not intended as an “official” Departmental analysis tool. See also the response to comment 103.

Response to Comment 89
The equations utilized to report the forest inventory are appropriate. The Department has utilized and tested various equations and coefficients in the past. See the response to comment 88. Self-consistency is not a reliable diagnostic of the accuracy of inventory and growth estimates in that all forest inventory and growth estimation equations are by definition self-consistent. The length of time over which a set of estimation equations are used are not a reliable diagnostic either, but merely a statement of a management situation.

Response to Comment 90
The word “they” in the Department's response refers not to the IFI and CFI inventory estimates, but to “the IFI and CFI”, meaning the inventory sampling design. The Department's 2002 response remains correct.

Response to Comment 91
In the short term, the fact that new estimates correspond to previous years' estimates does provide an element of validation to the new estimates. In the long term, the form of trees changes over time, as do relationships between tree diameter, tree height, tree form, and tree volume. Improvements in statistical methods inevitably occur over a period of 47 years. Eventually, forest growth and development will require revising old equations and introducing new ones. New equations are not introduced gradually but rather at one point in time, thus necessarily causing a break in the consistency of estimates over time (if the new equations did not cause a break in consistency, they would not be different from the old ones). In the natural world of constantly developing forest ecosystems, it would be inappropriate to force new inventory estimates to be "self-consistent" with old equations given the existence of new and better equations.

Response to Comment 92-93
As expected, the 1989 IFI and the 1989 CFI will give very similar results. The purported 40 percent to 50 percent difference between the IFI and CFI estimates does not exist. The Board agrees that the results of the 1989 CFI inventory and the 1989 IFI inventory are not statistically significantly different, at the 95 percent level of confidence. To extrapolate that finding to claim sampling error, alone or in combination with other factors, cannot be the source of differences between different inventories is unsupportable.

Response to Comment 94
Two parameters are being confused in the comment, as is evident in the interchangeable use of the constructs volume-height relations and volume-diameter ratio. The Department did not focus on either, but rather discussed the relationship between diameter and height as one of many possible reasons for changes in CFI inventory estimates over time. Changes in the relationship between tree height and tree diameter are well documented in the literature. The Department has performed an examination of these relationships and has introduced new revised volume equations that account for height as well as diameter. See also the response to comment 91.

Response to Comment 95
Some of the factors leading to varying inventory estimates have been explained above. The responses above have explained additional potential causes for inventory estimate variation over time. An increase in stand age and density are only two of the likely factors that have contributed to changes in the CFI inventory estimates over time.

Response to Comment 96
The CFI data from 1959 onward do not show that stand density steadily and significantly decreased throughout the period. The inventory is for the entire forest, not for individual stands or groups of stands. It is inappropriate to assume that the inventory is a representation of every stand within the Forest. The change in the relationship of tree height to tree diameter is not unidirectional at all levels and in all stands. A considerable degree of variance exists.

One must be cautious about how stand density is calculated and at what spatial scale. At the forest-wide level, a considerable amount of timber harvest has taken place since the forest was acquired from the Caspar Lumber Company in 1947. Many stands have been selectively harvested, but at variable rates of thinning. A substantial acreage of even-aged stands has not been harvested since the stands were regenerated. In still other areas, residual overstory trees have been removed, leaving behind developing stands of dense second growth forest. Even-aged harvest has resulted in dense young stands of third-growth forest in still other areas. Overall, however, much of the young forest on JDSF is slowly aging.

Response to Comment 97
The view expressed is not supported by the evidence. The response has been misrepresented.

Response to Comment 98
An objective examination of the data reveals that 95 percent confidence intervals around the two inventory estimates overlap, which means that sampling error could be one of several factors explaining the difference.

Response to Comment 99
The Department's reasoning relative to stand density is misrepresented. The Board refers to the source document referenced by the commenter.

The statement "each of the three inventories (1984, 1989, 1999) used a different estimating equation" is incorrect. The same volume equations, the "CRYPTOS volume equations", were used in 1999 and in 1989[1]. It is also incorrect to state that merely because a different volume equation was used at one point to calculate inventory results using the 1984 data, that the volume equation utilized is the best equation for the 1984 data. The CRYPTOS volume equations constitute the best available volume equations for all three measurement periods, the 1984, 1989 and 1999 data.

General response to Comments 100-112
It appears that the analysis provided by the commenter contains significant errors, all of which err in favor of the arguments made (it is not possible to fully evaluate the commenter's analyses since it does not provide a description of methods and assumptions). The difference between the two inventories is physically possible as a result of growth alone. An objective analysis of the data reveals that there is insufficient evidence to reject the hypothesis that the two inventories for 1984 and 1989 give the same results, at the 95 percent level of confidence.

The Board believes that approaching the analysis with the mindset that some of the equations and growth and yield estimates that have been used on JDSF during the 45-plus years of inventory efforts are incorrect, correct or inconsistent is inappropriate. The Board believes both the 1984 equations and growth and yield estimates (the old system) and the 1989 equations and growth and yield estimates (the new system) are accurate. The old system continues to provide accurate estimates over the range of conditions for which it was developed. The new system takes advantage of additional information, i.e. tree heights, to provide more flexible estimates over a wider range of conditions. The differences in estimates between the old and new systems do not represent an

[1] Wensel, L. C. and B. Krumland 1983. Volume and taper relationships for redwood, Douglas-fir and other conifers in California's north coast. Bulletin 1907, Division of Agricultural Sciences, University of California, Berkeley.

inconsistency between the two systems, but rather they are within the range of variation of what one might expect when introducing a new inventory design and a new set of estimation equations.

Given that both the old and new systems are valid, it is not instructive nor necessary to undertake a detailed study of the data to identify the factor(s) that caused the differences between the two estimation systems. The Department has identified a number of possible factors that could have caused growth and other structural changes, a change in inventory design, forest development, a change in volume and height equations, sampling error and possibly other unknown factors. The Board believes that any combination of these factors can explain any differences between the 1984 growth and yield estimates and 1989 and more recent growth and yield estimates.

Estimation equations change over time as scientific knowledge advances. It is reasonable to expect that over a period of 45-plus years, new and better estimation equations will be developed. Such new estimation equations necessarily occur on the scene at one point in time, and thus may appear to provide estimates of total timber volume on the Forest that are inconsistent with pre-existing equations.

By virtue of incorporating both diameter and height, the "new" estimation equations are preferable to the "old" equations. The "new" equations account for changes in diameter-height relationships with changes in, for example, tree age and stand density. This does not mean the old equations were wrong or inaccurate. They remain valid for the range of conditions for which they were developed.

Sixteen years of CFI repeat measurements and an intensive forest wide inventory in 2005 support the inventory estimates that were used as a basis for the management plan and EIR. The 1989-2005 inventories constitute the most accurate inventory and growth estimates for the Forest. All authoritative evidence in the received literature indicates that the inventory and growth estimates used in this management plan/EIR are reasonable[2].

Response to Comment 100
There are no "1999 estimating equations", as noted in earlier correspondence from the Department to the commenter[3]. By virtue of being a research forest, JDSF have investigated and used a plethora of different experimental volume and diameter-height equations. The set of equations incorrectly portrayed by the commenter as "the 1999 volume equations" were an intermediate work product and were never adopted as a standard for operational use. All inventories from 1989 onward have used the same volume equations, namely the CRYPTOS equations locally calibrated as per JDSF Newsletter 22 and with locally derived diameter-height equations, all of which were made available to the commenter.

Response to Comment 101
Complete documentation including all species codes were provided by the Department to the commenter along with electronic copies of all the inventory data. Cross-referencing species codes between 1984 and 1989 inventories is straightforward given the full name of the species associated with each code.

---

[2] Wensel, L. C., B. Krumland, and W.J. Meerschaert. 1987. CRYPTOS user's guide: the cooperative redwood yield project timber output simulator. Bulletin 1924, Agricultural Experiment Station, Divison of Agriculture and natural Resources, University of California, Berkeley.

Forty percent of the data used to develop the CRYPTOS growth model came from the CFI plots on JDSF and the neighboring Georgia-Pacific property (now Hawthorne Timber Company).

Lindquist, J.L. and M.N. Palley. 1963. Empirical yield tables for young-growth redwood. Bulletin 796, Agricultural Experiment Station,, Divison of Agricultural Sciences, University of California, Berkeley.

[3] Email from Helge Eng to Vince Taylor dated August 2, 2005.

Response to Comment 102
The nature of this comment is unclear. In addition, the commenter's calculations are in error. Forest-wide total volume estimates using the 1989 CFI (using what he refers to as the 1989 equations) are 10 to 15 percent greater than volume estimates arising from the 1984 CFI (using what the commenter refers to as the 1984 equations) depending on site index and species included, not 31.6 percent.

If the commenter refers to isolating the effect of the volume equations (i.e. calculating the 1984 CFI volume using the 1989 volume equations and the 1984 volume equations), the conclusion is not incorrect. The difference then is approximately five percent.

Response to Comment 103
There are no "1999 estimating equations", as noted in earlier correspondence to the commenter[4]. By virtue of being a research forest, JDSF has a plethora of different experimental volume and diameter-height equations. The set of equations incorrectly portrayed by the commenter as the 1999 volume equations were an intermediate work product and were never adopted for use. All inventories from 1989 onward have used the same volume equations, namely the CRYPTOS equations locally calibrated as per JDSF Newsletter 22 and with locally derived diameter-height equations, all of which were provided to the commenter by the Department.

Response to Comment 104
The old growth volume equations used in the inventory for this management plan/EIR, referred to by the commenter as the 1989 relations, were developed from old growth tree data on the Forest. It was a statistically better fit to the data than what the commenter refers to as the 1984 equations. In other words, it was a more accurate volume equation. The commenter's basis for asserting that the 1984 equations were a better alternative and that the 1989 equations were unreliable appears to be the observation that the 1989 equations produced higher volume estimates than the 1984 equations.

Response to Comment 105
The equations utilized to estimate the volume of old growth trees are valid representation of the old trees that exist within the Forest. The new equations were found to provide more accurate estimates of volume, based upon the population of old trees that remain. Similarly to younger trees, old trees are capable of altered form and growth patterns under various individual tree and stand conditions.

Response to Comment 106
While the commenter does not provide detail of the methods used, it appears that incorrect species codes may have been used on two occasions. The Department provided the correct species codes to the commenter.

Response to Comment 107
Using the current CFI database, the total volume estimate for 1984 CFI data (all species) using the 1984 equations is about 1,620 million board feet, depending on site estimates used.

Response to Comment 108-111
In comments 60, 64, 69, 70 and 71, the commenter states the opinion that the Department erred in calculating growth by adding harvest to net growth, yet correctly adds harvest to the difference in net growth within his own calculations.

There appear to be mathematical errors in the commenter's analysis. The commenter's 1989 estimated volume of 2.011 billion board feet is incorrect. Using the 1989 volume equations and the locally derived diameter-height equations, the correct estimate is 1.804 billion board feet, based upon the current CFI database provided to the commenter by the Department. The commenter chose not to document his methods and assumptions, but it appears likely that an error was made in applying species codes from 1984 to 1989 data.

[4] Email from Helge Eng to Vince Taylor dated August 2, 2005.

The harvest figures for 1985 through 1989 cited in Mr. Taylor's footnote 29 appear to have been added incorrectly. The five harvest figures, when summed, total 153 million board feet. There appears to be a second mathematical error in the footnote, since the correct total (153) appears to have been multiplied by a factor of 1.18 twice to arrive at the incorrect total of 214 million board feet. Further, it is inappropriate to apply a single factor to total net scaled annual harvest volume from multiple harvest sites in order to estimate total gross volume. These factors vary considerably across harvest sites and years, depending upon what type of timber is harvested, the form of the trees, and the nature of tree defect in various parts of the forest. The context of the noted personal communication between Mr. Taylor and forester Griffen is unknown. Further, it is common to report forest inventory in terms of net volume, not gross volume, especially when using the inventory to estimate timber yield.

Using an appropriate method for calculation of the 1989 CFI inventory volume (CRYPTOS volume equations and 1989 diameter-height equations, and including minor conifers and hardwoods), the results of the correct analysis, using the commenter's assumptions and methodology, should be as follows:

All numbers in millions of board feet.

	1984 Inventory	1989 Inventory	Change 1984-1989
All Trees	1,698	1,804	106
Harvest 1985-1989			154
			260

The estimated growth of 260 million board feet from 1984 to 1989 translates into 1,069 board feet per acre per year, well within the range of observed rates of growth in this area, and within the range of what was used in the management plan/EIR.

The commenter bases his assertion that the 1989 inventory estimate is biased on the fact that the 1959 to 1984 series of measurements provided what he feels are self-consistent estimates. The Board argues that the more recent series of measurements from 1989 to 2005 provide an equally self-consistent series of inventory and growth estimates. Given the advances in technical knowledge of volume estimation techniques since 1959, the Department feels the more recent series of data from 1989 to 2005 is preferable.

The 1989 inventory results are well within expectations. Errors were not made in the 1989 data collection and processing. The Board believes the commenter’s claims in comments 108-111 are not correct, in light of the mathematical errors made by the commenter and the results of the correct analysis above.

Response to Comment 112

There appear to be errors in the commenter's analysis (see above). The statement, “the IFI whole forest estimates exceed the most credible CFI estimates by nearly 50%”, is not supported (see response to comments 108-112 above). The Department’s database shows that the 1989 IFI estimate is bracketed within the range of inventory estimates that came before it and after it.

It is unclear which one of the set of numbers the commenter has produced is being represented as correct. The commenter here claims the 1989 IFI estimate exceeds the 1984 CFI estimate by nearly 50 percent, yet in comment 102 he claims the 1989 estimate was 31.6 percent greater than the 1984 estimate.

The inventory upon which the DFMP/EIR (and ADFFMP/RDEIR) is based is corroborated by the most recent data, the 1999 Continuous Forest Inventory, the 2005 Continuous Forest Inventory and the 2005 Intensive Forest Inventory.

The commenter confuses a perceived difference in volume estimates between the 1984 CFI and 1989 CFI inventories with the statistical concept of sampling error as discussed in the forest practice rules for sustained yield plans.

Response to Comment 113
This comment summarizes a conversation with Paul Ederer regarding his work on processing the 1989 inventory data. It should be noted that the report is interspersed with the commenter's editorial comments. For example, the statement, "the people doing the analysis knew that this was an impossibly great difference" is that of the commenter, not Mr. Ederer. The report of the conversation (attachment VT-7) and the newsletter article itself (VT-6) represent a relatively normal process of starting up the implementation of a new inventory design, new processing software and new estimation equations.

Response to Comment 114
The 1989 inventory estimates are well within reason; see responses to comments 100-112 above. The analyses reported in the newsletter article can be considered normal when starting up and implementing a new inventory design. Contrary to the commenter's claim, CAL FIRE has continuously gone back and maintained and reconciled the underlying data in their databases.

Response to Comment 115
The commenter suggests the CRYPTOS volume equations used on JDSF contribute to erroneously high volume estimates. The basis for his claim appears to be "some cursory analyses", presumably undertaken by himself.

Tree volume equations for the redwood region were developed by Dr. Bruce Krumland and Dr. Lee Wensel (Volume and Taper Relationships for Redwood, Douglas Fir and Other Conifers in California's North Coast, Bulletin 1907, University of California, printed 1983). These are also known as the CRYPTOS volume equations. They constitute the state of the art of volume equations for the area, including JDSF. These equations were derived from regional data, including data from JDSF. The authors recognized that there may be localized variances in tree volume relationships, so a calibration routine was created. Staff of JDSF conducted a local study and determined the local calibration that could be applied at the forest-wide level. This calibration factor has been appropriately derived and applied to the JDSF tree volume estimates.

In the absence of any real evidence beyond a vague reference to cursory analyses, the Board continues to believe the CRYPTOS volume equations are the best available estimation equations and rejects the suggestion they contribute to erroneously high volume estimates.

Response to Comment 116
It is not clear what the commenter views as a problem. Parameter estimates in all regression equations are subject to statistical error. This is normal. It is not clear how it follows that "there are almost certainly problems in the way these equations were applied".

Response to Comment 117
Deriving relationships between tree height and tree diameter is standard practice in the industry. The purpose of sampling is to keep the costs of estimating inventory at a reasonable level. Measuring the height of all trees within all plots would be prohibitively expensive.

Some individual tree characteristics are normally derived through the sampling process, where parameters are estimated based upon relationships observed in the field (e.g., height-diameter relationships). This approach has been an accepted methodology in sampling across a broad range of natural resources disciplines from agriculture to forestry, for many years. It is an area of active, ongoing statistics research. See also the response to comment 118 below.

Response to Comment 118
The methodology that the commenter feels is statistically questionable has been in common usage in sampling, not only in forestry but in almost any other discipline, for many years. See the discussion entitled Statistical Imputation below.

The belief that a local volume equation (volume is estimated directly from diameter without estimating height explicitly) is more accurate is not necessarily correct. The source of variation introduced into the regression equation from the actual variation in heights of trees on the ground does not disappear, it is merely made implicit and hidden in the overall variability that has to be explained by the regression equation. The trend in forestry research over at least the last 30 years has been away from local volume equations toward standard volume equations (both height and diameter are included as explanatory variables). The standard volume equations allow potentially more accurate estimation of volume because more sources of variation can be isolated and explained separately.

Statistical Imputation

Forest inventories are designed to provide unbiased and efficient estimates of resource parameters. Designs must consider the time spent at each plot, travel time, and variability of the parameters. Efficiencies may be gained by identifying variables that are correlated where one is expensive to measure and the other inexpensive. The relationship between these variables may be exploited to measure only a subset of the expensive variable. This approach has its foundation in both the statistical and forest biometrics literature, which are discussed below.

This discussion follows from Little and Rubin (2002). Single imputation refers to filling-in or imputing a missing value from information gained from the portion of the dataset where no missing values occur and/or from an outside source. Approaches to imputation are generally classed as either explicit or implicit modeling. The explicit model is based on a predictive distribution based on a formal statistical model with explicit assumptions. The implicit model focuses on an algorithm, which implies an underlying model.

Explicit modeling methods include mean imputation, regression imputation, and stochastic regression imputation. Implicit modeling methods include hot deck imputation, substitution, cold deck imputation, and composite methods. The implicit method names referring to decks derive from their origins at the US Census Bureau using card readers. The most common methods utilized in forest inventory analyses are the explicit methods of regression and stochastic regression imputation (Biging et al., 1994; Scheffield and Schweitzer, 2002).

There are a number of standard forestry methods that take advantage of double sampling techniques whereby the inexpensive variable is used to estimate the expensive variable. The first example is volume basal area ratios (VBAR), where a subset of trees is measured completely, ratios determined, and applied to the diameter only measured trees (Shiver and Borders, 1996). Multi-staged sampling may also be employed, particularly for large ownerships. Primary sampling units (e.g. stands) may be selected completely at random or with probability related to some parameter measured from say remotely sensed data. Correlations between remote sensing and ground based estimates (e.g. volume) allow efficient estimates to be made by imputing for primary sampling units where ground measurements were not made. Finally, height-diameter curves allow heights to be imputed from the relatively easy to measure diameters (Husch et al., 1993).

In summary, the use of efficient statistical approaches incorporating imputation techniques is commonplace in forestry applications and scientific research in general.

Literature Cited

Biging, G.S., Robards, T., Turnblom, E.C. and Van Deusen, P.C., 1994. The predictive models and procedures used in the forest stand generator (STAG). Hilgardia, 61(1): 36.

Husch, B., Miller, C.I. and Beers, T.W., 1993. Forest Mensuration. Krieger Publishing Company, Malabar, Florida.

Little, R.J.A. and Rubin, D.B., 2002. Statistical analysis with missing data. Wiley series in probability and statistics. John Wiley & Sons, Hoboken, NJ.

Scheffield, R.M. and Schweitzer, C.J., 2002. Modeling missing remeasurement tree heights in forest inventory data, Fourth annual forest inventory and analysis symposium. USDA Forest Service, pp. 181-186.

Schreuder, H.T., Gregoire, T.G. and Wood, G.B., 1993. Sampling methods for multiresource forest inventory. John Wiley & Sons.

Shiver, B.D. and Borders, B.E., 1996. Sampling techniques for forest resource inventory. John Wiley & Sons.

Response to Comment 119
The comment's concern appears to be that a perceived wide variability in volume estimates resulting from the use of different diameter-height equations at different points in time casts doubts on the design and conduct of the estimation procedure, and a concern the diameter-height equations are not stable and solid.

First, the variability observed by the commenter includes the confounding effect of growth in addition to any possible effects of different height-diameter equations. Second, the variability estimates calculated by the commenter are incorrect. The correct figures are: a 10 to 15 percent increase between 1984 and 1989 (depending on site estimates used in the 1984 equations), and a 14 percent increase between 1989 and 1999. These figures give little cause for concern about excessive variability. Finally, the stability of the equations must be evaluated over a range of data for each equation separately. It makes little sense to compare the different equations. A perceived lack of stability in the equations could in fact be a reflection of real changes in the diameter-height relationship on the ground.

Response to Comment 120
The diameter-height equations remain unbiased uniformly minimum variance estimators, that is they produce an accurate estimate of the real heights. The inclusion of site as a variable is an advantage if there is some reason to stratify height estimates by site class. This was not the case on JDSF. In addition, recent research suggests that site can be surprisingly variable over the landscape and is therefore not as reliable a stratification tool or explanatory variable as previously thought.

The commenter's estimate of the 1984 CFI volume estimate using 1984 equations has been shown to be incorrect (see comment 107). The cursory analysis of growth from 1984 to 1989 using the 1984 equations is also incorrect.

Response to Comment 121
Selective quotes from an interview with Mr. Ederer with the commenter's editorial comments, do not provide a convincing argument. JDSF Newsletter article #46 does not describe any insuperable problems in processing the 1989 inventory data, nor does it in any way imply that errors were almost certain. The commenter appears to argue that the 80286 computers used to process the 1989 CFI and IFI data at the time constituted such rudimentary computing facilities as to virtually guarantee errors. The implied correlation between computing power and potential for error in data processing seems speculative.

Response to Comment 122
The term “unapproved” does not mean that there is in some way a deficiency in or a problem with, the JDSF Option A plan. It simply means the Option A plan has not yet been approved by the regulatory authority. The Option A plan review process has been halted at the request of the Department until the JDSF management plan is approved.

The Department has performed an analysis of long term sustained yield (LTSY) resulting from Alternative G, and a revised Option A plan is being drafted to reflect the ADFFMP that is based on Alternative G.

Response to Comment 123
The inventory estimate utilized in the computation of LTSY is accurate, and the projected level of harvest during the initial decade of the planning period is a conservative estimate that is well below the current level of growth. The beginning inventory of 2.09 billion board feet is accurate and is supported by all the three forest inventories that have been installed after it.

Response to Comment 124
The Board believes the most credible estimates of current and expected future growth is contained in this Management Plan/EIR. The estimates are developed using current data and best available models and equations. It is noteworthy that actual growth estimates from the CFI plots corroborate the CRYPTOS model projections in the Management Plan/EIR. The 1999 and 2005 inventory re-measurements corroborate the inventory estimates used in the Management Plan/EIR.

Response to Comment 125
The commenter appears to suggest that the use of unexplained “adjustments" to forest growth and allowable harvest are the preferred sustainability analysis. The Board prefers to base their determination of the LTSY on the Department’s objective and rigorous analysis using the best available science, and with exhaustive day-lighting of all methods and assumptions. The proposed level of harvest during the next decade is well below the level of growth, which will help facilitate the growth predicted in 100 years.

Response to Comment 126
The commenter refers to an analysis he has ostensibly performed, but provides no further details. Consequently it is impossible for the Board to make any judgment of the validity of his methods or results. The Department's Option A plan considers 300,000-plus variables. It is a state-of-the-art GIS-based planning effort that fully accounts for all of the major sources of variation and provides a robust and accurate estimate of sustainable harvest levels on the Forest. See also the response to comment 125 above.

Response to Comment 127
The Board has considered alternatives that include removal of the Woodlands area from JDSF and management of the Woodlands STA area as a no harvest area (Alternative E) or for transfer to the Department of Parks and Recreation (Alternative D) preserve (see DEIR Table VI.1). Areas that are removed from JDSF are not included in any estimate of LTSY or allowable harvest.

Response to Comment 128
The harvest of timber is not prohibited within the Woodlands area that was deeded to California by the Federal Government. Timber harvest within the Woodlands Special Treatment Area is a use approved by the Federal government in 1947, and was also recognized by the Legislature (Division 5, Chapter 8, PRC 5829). The Management Plan does however incorporate strictly selection or late seral forest development harvests in the Woodlands Special Treatment Area, in recognition over public concerns over harvesting here.

Response to Comment 129
The Federal Government determined that the harvest of timber falls within the meaning of "conservation purposes" and is an appropriate use of the area. All areas of the Woodlands Special Treatment Area are coincidentally available for recreational uses, and other uses consistent with those of parks. See the response to comment 128 above.

Response to Comment 130
This is not an environmental issue. Litigation may occur at any time, and with regard to virtually all aspects of management. This is a speculative matter.

P185

Dharma Cloud Foundation
PO Box 1066
Mendocino, CA 95460

February 24, 2006

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460
Fax: (916) 653-0989

RECEIVED BY
FEB 27 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Subject: Jackson State Forest Draft EIR – Part 1

Dear Mr. Gentry:

Enclosed are:

1. A copy of the 2002 Final EIR for JDSF
2. A copy of my comments on the 2002 Draft EIR for JDSF

I am submitting these as the first part of my comments on the current Draft EIR for JDSF. Please collate these with other comments your receive from me. All my submissions should be considered as a whole.

Sincerely,

Vince Taylor

Vince Taylor

Tel: 707 937-3001 Fax: 707 93-73001 vtaylor@mcn.org
Web: www.dharmacloud.com

Mailed Letter P-185

The commenter has resubmitted comments that he made on the 2002 DEIR for the May 2002, Draft Forest Management Plan. These comments have limited relevance to the 2005 DEIR, which is substantially revised from the 2002 DEIR. The most relevant responses to the comments on the 2002 DEIR are the ones that were provided in the 2002 Final EIR. These are reproduced here. The 2002 FEIR submitted is hereby incorporated by reference.

VT-241

Campaign to Restore Jackson State Redwood Forest
100 Manzanita Street
P.O. Box 1789
Fort Bragg, CA 95437

JUL 1 8 2002

July 18, 2002

Chris Rowney, Deputy Chief for State Forests
California Department of Forestry
1416 9th Street
PO Box 944246
Sacramento, CA 94244

Dear Mr. Rowney:

Accompanying this letter are my comments and supporting exhibits on the Draft JDSF Management Plan and Draft EIR for that plan.

Please enter my comments and supporting exhibits into the official record of the development of the Draft JDSF Management Plan and CEQA mandated review.

Sincerely,

Vince Taylor

Vince Taylor, Ph.D.
Executive Director

Tel: 707 964-5800 Fax: 707 964-6202 campaign@jacksonforest.com www.jackson

Comments on the Draft Management Plan and Draft Environmental Impact Report for Jackson Demonstration State Forest

Vince Taylor

July 18, 2002

Campaign to Restore Jackson State Redwood Forest
PO Box 1789
Fort Bragg, CA 95437
www.jacksonforest.com

CURRICULUM VITAE

James R. Strittholt, Ph.D.

Office:
260 SW Madison Ave., Suite 106
Corvallis, OR 97333
Phone: (541) 757-0687, FAX (541) 752-0185
Email: stritt@consbio.org

Home:
1130 NW Walnut Blvd.
Corvallis, OR 97330
Phone: (541) 752-1337

Personal

Born May 14, 1956, Cincinnati, Ohio (citizen of U.S.A.)
Married, three children

Education:

1994 **Ph.D. Conservation Biology-Landscape Ecology** from The Ohio State University, Columbus, OH
Dissertation: "*A Regional Nature Reserve Design Using Geographic Information Systems for the Edge of Appalachia, Adams County, Ohio*"

1985 **M.S. Zoology** from Miami University, Oxford, OH
Thesis: "*Population genetics of yellow perch in Lake Erie and selected impoundments*"

1980 **B.S. Botany, B.A. Zoology, and Secondary Education Certification** from Miami University, Oxford, OH

Professional Experience:

August 1997-present. **President and Executive Director of the Conservation Biology Institute.** Corvallis OR http://www.consbio.org

January 1995-2000. **Founder and President of Earth Design Consultants, Inc.** Corvallis, OR

1994-1995. **Ecologist for North American Wilderness Recovery, Inc.** Portland, OR Responsible for scientific research and technical advising for conservation planning.

1992-1993. **The Ohio State University Presidential Fellow.** Columbus, Ohio
Responsibilities focused on research in conservation biology.

1989-1992. **Graduate Researcher: Center for Mapping, The Ohio State University.** Columbus, Ohio
Responsibilities included grant proposal writing, research project liaison, computer mapping and educational materials production.

1987-1989. **High School Science Teacher, Sycamore High School.** Cincinnati, Ohio
Courses taught included Biology I, Human Anatomy & Physiology, and Chemistry.

2 Estimates of Inventories

2.1 Failure to Provide Information Needed

In the areas of forest inventory, timber growth, and allowable cut, the DFMP fails completely to provide the information needed for informed decisionmaking and public participation.

Estimates of inventories and forest growth are the foundation upon which the DFMP rests. Conclusions of the plan about the impacts of proposed logging plans on forest health and sustainability depend critically upon the estimates of inventory and growth. Decisionmakers can have only as much confidence in the environmental conclusions of the DFMP as they can have in the accuracy of the forest inventory and growth estimates presented to them.

The inventory and growth data presented in the DFMP and DEIR are erroneous, seriously misleading, and wholly inadequate in detail and organization.

The importance of these data are so great and deficiencies in presentation and analysis so great that the DEIR fails to meet the minimum obligations of CEQA to provide a basis for informed decisionmaking and public participation in the development of the Management Plan.

2.1.1 Inadequate Data

At the most basic level, the DFMP and DEIR fail to provide the inventory data needed for informed decisionmaking and public participation. Changes need to be made in the presentation of inventory information in the Final Draft.

2 Every previous Management Plan, going all the way back to 1964, has presented tables and charts showing inventory estimates (volume and growth) and trends by forest compartment and tree type, distribution of acreage by age-class of trees, stems per acre for each diameter class, amount of inventory in each diameter class, inventory of trees by species, sawtimber growth by merchantability class and diameter class. The DFMP does not present any of these charts and tables, losing the valuable time-series of information and making it impossible for the reader to determine trends in the composition and totals of the forest inventory.

Further, because the new inventory system has about 2500 plots, no one can make any sense out unaggregated plot data. Yet, the only table of inventory presented in the DFMP (Table A5-1, Appendix 5) simply lists the 1997 (sic) inventory data for hundreds upon hundreds of forest areas, identified only by vegetation type and site class.[1] No key is given for the vegetation type, nor are the rows identified by geographical area or watershed. The data are not aggregated into the planning units used in previous management plans and compared to previous results; thus there would be no possibility of determining changes in forest inventory within watersheds even if the data were reliable. To create understanding of the results, data for the individual plots need to be aggregated in various ways and related to the geography and harvesting histories in the forest.

2.2 Probable Serious Errors in Inventory Estimates

2.2.1 New Inventory System Not Accurate and Reliable

There is strong evidence that the new inventory system substantially overestimates the true inventory of Jackson State Forest. An accurate, reliable inventory is absolutely crucial to development of appropriate harvest plans. The new inventory system fails to meet this requirement. Before an acceptable management plan can be developed, the inventory system needs to be corrected and empirically validated.

2.2.2 Failure of CDF to Provide Evidence and Analysis

3 In 1998, I presented to CDF substantial evidence that their recent estimates of forest inventory and growth were very much greater than the true values.[2] CDF's reply to my evidence was not a convincing rebuttal.[3] At the very least, the evidence presented raised serious questions about the accuracy of the estimates. More recently, I have obtained internal documents from JDSF that 1) support the conclusion that the current inventory system is substantially overestimating inventory and growth, and 2) raise serious questions about the validity of the estimates produced by the current inventory system.[4]

CDF did not present any of this information in the DFMP or DEIR. Further, CDF had the data and capacity to perform additional analyses to resolve uncertainties and provide answers to questions about the accuracy of recent inventory estimates. Its failure to do so and to make the data and analyses available to the decisionmakers and the public is an unacceptable failing of the DFMP and DEIR.

To support the assertion that CDF has failed to provide information and analysis essential to informed decisionmaking and public participation, I have included a sampling of such information as exhibits attached to my comments. In following sections, I discuss and perform limited analyses of this information. Given my limited access to data and resources, the presentation here is indicative but not comprehensive. Much more could and should have been done by CDF before publishing the DFMP.

2.2.3 How Can the New Estimates Be Reconciled With the Old?

4 JDSF installed a new inventory system (IFI or Intensive Forest Inventory system) in 1989-90 to replace the former CFI (Continuous Forest Inventory) system. The new system estimated 1990 inventories were nearly 50% higher than the 1984 CFI estimate. Its estimate of forest growth was 34 percent greater. Since 1990, all estimates of inventory and growth have been very substantially higher than those produced by the CFI system (and keep growing larger).

5 The estimates of inventory and growth on which the DFMP is based are enormously higher than the corresponding estimates made over a 25-year period by the previous inventory system. For example, the DFMP states, "...the most reliable evidence of forest growth on JDSF. ... [produced an] estimate of annual growth of approximately 65 million board feet, or approximately 1300 board feet per acre per year." These figures are twice as large as those produced by the old (CFI) system in 1984, the last year it was used. The 1984 estimate of growth was 655 board feet per acre per year.[5]

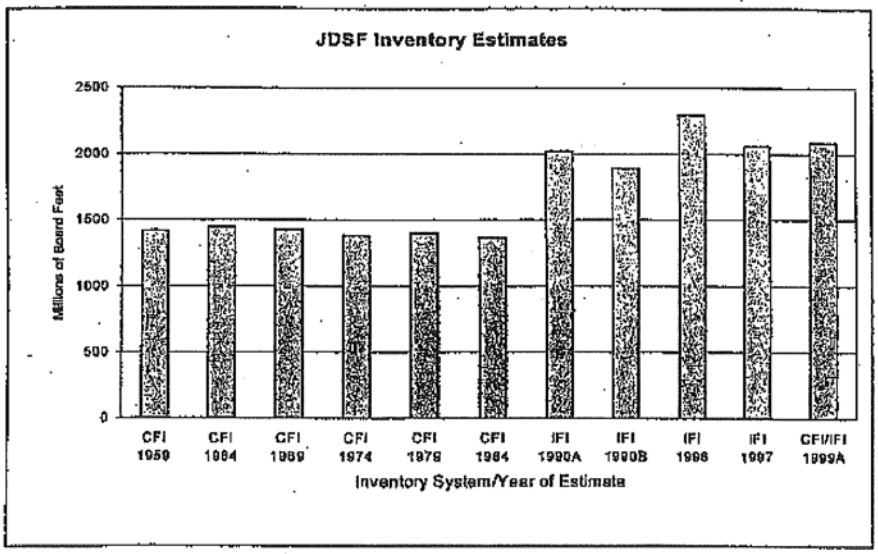
5 The fundamental question, which is not addressed by the DFMP or the DEIR, is, "How can the vastly higher recent estimates of forest inventory and growth be reconciled with the much lower, stable estimates that were produced over 25 years by the previous inventory system?" The new estimates are so much higher than the old stable ones, from 33 to 100 percent higher, as to raise an immediate doubt about their validity.

2.2.4 CFI Estimates Were Self-Consistent

As Figure 1 shows, during the 25-year period in which the former (CFI) inventory system was in place (1959-- 84), the measured inventory was about the same at the end as at the beginning[6]. During this same period, JDSF policy was *always* to attempt to cut all incremental growth. If this policy had exactly succeeded, inventories would have remained exactly constant. Thus, the growth, harvest, and inventory numbers were generally *self-consistent*.

If anything, the CFI inventory system appears to have overestimated growth in the last twenty years, because inventories declined by 78 million board feet between 1964 and 1984. This decline of almost 4 million board feet per year would not have occurred if the estimated growth, which determined harvest levels, had not been higher than actual growth.

Figure 2-1



2.3 Are the New Estimates Credible?

Various estimates of inventory and growth have been made with the new (IFI) inventory system since it was installed in 1989-90. A number of the inventory estimates are plotted in Figure 1.

The first inventory estimate with the new system was for 1990. It is sharply higher that the previous estimate. Harvest levels from 1984 to 1990 were set at the estimated growth for that period, as was the long-standing JDSF policy. Thus at most a minor part of the estimated increase of 48 percent between 1984 and 1990 could possibly reflect actual forest growth. Rather, the higher estimated inventory is a product of the new inventory system.

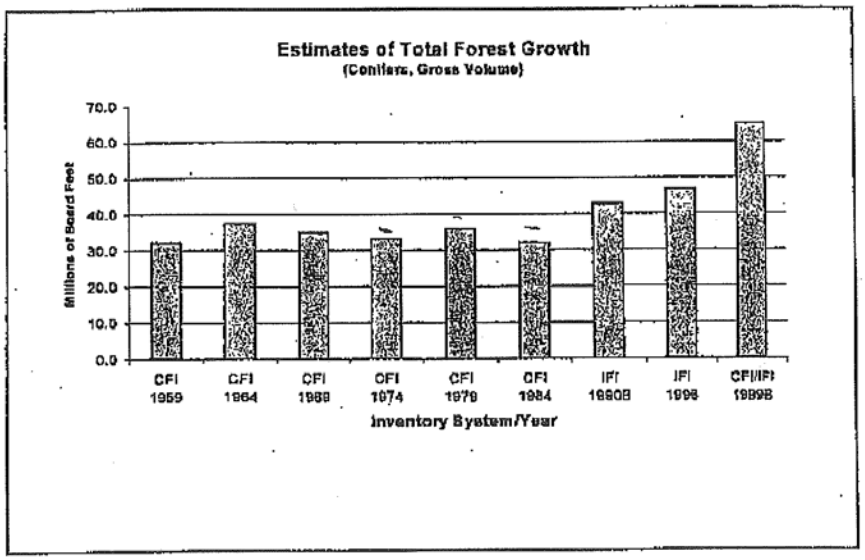
5

If the new system estimates are accurate, the old system produced substantial underestimates of the true inventory. Is this credible? To answer this, one needs to look at forest growth and harvests, because these are the determinants of changes in forest inventories.

2.3.1 Forest Growth Estimates

Figure 2 shows various estimates of forest growth. As was true for inventory estimates, the growth estimates of the new system are also much higher than those of the old system. Are the higher growth rates estimated by the new system consistent with the trends of inventories over time? The answer is, "No."

Figure 2-2



2.3.2 Simulated Inventory Projections

The inconsistency is seen most dramatically by assuming the DFMP estimate of forest growth of 65 million board feet per year (before harvests) is accurate and that this has been the real rate of growth since 1959, rather than the much lower rates estimated by the old inventory system. Estimated inventory growth during any given period equals forest growth (65 million board feet per year) minus actual harvests.

Figure 2-3

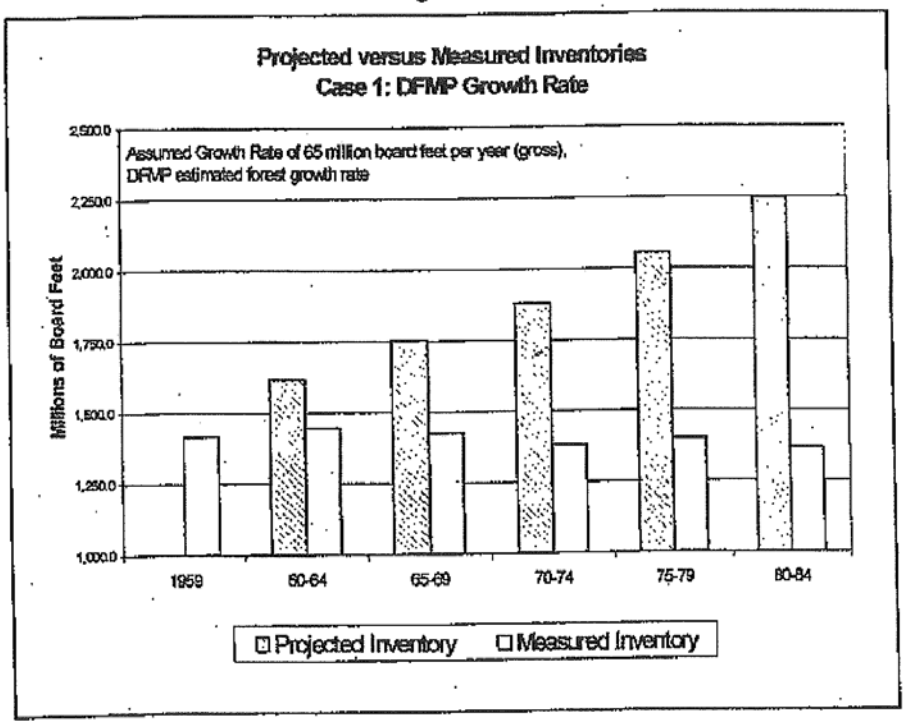


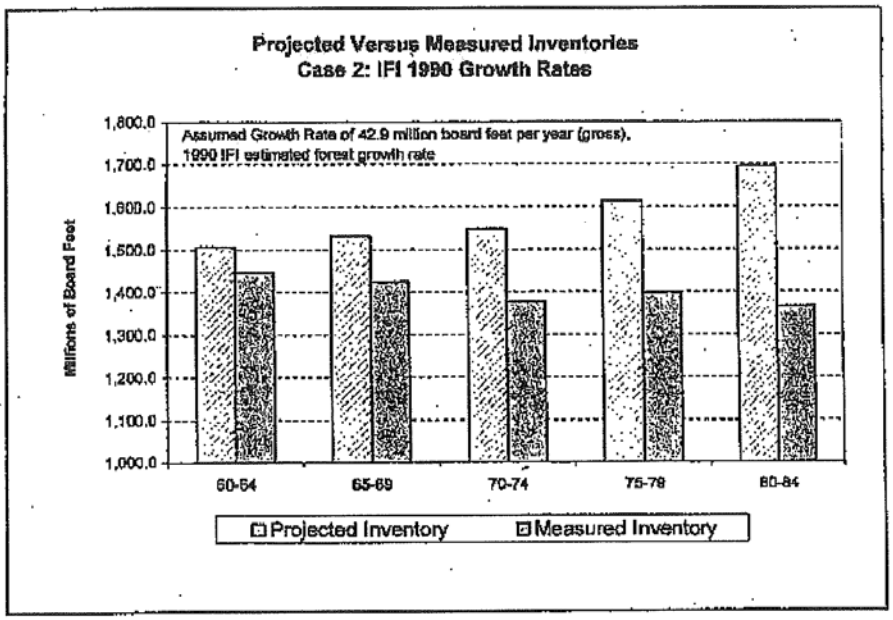
Figure 3 shows the projected inventories assuming the DFMP growth rate applied from 1959 through 1984. Projected inventories increase from 1417 in 1959 to 2248 in 1984, an increase of 831 million board feet. During this same period the measured inventories *decreased* by 52 million board feet versus those measured by the CFI inventory system.

It is inconceivable that a consistently applied inventory measurement system, applied to the same plots for 25 years, could show a decrease in inventories if inventories were actually increasing as projected in Figure 3. By the end of the period, the CFI system would be underestimating the "true" inventory by forty percent! This is just not credible.

Even the growth rate derived from the 1990 IFI inventory (42.9 million board feet per year) implies significant inventory growth between 1954 and 1984, as shown in Figure 4.

Projected inventories still grow by 267 million board feet while measured inventories were decreasing by 51 million board feet.

Figure 2-4



2.3.3 Fundamental Difficulty in Justifying Higher Growth Rates

The decline of inventories between 1959 and 1984 presents a fundamental hurdle that assertions of higher growth must overcome. This is a difficult hurdle, because even if actual inventories were higher, and the CFI levels needed to be adjusted upward to correct this bias, measured inventories would still have declined. Each measured inventory would be adjusted upward by the correction factor, so there would be no change in the pattern of decline.

The only way that true inventories could have increased while measured inventories declined would be if the measurement error of the system increased over time. For example, if the system were accurate in 1959 but underestimated inventories by 330 million board feet in 1984, the 1990 IFI growth rate could be supported. But, what could account for such a large growth in underestimation over the period? And how could it completely miss measuring the much higher rate of growth?

2.3.4 The CDF Argument for Increasing Underestimation Fails Empirically

In attempting to justify the higher growth rates, CDF came up with an ingenious explanation that could, theoretically, account for an increasing error in the old system over time. CDF's argument is, in summary:[7]

1. The CFI system estimated tree volume solely by measuring tree diameters, using relations between tree diameter and volume developed empirically at the start of the system (late 1950's).
2. If the average tree height for a given diameter increased over time, the CFI system would not capture this height increase and, therefore, would increasingly over time underestimate the true tree volume.
3. Tree heights for a given diameter will be greater in stands of greater tree density (more stems and/or volume per acre), because in denser stands, trees will put on more height growth than diameter growth.
4. Finally, CDF conjectures that forest stands in the west and central parts of the forest were growing denser. "The likely result is that as the young growth stands grew older and denser during this forty year period with an increasing amount of inter-tree competition, diameter growth decreased relatively disproportionate to height growth, changing the relationship of the diameter-height ratio of individual trees."

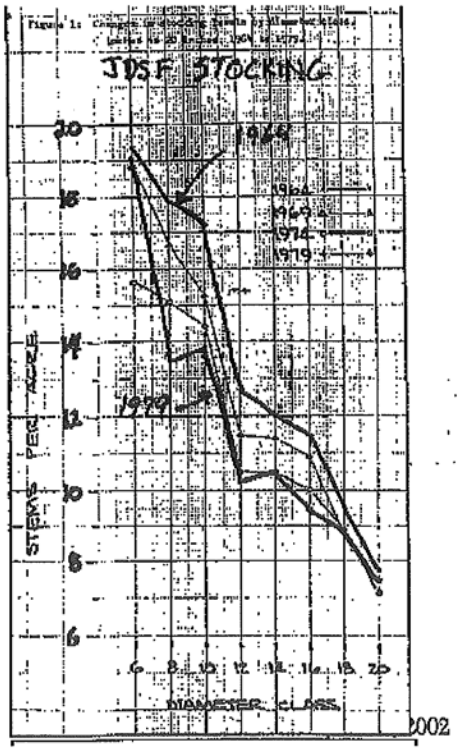
Although the first three points may be a correct *theoretical* analysis, its application to JDSF depends upon the *empirical* conjecture in point 4. This conjecture is refuted by JDSF's inventory data. Measured tree density increased somewhat between 1959 and 1964, but **from 1964 through at least 1979, stand density in JDSF was constantly diminishing.**

6

The decrease in density is striking for trees of DBH (diameter at breast height) less than or equal to 20 inches (Figure 5): For every tree-diameter class, there were fewer trees per acre in 1979 than in 1964. The differences are not so dramatic for larger tree diameters, but careful inspection of the original of Figure 6 shows that in 1964 there were at least as many trees in every size-class below 44 inches as there were in 1979. Note: JDSF has never published the results of its 1984 CFI inventory, but since the measured inventory declined significantly between 1979 and 1984, almost certainly stand density decreased further in that period.

When empirical data are applied to the CDF theory, it works in the opposite direction that CDF conjectured. To the extent that stand-density changes were affecting the accuracy of CFI measurements, they should have caused a growing overestimation of inventory, that

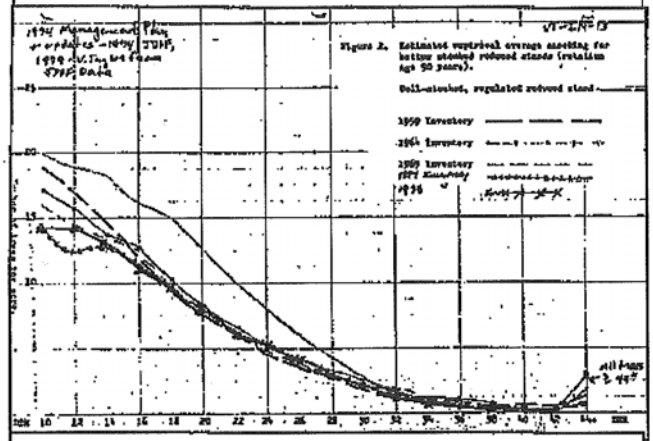
Figure 2-5



Vince Taylor

2002

Figure 2-6



Source: VT-IN-13

is, true inventories would be increasingly smaller than those measured.

Taking into account changes in stand density reinforces a conclusion that true growth of the forest has been equal to or less than the CFI growth estimates.

2.3.5 Growing Overestimation of CFI Estimates Consistent with Data

A growing overestimation of inventory is consistent with the downward trend of measured inventories between 1964 and 1984, when the forest policy was to cut all measured incremental growth. Estimated growth was determined by the period differences in measured inventories. If inventories were increasingly overestimated, so was growth; thus harvest levels would be set higher than true growth, and this would cause true inventories to decrease.

2.3.6 Forest Manger Concerned that Growth was Overestimated

Additional evidence that the CFI system has overestimated growth is a 1976 letter from J. E. Sindel, Manager of JDSF, to the Deputy State Forester, quoted here in part:[8]

> After reviewing the 1974 CFI information and comparing growth figures with those of 1969, we find a decrease in average annual growth. This, we believe, is due to increased cutting in our second growth stands.
>
> With this in mind we believe our current annual cut should be held to about 26 million for the next few years. Our reasons are as follows:

1. Continued cutting of 28 to 30 million feet would decrease out growing stock to an even lower level resulting in a continued decrease in average annual growth....

The 1969 Management Plan was based on the 1964 CFI inventory. Forest growth (net) was estimated to be 34.9 million board feet, and the allowable annual cut was set to this amount. Actual reported harvests from 1970-74 averaged 31.8 million board feet per year. Between 1969 and 1974, the measured inventory decreased from 1464 to 1417 and estimated forest growth (net, all species) from 30.3 to 29.7 million board feet.

The 1974 Management Plan set the allowable cut at 30 million board feet (all species), based on 1969 inventory data. Even though the estimated 1974 growth was not much less (29.7 million board feet), the Forest staff evidently felt that actual growth was less than the estimate, as the letter quoted above states the staff's belief that cutting 28-30 million board feet per year would "decrease our growing stock to an even lower level."

2.3.7 The New Empirical Relations between Diameter and Volume

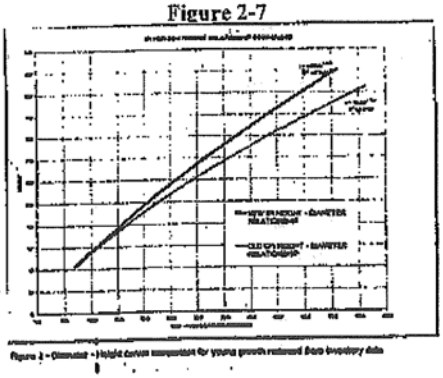
6

In 1984, JDSF undertook an empirical ("Fall and Buck") study to update the relationship between tree diameter and volume. The intent was to incorporate the revised estimation parameters in the CFI system and to use them in estimating timber yields of Timber Harvest Plans.

These new diameter volume relations support the view that the CFI system underestimated inventories, but the magnitude of the implied underestimate is small, perhaps 10%.

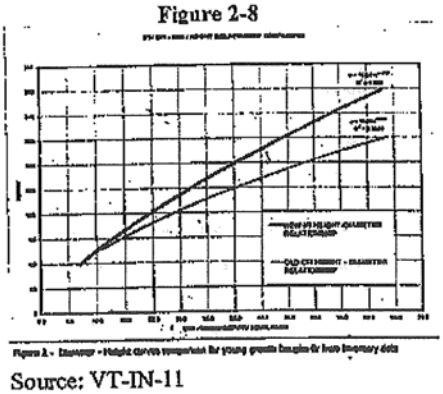
This estimate is derived as follows. A comparison between the new and old relations was published by CDF.[9] Two figures are provided, one for redwood and one for Douglas Fir, showing volumes as a function of diameter.

Figure 2-7



Source: VT-IN-11

Figure 2-8



Source: VT-IN-11

In the range where most merchantable trees lie (12' to 30" diameter), the new volumes appear to average about 7% higher for redwood and 15% higher for Douglas Fir. As

shown in Table 2-1, these differences translate into an average increase in inventory estimate due to the new equations of approximately 10%.

Table 2-A

Effect of New Volume Equations on Inventory Estimates

Type of Tree	Percent of Merchantable Timber (Approximate)	New Equation Volume Relative to Old	Adjusted Forest Volume (Percent) (Column 2 *times* Column 3)
Redwood	67	1.07	71.7
Fir	33	1.15	38.0
Total	100		109.7

2.3.8 New Data Eliminates Increase in New Volume Equations

A 1992 memo by John Griffen, senior forester at JDSF and at the time in charge of all timber sales, shows that further data eliminated most if not all of the increase in estimated inventory predicted by the new volume equations:[10]

6

> There is still some question about the reliability of our volume equations. When we abandoned the equations used in the old CFI in favor of those used in the new system we estimated a difference of 10-20% (the new ones estimating higher volumes). This seemed OK at first because the sales that we cruised with the new equations cut out pretty well. Then we started experiencing under-runs and incorporated form ratio into the volume equations to try to fix it. This mitigated the under-runs, but in the process we found that the equations with form ratio estimated volume at about 10% less that the equations without.

I estimate above that the new volume equations raise inventory estimates by 10%. Introducing form factor reduces them by 10%; thus after all of the changes, we are left with the CFI estimates unchanged.

2.4 DFMP Erroneous and Misleading Growth Estimate

The DFMP cites as "the most reliable evidence of forest growth on JDSF, ... an unconstrained [before harvests] estimate of annual growth of approximately 65 million board feet, or approximately 1300 board feet per acre per year."[11]

The DFMP states that the cited timber growth estimate was actual measured growth: "The plot system was measured in 1989 and again in 1999. The difference between the measurements, accounting for harvest, produced [the figure cited]."[12]

2.4.1 Computer Projection, Not Measured Growth

The assertion that the DFMP growth figure is based on measurement is erroneous and very seriously misleading. An internal document from JDSF files show that the cited

growth estimate was developed from a computer-based model that *projected* the growth, rather than from actual measured differences in tree volumes between the two dates.

> This model [CRYPTOS] allows the user to grow a stand ... for one or more five year increments.... In this case, each stand was simply grown for 5 years and the mortality function in the model was allowed to operate. The default values in the model were used – that is, no growth calibration factors were added to the run. [13]

7

Note that default values were used. No actual growth data were used to calibrate the model. These calculations are highly dependent on the values of parameters used in the model, and these parameters were not based on empirical data from JDSF.

2.4.2 Data Collection Problems and Probable Bias

Even the data collected in JDSF and used in the model is of questionable reliability: "Site information was acquired by choosing site trees [sometimes a single tree per plot] in or near each inventory plot. Using the height and DBH (diameter at breast height) information from these site trees allowed calculation of the site index for each species. This is an important growth model component in CRYPTOS."[14] Thus, the site trees selected were critical to the growth estimates.

8

A letter to JDSF from a consultant on the project lists numerous problems and concerns about the reliability of the data being used as the basis for calculating forest growth, including a concern about the selection and measurements of site trees.[15] The letter makes clear that the site tree selection process was not random but based on subjective judgment. After the data collection on site trees was underway, the consulting firm became concerned:

> As of 7-9-99 HJW provided explicit instructions for all crews to ONLY use the existing site tree if it indeed is a representation of the Site quality for the plot. If the existing Site tree(s) is/are not suitable, a good open grown tree within 300 feet of the plot center shall be selected as the Site Tree, but only if the tree is the best representation of the height and diameter for trees on the plot.[16]

The possibility of significant bias is evident, given the desire of CDF to show high growth rates. If the Site Indices for the plots are biased upward, so will be the calculated growth rates.

2.4.3 DFMP Misleads Further

The results of the computer runs are then presented:

> ...the total forest growth per year is calculated by multiplying the 1312 bf/acre value by the 48,652 acres generated from GIS computations. The result of this calculation is 63,851,437 board feet growth per year for all species. Conifers contribute 58,356,176 board feet of this and hardwoods 5,493,880 board feet[17]

9

Obviously, this computer projection is the source of the estimates highlighted in the DFMP. But even beyond implying that these figures were empirical measurements rather than creations of a computer program, the DFMP further misled readers. In citing these results in the DFMP, the forest total is rounded upward to 65 million board feet. The figures are for all-species, not solely for conifers, the class of trees appropriate when

discussing the potential growth available for commercial harvest. Even if CDF wanted to use these calculated estimates, it should have presented those for conifers only – 58.4 million board feet instead of 65 million board feet.

9 In summary, CDF presented a computer projection as a measured estimate, failed to present information on data collection problems and the likelihood of subjective bias, and cited the results of the computer projection in ways that exaggerated the already high estimate of growth.

2.5 Evidence that CDF Does Not Believe IFI System Reliable

Although the IFI system was installed in 1989-90, JDSF has never used the system either to determine the acceptable level of harvest or as a tool in developing timber harvest plans. There is substantial direct and inferential evidence that CDF did not have confidence in the reliability of the system.

2.5.1 Failure To Revise the Allowable Cut

Board of Forestry policies on State Forests says, "Allowable cut levels must be derived from pertinent current inventory and growth data." (Section 0351.4 C.) The Management Plan states specifically, "In 1985 and again in 1990, this allowable cut level will be recalculated based on new inventory and growth information..."[18]

Throughout the 1990's, JDSF set its allowable cut (harvest) at the level determined in the 1983 Management Plan, updated for the results the 1984 (CFI) inventory. But, it never revised the allowable cut after either the 1990 inventory or the 1995 partial remeasurement conducted with the IFI system.

Why did CDF ignore Board policy and its own 1983 Management Plan? Why did it not revise the allowable cut in the early 1990's after the initial IFI results became available?

Starting in 1992, CDF started using about $8 million annually of Jackson State revenues to fund its own internal operations. It was anxious to get as much revenue as possible from Jackson State. The IFI estimate of growth was one-third higher than the prior CFI estimate, thus the revised allowable cut would have been significantly higher, too.

Throughout its history, JDSF has aimed to cut all of the estimated growth. For many years in the 1990's, CDF exceeded the limits set by the CFI allowable cut, despite repeated internal warnings that this would violate JDSF and Board of Forestry policies.[19] In the latter part of the 1990's, CDF even began using the superseded, higher allowable cut of the 1983 Management Plan in its internal discussions of allowable cut, but it still did not propose to revise the cut using the 1990 inventory results.

Given CDF's demonstrated desire to log JDSF at levels higher than allowed by the 1984 inventory, its failure to make the legally mandated revision in allowable cut strongly infers that CDF did not have confidence in the validity of the 1990 or 1995 IFI estimates.

2.5.2 Direct Evidence

Internal JDSF memos support the indirect evidence that CDF lacks confidence in the IFI system.

2.5.2.1 Concerns of John Griffen

John Griffen is a senior forester at JDSF. He began working for JDSF in 1977. He became a supervisor in 1979 and in 1984 became supervisor of the timber sales program, which is by far the most important and largest activity of JDSF. He oversaw the preparation of the 1983 Management Plan, and was in charge of inventory and allowable cut calculations made with the 1984 CFI estimates. In sum, he is experienced and knowledgeable about the condition of the forest and the CFI system.

In internal JDSF memos, Mr. Griffen has several times expressed his personal lack of faith in the reliability of the IFI system and suggested additional analysis. For example, in a 1992 memo, he says:

> So far we can only guess at why the new inventory and growth figures are so much higher than the old.
>
> There is still some question about the reliability of our volume equations... It should be noted that since we have been using the old CFI and setting annual harvest equal to growth, the inventory of the growing stock has remained remarkably constant.
>
> Further analysis would look at basal area and diameter distribution to see if we might just be measuring the same trees with a shorter yardstick...
>
> To answer some of the questions raised above we might want to look further at our volume equations. We still have a lot of data from the 1984 fall-buck-scale study that might be enlightening, and we could compile additional data by doing some intensive woods scaling on each timber sale...[20]

10

Mr. Griffen also performed a calculation to determine his own personal confidence in the IFI.[21] Starting with an initial confidence level of 95%, he considers 10 steps in the history of the system, adjusting his confidence for each development. He ends up with a 65% confidence level. He follows the analysis with:

> Things to do to boost confidence:
> - Precisely locate plots on type map and confirm strata they're in
> - Spend more time regressing diameter-height relationship
> - Analyze check cruise data ... develop correction factor for cruises

In a December 1993 memo, Mr. Griffen says:

> ...A new calculation of annual cut based solely on growth as indicated by the new inventory has already yielded a figure of something like 42 mmbf. (Of course, this is a based on numbers that I have expressed little faith in.) A lot of work refining the inventory numbers will likely only yield us a somewhat different number that we still won't feel comfortable with. (Emphasis added.)[22]

In the same memo, Mr. Griffen also discusses the problems with keeping the new inventory system current. He pencilled in some updates in Jan 1995, implying that his 1993 concerns had still not been addressed:

> One thing to consider is some kind of remeasurement plan. The plot data is now 4 to 6 years old, and the calculated whole-forest numbers that were brought forward to a common date of 12/31/90 are 4 years old. The original plan allowed for remeasuring one tenth of the plots every year so that no data would be older than ten years, and so the expense could be parceled out into (affordable?) annual amounts instead of trying to

> come up with the whole thing once every 10 years. If we go with the one tenth per year plan, we should have started this year [1993].[23]

He also discusses an important problem that has not been resolved to this day:

> Then there's the question about adequacy of the current inventory system... [The need for more complex forest planning is] an argument for increasing the sophistication of the design. On the other hand, without a forester with enough time to actually manage the inventory, what we have now is too complex to very useful. The stratified sample design, the mixture of permanent and temporary plots, and the provision for partial replacement of permanents at the time of remeasurement are all complications that require time, effort, familiarity and expertise to deal with. We might want to recognize our limited resources and consider actually simplifying the system before we get much into remeasuring things.[24]

2.5.2.2 1995 Inventory "Validation"

Evidently concerns about the 1990 IFI measurements were sufficiently widespread that CDF planned a major project in 1995 to validate or revise its findings. Attached to my comments are 10 pages of typed and handwritten notes concerning this project (Exhibit VT-IN-19). The details are too complex to summarize here, but it is apparent that this was a major project that would require a substantial commitment of resources.

10 An introductory paragraph of "IFI Meeting Notes – 1/24/95" on the validation project is extremely telling:

> The first phase is actually validating (re-doing) the original inventory which was to calculate the forest inventory as of December 1990. Important in this process is the documentation of what and how things were done and what assumptions were made during the process.[25]

Five years later, CDF is planning to completely re-do the 1990 inventory, only this time actually trying to keep track of what was done. Evidently, record keeping during the initial inventory was so inadequate that it was impossible to reconstruct what was done.

2.5.2.3 Was the Validation Study Completed?

CDF has never made public the results of the 1995 validation project. Dharma Cloud Foundation, of which I am a trustee, made a Public Record Act request to CDF in May 2001. Included in the request were:

> All records that relate to estimates of timber inventory and timber growth in JDSF produced since 1985, including all interim estimates that might later have been revised.[26]

No papers on the results of this validation project were found in the files provided by CDF in response to this request.

CDF should be required to provide a detailed description of the results and of problems encountered in conducting the validation study before the EIR is certified.

---

[1] To my knowledge, no comprehensive inventory was performed in 1997; thus the numbers listed are probably primarily based on the 1989-90 inventory projected to 1997.

[2] Letter to Marc Jameson, Forest Manager, JDSF, from Vince Taylor, April 22, 1998, Exhibit VT-IN-1, and letter to Richard Wilson, Director, California Department of Forestry, from Vince Taylor, April 22, 1998, Exhibit VT-IN-2.
[3] Letter to Vince Taylor from Richard Wilson, Director, California Department of Forestry, February 11, 1999, Exhibit VT-IN-3.
[4] Attached as Exhibits to my comments and discussed below.
[5] *The New Inventory, What It Tells Us So Far*, typed with hand-written additions, no author, JDSF files, 1993. Gross volume figure for 1984, the appropriate comparison with the DFMP estimate of 1300 board feet per acre per year. Exhibit VT-IN-5.
[6] Estimates and sources for Figures 1 to 4 are in Appendix A of this chapter.
[7] "JDSF Forest Inventory – Transitioning from the Old to the New," Norm Henry, Division Chief, JDSF, in *Jackson Demonstration State Forest Newsletter*, Spring/Summer 1999, Exhibit VT-IN-11.
[8] Letter from J. E. Sindel, State Forest Manager, to George Grogan, Deputy Forest Manager, on Resource Management, Jackson State Forest, Allowable Cut, June 25, 1976. Exhibit VT-IN-13
[9] "JDSF Forest Inventory," *op. cit.*
[10] Memo from John [Griffen] to Forest [Tilley, Manager], April 28, 1992. VT-IN-15, pp.1-2.
[11] DFMP, *op. cit.*, p. 48.
[12] *Ibid.*
[13] *NOTES ON AND RESULTS FROM FOREST GROWTH CALCULATIONS*, no author, from JDSF files, 11/30/00.
[14] *Ibid.* Emphasis added.
[15] Letter from Bonnie Churchill, Hammon, Jensen, Wallen, & Associates, to Norm Henry, JDSF, August 3, 1999. Exhibit VT-IN-7.
[16] *Ibid.*
[17] *Ibid.*
[18] JDSF Management Plan, 1983, p. 73. Interestingly, in light of the discussion of this section, the quoted text continues, "but it would not be expected to change more than 10% at either time."
[19] Vince Taylor, *Jackson State Forest Logging in Excess of Allowable Cuts*, Unpublished paper, July 15, 2002. Exhibit VT-IN-16.
[20] Op. cit., VT-IN-15
[21] *Confidence in the New Inventory*, no author listed but in John Griffen's handwriting, undated. Exhibit VT-IN-17.
[22] Memo to Hal [Slack, Forest Manager] from John [Griffen], *Re: Reorganization*, December 1, 1993. Exhibit VT-IN-18.
[23] *Ibid.*
[24] *Ibid.*
[25] "IFI Meeting Notes – 1/24/95," no author, typewritten. Included in Exhibit VT-IN-19.
[26] Letter to Andrea Tuttle, Director, CDF, from Vince Taylor, Trustee, Dharma Cloud Foundation, May 22, 2001. Exhibit VT-IN-20.

Appendix 2.A: Inventory Systems and Measurements

This Appendix provides information on the JDSF inventory systems and measurements. It provides supporting data and sources for the figures presented in the chapter.

B.6 Inventory Estimates Adjusted for Comparability

All total forest inventory and growth numbers presented here are adjusted to 48,650 acres to make them as comparable as possible. Acreage considered in different estimates made by JDSF range between approximately 44,000 and 49,000. Recent estimates generally are based on an acreage of 48,650 acres; thus the figures cited herein are 2.8% higher than values published by CDF.

To the extent possible or noted otherwise, only conifers (merchantable trees) are included in the estimates.

Numerous differing IFI estimates for the same year were obtained from JDSF files. There is no indication on the estimates of which ones CDF considered most accurate. The one's cited here are representative.

B.7 The CFI Inventory System

From 1959 through 1984, JDSF used the Continuous Forest Inventory (CFI) system to estimate inventories and growth. Estimates were based on periodic measurements made in 141 one-half acre plots. This system yielded estimates that were roughly *self-consistent*, that is, the period to period changes in measured inventories were roughly equal to the starting inventory *plus* estimated growth *minus* harvests.

The last CFI inventory was made in 1984. Total forest inventory was estimated to be 1446 million board feet. [1] Growth (before harvests) was estimated to be 655 board feet per acre per year (gross). For 48,650 acres, the estimated gross growth was 31.9 million board feet.

B.8 The IFI System

The Intensive Forest Inventory system was introduced in 1989. Its estimates are based on a combination of 308 permanent and 2054 temporary one-fifth acre plots. One-hundred forty-one of the permanent plots were placed within the original 141 CFI plots.

Data for the first IFI estimate were collected in 1989-90. Total forest inventory (gross) was initially estimated to be 2,020 million board feet.[2] A later dated publication gives a 1990 IFI total inventory (gross) of 1,892 million board feet.[3] The later publication gives estimated IFI growth (gross, before harvest) of 882 board feet per acre or total forest growth 42.9 million board feet per year.

An internal memo on "1996 Inventory Stats" gives a total forest inventory of 2,296 million board feet and growth of 957 board feet per acre.[4] The memo does not indicate whether these are net or gross or include or exclude non-conifers. Based on other estimates, one would think that these are gross and include hardwoods. However, the memo says, "Based on these figures, the total forest growth based allowable cut would be

46.6 MMBF [million board feet]...." Allowable cuts have been given in past management plans in terms of net volumes of conifers (and further reduced by 4% for breakage), suggesting that the presented estimates were net volumes of conifers.

The DFMP provides what it terms a "1997 IFI Inventory" estimate (gross) of 2,057million board feet.[5] This is virtually identical to the initial 1990 estimate. No corresponding estimate of growth is provided.

Although the CFI plots were remeasured in 1999 and total forest inventory estimates using the new IFI models were made by CDF, these estimates are not presented in the DFMP. An internal JDSF memo presents an estimate of total inventory (gross) of 2,084 million board feet.[6] This internal memo contains the notation "Void;" thus, there were likely changes made in the estimate after this memo was written. This estimate was, however, the only estimate of the 1999 inventory produced in response to a Public Record Act request made on May 22, 2001 for all records related to inventory estimates.

B.9 Compilation of Inventory and Growth Estimates

Table 1 presents a compilation of estimates of forest inventory and growth made under the CFI and IFI systems. The data in this table was used to construct the figures on inventory estimates in the body of the chapter.

---

[1] *The New Inventory, What It Tells Us So Far,* op. cit., Exhibit VT-IN-5.

[2] *Inventory Comparison,* draft, no author, JDSF files, 11/1/90. The reported figure was 1,833,650 board feet on 44,151 acres. This has been adjusted to 48,650 acres. Exhibit VT-IN-4

[3] *The New Inventory, op. cit.*

[4] *1996 Inventory Stats,* memo to Marc Jameson from Norm Henry, undated, VT-IN-9. The table is introduced with, "The latest forest inventory /growth figures resulting from the new plot installation and deletion other old plots...."

[5] DFMP, Appendix 5, pp. 156-8. Although the DFMP does not tell how the 1997 inventory was measured, my recollection is that only a subset of plots were measured at that time, and the remainder of the forest was "grown" from 1990 data using a computer model; thus the reliability of this estimate depends heavily upon the accuracy of the growth projections of the computer model. To my knowledge, CDF has never performed any empirical data collection and analysis to calibrate the computer model; thus there is no way of knowing the accuracy of the 1997 estimate relative to the 1990 estimate.

[6] *JDSF Adjusted inventory estimate – CRYPTOS,* handwritten, from Norm [Henry] to Marc [Jameson], 5/1/00, Exhibit VT-IN-8. The figures are for conifers only. The copy of the memo in my possession is copied onto a larger paper and contains the notation "Void". Thus, there were likely changes made in the estimate after this memo was written.

Table 1

Various Estimates of Forest Inventory and Growth, Jackson State Forest.													
(Conifers, Gross Volumes)													
Year	1959	1964	1969	1974	1979	1984	1990A	1990B	1996	1997			
Inventory System	CFI	CFI	CFI	CFI	CFI	CFI	IFI	IFI	IFI	IFI			
Adjusted Total Forest Inventory (1)	1417	1446	1424	1379	1399	1365	2021	1892	2296	2057			
Adjusted Total Forest Growth per year (1)	32.1	37.5	34.9	33.1	35.8	31.9		42.9	46.6				
Total Forest Inventory per Acre						28062	41532	38900	47200	42280			
Forest Growth per Acre						655.0		882.0	957.0				
Forest Acres in Inventory Measure	50000	50000	50000	50000	50000	48750	44151	48586	48652	48652			
Unadjusted Forest Inventory	1456	1486	1464	1417	1438	1368	1834	1890	2296	2057			
Unadjusted Total Forest Growth per year	33000	38500	35900	34000	36800	32000							
Harvest Periods		60-64	65-69	70-74	75-79	80-84	85-90						
Years in Period		5	5	5	5	5	6.0						
Estimated Growth in Period (Gross)(2)		160.5	187.3	174.7	165.4	179.0	191.6						
Harvests in period (Gross) (3)		124	189	199	149	133	204						
Calculated Change in Inventory (Growth - Harvests)		36.5	-1.9	-24.0	16.4	46.0	-12.6						
Change in Estimated Inventory (End - Begin Inventory)		29.2	-21.4	-45.7	20.4	-34.0	655.4						
Notes													
Total inventories and growth are in millions of board feet													
Growth per acre is in board feet													

Vince Taylor 20 July 17, 2002

| | | |

3 Timber Harvest Policies

3.1 Proposed Timber Harvest Plans Not Best Current Practices

3.1.1 IFI Data Not Used in Preparation of THPs

A major purpose of installing the new IFI inventory system installed in 1989-90 was to obtain geographically fine-structured data to improve timber harvest planning. Meeting current environmental protection standards, as well as managing for maximum sustained production, as required by law and policy, requires use of fine-structured data.

The DFMP provides no indication that the design of the long-term silvicultural plan for the forest or of the proposed near-term timber harvest plans (THPs) relied in any way upon the detailed inventory data of the IFI. 11

The 5-year schedule of Timber Harvest Plans (THPs) in the DFMP primarily consists of large plans designed to produce 6 to 10 million board feet each.[1] These large plans are within one geographical area and have one silvicultural prescription.

The areas covered by uniform silvicultural prescriptions and harvest methods are so large as to create a presumption that fine-scale inventory data were not used. If fine-scale data were used, the DFMP needs to provide information that allows the reader to understand how they were used to develop the plan. If they were not, the plan did not use best current science and should be rejected.

3.1.2 Timber Management Concerns of John Griffen

In 1992, John Griffen, senior JDSF staff, and supervisor of timber sales at that time, wrote a lengthy memo listing his concerns with current and future forest management in JDSF.[2] Mr. Griffen's memo should be required reading for Director of CDF and every member of the Board of Forestry before they pass judgment on the DFMP and EIR.

Every serious problem Mr. Griffen exposes in his 1992 memo continues to this day, often intensified. The DFMP fails even to acknowledge their existence.

Mr. Griffen expresses concern about

10

- the unreliability of the new inventory system (previously discussed),
- need for and lack of GIS (Geographic Information System) capability,
- lack of internal support for implementing a sophisticated timber harvest scheduling system (Rich Barber's project),
- the lack of resources to do long-term timber harvest scheduling ("Depending on the level of accuracy and detail required, the task may be virtually impossible or merely overwhelming."),
- needs of the timber sale program ("It's a given that getting the timber sales out will continue to be the number one priority.") will make it impossible for the Operations Officer (John Griffen) to continue involvement with inventory and long term planning.

A number of his concerns are especially pertinent to judging the adequacy of the DFMP. These are discussed in more detail below, with interspersed comments.

2.9.1.1 Griffen: Allowable Cut Determination

The plan has been to use data from our new intensive inventory to come up with a more sophisticated answer to the question of how much to cut than the simple answer of cut equal growth. That was the premise planning premise behind Rich Barber's first harvest scheduling project in 1988.

Comment: Never implemented.

But there are a whole host of options in harvest scheduling, things like even flow, non-declining even flow, area control, volume control, economic optimization, and sequential look aheads.

10

Comment: None of which were considered in development of the DFMP THPs.

Maybe the overriding factor is, or will soon be, the Department's need for revenue, and we should be concerned about providing some target increment for FRIF.

Comment: This was when CDF began funding $8 million of department operations from FRIF, the depository of Jackson State timber sales. The dominance of revenue over all else is widely known and accepted within JDSF and CDF. I was told this myself in 1995 by Ross Johnson, Deputy Director of CDF then and now. The continued importance of JDSF revenue to CDF was emphasized again in an internal memo in 1999:[3]

> Ross [Johnson] has made it clear that if your forest has a target annual harvest or every other year harvest level we all need to make sure that we hit these target sale volumes. ... This is most important for JDSF because of the revenues generated are most critical to the CDF programs. (Emphasis added.)]

2.9.1.2 Griffen: Timber Sales Operations

We've been behind on getting the sales out since at least Fairbank Drive 1986. ...

What it comes down to is that if the sale staff works on nothing but preparing and administering sales then we can probably get out three major sales a year. ... The sacrifice will be in terms of:

training on how to follow the new rules
professional development training
culvert maintenance
plantation maintenance
revisting old sales to learn whatever
small-scale D&E, like looking at regen in Pleiades
road maintenance inspections
stopping to check wood cutters
writing newsletter articles
filling out stand record cards
looking at each other's sales

2.9.1.4 Griffen: Clearcutting versus Uneven-Age Management

In 1987, ... it was felt that the predominant management system in the redwood region would be even-aged, and that the State Forest should mirror that trend. As a result, about 75% of the Forest was assigned to even-aged management... Since then it has become apparent that uneven-aged management more closely fits the desires of the Forest's owners and better serves the needs of the demonstration program's primary clientele group. We have now reassigned management systems with the ratio reversed, 75% uneven-aged and 25% even-aged.

(This will have significant impacts both on potential harvest yields and on our ability to efficiently sell it... It is also recognized that it takes more time per mbf to prepare a partial cut than a clearcut.)

Comment: The DFMP heavily emphasizes clearcuts. Including clearcuts, euphemistically called "group selection, the DFMP proposes clearcuts for two-thirds of the forest areas eligible for such harvesting, a total of half the forest. This is contrary to the needs and desires of the Forests owners – the people of California – and the demonstration program's primary clientele group, acknowledged in the DFMP to be small landowners.

10

If CDF were truly concerned about forest ecology, the DFMP would have planned few if any clearcuts. The reversal of course to emphasize even-age management is based not on modern science. Mr. Griffen gives the probable explanation: selective forestry would negatively impact profits and put too great demands on inadequate staff.

2.9.1.5 Griffen: Vision

... Judging from the expressed desire of CDF administration [Sacramento headquarters], the primary purpose of Jackson State Forest is the generation of revenue for FRiF.

... we are operating in the dark, or at least in a thick fog, with no clear direction, purpose or goal... and without any particular interest or support from the Department. This will continue to fuel the frustration and disappointment of the forestry staff who are trying to practice good forestry but who are appreciated only when they practice profitable forestry.

Comment: Amen.

3.1.3 DFMP Failure

Mr. Griffen not only expressed concerns based on deep knowledge, but pointed out many of the steps need to management of JDSF. CDF has taken almost none these, with the result that the basic information and staff capability required to implement a modern, ecologically sensitive management plan do not exist. The DFMP and DEIR fully reflect the absence of knowledge and capability. It is filled with high-sounding rhetoric. But, the timber harvest plans proposed follow the long-standing policy of large timber sales designed to maximize profits, with ecological considerations reduced to the minimum forced by Forest Practice Rules.

3.2 Maximum Sustained Production

3.2.1 The DFMP Fails to Implement Maximum Sustained Production

State law requires that JDSF by managed for "maximum sustained production" of high-quality timber. The policies of the Board of Forestry provide explicit guidance on implementing this requirement of law.

The timber plans of the DFMP are not designed to achieve maximum sustained yield. The DFMP as written is in violation of the law.

3.2.2 Code and Regulations

The Public Resources Code (PRC) pertaining to State Forests says:

> The management of state forests ... shall conform to regulations prepared by the director [of the Department of Forestry] and approved by the board [Board of Forestry]. These regulations shall be in conformity with forest management practices designed to achieve maximum sustained production of high-quality forest products while giving consideration to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment. [PRC §4651] (Emphasis added.)

The Board of Forestry regulation on maximum sustained production says:

12

> E. State forest timber stands should be harvested on the basis of maximizing mean annual increment of high quality forest products. This should not preclude intermediate cuts designed to increase total yield and reduce losses from mortality.

3.2.3 Maximizing Mean Annual Increment

"Maximizing mean annual increment" is a basic mathematical method for determining the point in time when one should cut a stand of trees in order to achieve the maximum sustained production. It is a well-established concept in forestry.

The "annual increment" is the volume of growth in a given stand in a year. The "mean annual increment" (MAI) is the average of the annual increments since the stand began growing. The average will continue to increase as the stand grows older and bigger. While the mean or average is increasing, the annual increment will lie above the average. At the point where the growth slows to the point where the annual increment falls to the average, the "maximum mean annual increment" (MMAI) will have been reached. If the stand is grown for either a shorter or longer time, its average production will be below this maximum.

In establishing the regulation that state forests maximize mean annual increment, the Board of Forestry faithfully implemented the intent of the PRC section on maximum sustained production. It provides an unambiguous, well understood technical directive.

The age of maximum mean annual increment depends upon the growth characteristics of trees in the stand and the growing conditions. The longer before growth volume starts to decline, the greater will be the age of at which a tree will reach its maximum mean annual increment.

Forest researchers have constructed tables of MMAI. There are different tables for different species, with different values for different growing conditions (site values) for each species.

3.2.4 MMAI and Jackson State Forest Management

The 1983 Management plan discussed the Board Policy on managing for maximum mean annual increment, but as a "suggested" rather than a mandated policy:[4]

> Board of Forestry policy suggests [sic] that State Forest timber be managed to optimize mean annual increment of high quality forest products.

The reason for this misstatement becomes clear in the next sentence:

> Unfortunately, currently available yield tables (Lindquist and Palley, 1963) and growth models (CRYPTOS, (c) Wensel 1982 (Krumland and Wensel 1982)) indicate that board feet mean annual increment of good to high site redwood/Douglas-fir stands does not culminate, at least within a reasonable rotation (175 years). Part of the problem is a lack of data on stand growth past about age 100.

12

Therefore, if Jackson State were to follow the directive of the Board of Forestry, it would not be harvesting any second growth for many decades. The 1984 Management Plan, therefore, dismissed the "suggested policy" as "unrealistic," and did not further consider maximum sustained yield.

3.2.5 The DFMP and Maximum Sustained Yield.

The DFMP discusses cumulative mean annual increment (CMAI), which is another term for MMAI, in the context of setting rotation ages for harvest. It states:[5]

> Two rotation ages (a term only applicable to even-aged management) based on average site classes: short to medium and medium to long rotations. The western portion of the State Forest generally averages Site II. Short to medium rotation ages on the West End are considered to be 60 to 90 years. Medium to long rotation ages are characterized as 90 to 120 years.

For the eastern portion, it specifies longer rotation ages, but most of the east end is still young and is far from any reasonable "rotation age." It is the west end where most of the revenue-producing harvest plans are scheduled, and thus where the policy adopted will have a significant effect on harvest planning.

Note that the policy appears to apply only to clearcuts (or other pseudonyms), because "rotation age" applies only to clearcuts. The DFMP needs to clarify whether or not it applies to selection harvests.

The policy of the DFMP with respect to MMAI (CMAI) is clearly stated:[6]

> The intent was to find a range of ages that might bracket the age of culmination of mean annual increment (CMAI) within the medium to long rotation alternative. (Emphasis added.)

The DFMP thereby acknowledges that all harvest plans with harvest ages in the short to medium bracket will be in violation of the directive to manage for CMAI.

Further, the DFMP does not provide the data or analysis used to determine the lower end of the CMAI rotation age. A reasonable lower estimate of CMAI for most stands in JDSF may well be much higher than 90 years.

The most recent data on which the DFMP says the projections were made for redwood CMAI is almost 40 years old and only went to 100 years.[7] This is a critical shortcoming, because there is even now little data on second-growth redwoods more than 100 years of age, and there was even less forty years ago. Data past 100 years of age is essential, because the mean annual increment for redwoods on most site classes culminates beyond 100 years.

Given the legal requirement that JDSF be managed for CMAI, a thorough search for data on CMAI in coastal redwood forests should have been conducted and included in the DFMP. If adequate data were not found, the DFMP should have made development of this data a prerequisite for planning specific large THPs. Without this data, timber harvesting cannot conform to state law and Board policy. Development of improved CMAI data would contribute to the research and development mission of Jackson State.

3.2.6 The DFMP, CMAI, and Short-Term Harvest Plans

13 The DFMP does not specify CMAI as one of its objectives or even one of its considerations in developing its short-term harvest plans.[8] It does not specify how each of the harvest plans contribute to the achievement of MMAI, which is an implicit requirement of the Board policy on MMAI. Therefore, the DFMP violates Board policy and state law.

3.3 Allowable Cut

3.3.1 Allowable Cut Key Component of DFMP

The allowable cut has been historically the most single important component of management plans for Jackson State Forest. It has been used to determine the level of harvests, and timber harvesting has been the dominant activity in Jackson State Forest. Although the DFMP purports to give greater weight in the past to other activities, the contents of the DFMP are heavily oriented toward continuation of large-scale timber
14 harvesting.

The allowable cut constitutes the target for timber sales volumes. It has also acted as a strong constraint on CDF Sacramento, which, as documented herein, values JDSF primarily for the revenue that it can provide for state forestry programs. The allowable cut needs to be clearly defined and set at a level that will not allow forest values to be degraded by timber activities. The DFMP fails to meet this objective and is therefore fatally deficient.

3.3.2 Allowable Cut Must Be Based On Current Inventory Data

Board of Forestry Policy specifies that "Allowable cut levels must be derived from pertinent current inventory and growth data." Implicit in this requirement is that there be reliable, accurate data in which decisionmakers can have confidence.

The DFMP does not derive its allowable cut from "current inventory and growth data." As documented in Section 3 of my comments, this would be impossible, because JDSF does not now have accurate estimates of inventory and growth. The figures cited in the DFMP have been demonstrated to be based on models and data that have not been empirically validated and that are not trusted even by JDSF staff.

15 Significantly the DFMP does not base its determination of allowable cut on the estimate of growth that it cites as "the most reliable evidence." Rather, it uses computer modeling of growth performed for an Option A document, which has never been approved. The computer modeling uses 1989-90 inventory data, which in no way can be considered current, given the high level of harvesting that was done during the 1990's.

The numbers in the Option A document on which the DFMP is relying for determination of allowable cut are **projections**, not current inventory data as required. The projections depend upon many parameters that have not been empirically validated by data from JDSF and are highly suspect, because they yield estimates that far exceed the consistent estimates produced by the CFI system for 25 years.

The DFMP admits that the Option A projections do not accurately reflect the constraints on harvesting near streams accepted in the DFMP and that there are numerous other uncertainties around harvest constraints that may affect the harvest. The DFMP does not make any effort to quantify these, but simply asserts without foundation that these may "affect harvest levels by as much as 15 to 20 percent in one direction or the other." This is an unsubstantiated assertion. The estimate is made suspect on its face by the phrase "in one direction or other," because none of the listed effects would increase the potential harvest level." Given the importance of the allowable cut figure, supporting data and analysis in meaningful detail are imperative.

3.3.3 Meaningful Detail of the Allowable Cut Calculation Not Provided

The DFMP lists 23 Special Concern Areas in which harvesting will be restricted. The allowable cut determination should specifically address the reduction in harvest potential associated with each of these areas. A methodology for doing this was developed by Ross Johnson, present Deputy Director of CDF, when he was on the staff of JDSF.[9] This was 16 applied by John Griffen to adjust acreage for determination of the allowable cut used in the 1983 Management Plan.[10] Thus, the methodology is known within JDSF and has been applied in the past, but was not applied in the DFMP.

The DFMP or DEIR needs to provide data on the adjustment factor used for each Special Concern Area in order that the public and decisionmakers can judge for themselves the appropriateness and correctness of each adjustment factor.

3.3.4 DFMP Allowable Cut Likely a Substantial Overestimate

17 I have attempted to make an approximate estimate of an allowable cut based on cutting all allowable incremental growth. This illustrative calculation shows that the allowable cut of the DFMP is very probably substantially greater than true incremental growth that can be harvested within the constraints of law and the DFMP.

17

Taking into account the restrictions on harvest in Special Concern Areas reduces equivalent acreage to 61% of the unrestricted acreage.[11] The latest estimate of forest acreage, based on GIS data is 48,652 acres, or an equivalent unrestricted acreage of 29,689 acres. Applying the 1984 CFI estimate of net growth of 607 board feet per acre (the last reliable estimate of growth available) to the adjusted acreage yields an allowable cut of 18 million board feet.

The illustrative estimate of allowable cut is only 58 percent of the DFMP allowable cut. The need for more data and analysis in determination of the allowable cut is apparent.

3.3.5 Allowable Cut Should Not Be Based on Incremental Growth

Board of Forestry Policy requires the Forest to be managed for MMAI. Intermediate cuts must contribute to increasing maximum sustainable yield. To fulfill this mandate, the allowable cut must be derived by determining the specific harvests that will contribute to increasing the ultimate MMAI. An allowable cut based on MMAI will be significantly less that incremental growth when, as is the present case, the age of trees in the forest are significantly below the age when MMAI occurs.

---

[1] DFMP, p. 56. Three out of the five years have only 4 plans each, and the other two have three large plans and a number of small ones. The allowable cut of the DFMP is 31 million board feet; thus the large plans average close to 8 million board feet each.
[2] VT-IN-15, op. cit.
[3] Email from Jon Rea, CDF Sacramento, to all State Forests and Marc Jameson, Subject: "Sale Volumes, Revenues, Even Flow," February 11, 1999.
[4] 1983 JDSF Management Plan, P. 55.
[5] DFMP, p. 54.
[6] *Ibid.*
[7] *Empirical Yield Tables for Young-Growth Redwood* by Lindquist and Palley (1963), and *Stand and Volume Tables for Douglas Fir in California* by Schumacher (1930).
[8] DFMP, pp. 55-56
[9] *Update of Management Acres on Jackson State Forest*, Ross Johnson, JDSF, 1/23/78.
[10] *Considerations for Determination of Allowable Annual Cut*, John Griffen, JDSF, 10/23/79.
[11] Vince Taylor, VT-IN-24.

4 Other Comments

4.1 Public Comment and Scoping Sessions

18 The DFEIR does not include the oral comments presented at its scoping sessions for the DFEIR. The Campaign to Restore Jackson State Redwood Forest made extensive comments that are not included in the section purporting to include public comments, DFEIR Volume 2, Appendix 6.

The cutoff date for publishing comments received on the initial DFMP was more than six months before the publication of the DFEIR. This early, arbitrary cutoff date eliminated many comments from being published that should have and could have been included in the public record.

4.2 Forest Condition Not Improved

4.2.1 Increasing inventories

The DFMP needs to correct the statement on p.1, chapter 1and wherever similar other statements appear:

19 > Due to the long-standing practice of harvesting less than growth, inventories of standing timber continue to increase.

The correct statement would be: "Due to the long-standing policy of cutting all estimated growth, we believe inventories have been maintained approximately constant, but there is substantial uncertainty about current inventories. Due to our long-standing policy of cutting the oldest trees, almost all old growth and much of the oldest second growth has been cut."

4.2.2 Improving Resource Conditions

The DEIR says in Section VII-1.5,

20 > Where natural resources are concerned, it is important to recognize that the general goal of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. *This goal has been ongoing since the property was acquired by the State in the 1940s and 1950s. The site was acquired in a degraded condition, but over time, has notably improved in most of the resource categories.* (Emphasis added.)

The emphasized quotations are erroneous and need to be corrected. CDF has made similar, unsubstantiated statements so many times in press releases that its leadership may believe them. There is no place for such erroneous statements in the DEIR and DFMP. The public record needs to be set straight.

First, it has never been up to this time a goal "to achieve net improvements in conditions for all natural resources over time." This goal was not stated in previous management plans and is contradicted by discussion in previous plans regarding wildlife ("Not much can be done in the wildlife management field until better population figures are available.

There are no known plans for any agency to conduct such studies." 1983 JDSF Management Plan).

Second, abundant evidence contradicts the assertion that natural resources have notably improved:

a. The old-growth components of the forest have been seriously degraded (essentially annihilated) under state management.

b. The miles of road, which are the admitted major cause of stream degradation, have increased substantially.

21

c. Caspar Creek and Hare Creek were largely recovered from the initial logging when inherited (with inventories in excess of 80,000 bf/acre in the 1970s). These are important native coho watersheds that were well on the way to becoming undisturbed late-seral forest. Both have been heavily logged, with the North Fork of Caspar Creek having over 500 acres clearcut within the last fifteen years.

d. The stocking levels at all sizes of trees steadily decreased from 1964 through the 1984 (the last available reported stocking data by tree size).

e. The best available evidence (CFI inventory reports) is that inventory has been decreasing slowly since the 1960s, while the condition of important watersheds (Chamberlain Creek, South Fork Noyo, Caspar Creek, Hare Creek, and the North Fork of Big River) have all been degraded under state management.

4.3 Resource Specific Analysis – DEIR, Section VII.

Section VII-1.6 (pp. 78-9) says:

> Impact assessment and mitigation are stated in general terms where the specific details of a particular activity are not known, and cannot be known at this time. This is particularly true for a Program EIR such as this that must forecast the impacts of actions resulting from policy decisions. Most often, programmatic or policy-level mitigation is provided as part of the EIR. Detailed mitigation may be deferred to a subsequent impact assessment. In these cases, additional CEQA review is required once the activity is fully defined in terms of scope, location, and other factors.

22

The conclusion of this section is wrong, because its assumption is wrong. It is not true that the Management Plan needs to "forecast impacts from policy decisions" and, therefore, details of a particular activity cannot be known at this time, justifying deferral of detailed analysis and mitigation measures.

BOF policies include the requirements: "B. A rotation age, cutting cycle, and an allowable annual cut will be established for [Jackson State]. Timber harvesting schedules should be projected at least five years into the future. C. Allowable cut levels must be derived from pertinent current inventory and growth data." (BOF Policies, section 0351.4)

These specific requirements have been met in every management plan previous to the current one and are largely met in the current one. The DFMP contains a table showing harvest plans and harvest methods and a map showing the location of these plans. Therefore, the harvesting plans are specifically known for the next five years, and the

silvicultural methods to be used in every area of the forest are specified, together with rotation ages and cutting cycles. Indeed, a number of the harvest plans have already been marked for cutting. Thus, the specific details of activities for the next five years *can be known now*, and the longer-term context in which the next five years of activity will be carried out is also specified now. **Thus, CDF can and should consider in detail the impacts of its five-year timber harvesting plans, individually and cumulatively, in all of the CEQA-required areas.**

4.3.1 Aesthetic Resources

Section VII-2.3.1 says: "Future management of timber harvest within the DFMP places a priority upon aesthetics near homes, recreational facilities, and main travel corridors."

23 The contents of the DFMP do not conform to this statement.

4.3.1.1 Recreation

There is no recreation plan (RECP) contained within the DFMP. The lack of RECP is contrary to one of the goals (Goal 5) which the DFMP is designed to achieve (DFMP, p. 5):

> 5. Plan for and provide low impact recreational opportunities that are compatible with forest management objectives and healthy ecological processes, and that are consistent with historic recreational use characteristics.

The lack of a RECP causes the DEIR section on aesthetics and recreation to be vague and non-specific(Section 2.3.2, p.87):

> The DFMP generally defers the explicit definition of the Recreation Corridors until a user-survey is conducted as part of the JDSF recreation management program... However, the DFMP does propose a defined corridor width of 300 feet around major campgrounds and identifies that this zone will preclude even-aged silviculture, but does not specify any other particular management prescription for that zone."

24 The lack of specific plan and resulting vagueness precludes informed comment on the adequacy of the DFMP in protecting aesthetic resources important to recreation uses of the forest. CDF should be required to prepare a specific recreation plan with specific, detailed aesthetic protection measures prior to certification of the EIR.

4.3.1.2 Neighbors

The DEIR says only that CDF has historically "discussed" harvest operations within 200 feet of neighbors. A mitigation that might apply to neighbors is discussed on page 91 of the DEIR, but it is unclear whether or not it does apply. In any event, the mitigation does not guarantee any influence by the affected neighbors nor specify the minimum width of the buffer, which needs to be greater than 200 feet to provide any degree of real protection.. As stated, it would allow "single-tree selection" without any limit on the percentage of trees that could be removed and says nothing about the treatment of slash, preservation of existing recreation trails, or treatment of logging roads.

No mention is made in the EIR of recreation values of forest adjacent to neighborhoods. Therefore, there is no consideration of the tradeoff between recreation values and timber values. There is no consideration of restrictions on harvest to protect existing or potential recreation values. The lack of meaningful detail in discussing recreation in neighborhood forests precludes informed decisionmaking and public participation.

25 With respect to the DEIR treatment of harvest operations adjoining forest neighbors, informed decisionmaking and public participation are impossible because there is no clear description of proposed administrative procedures for consulting with neighbors, quantitative minimums or ranges for buffer size, types of allowable harvest operations and allowable percentages of single-tree tree removal within buffer zones, or provisions for protecting recreation values.

4.3.1.3 The Mendocino Woodlands Camp and Surrounding Forest

The DFMP has two planned timber harvests adjacent to the Woodlands Camp. These plans are in the so-called 2,550-acre "Special Treatment Area" that surrounds the Camp and is managed by CDF.

Background: The Mendocino Woodlands Area

The Mendocino Woodlands Camp is leased from California State Parks. The Camp is part of the Mendocino Woodlands Recreational Demonstration Area (Woodlands Area), an area of 5,426 acres transferred by the federal government to the state of California in 1947.

Originally, the Woodlands Camp comprised the entire 5,426 acres. The Woodlands Area now consists of three parts: the Woodlands Camp (780 Acres), a Special Treatment Area or STA in Jackson State Forest (2,550 acres), and the remaining part of the transfer, which is managed as a regular part of Jackson State Forest (2,155 acres).

All parts of the Woodlands area are of great ecological importance. With two exceptions, no logging has occurred in this area in eighty years, making it one of the two large areas of undisturbed, mature second growth in Jackson State Forest. These areas of mature second growth have great potential for providing habitat to endangered species, especially the Marbled Murrelet, dependent on old-growth type habitat.

The Woodlands Area was transferred to the state of California explicitly for park, recreation, and conservation purposes. The act of Congress authorizing the transfer stated in part: "Every such deed or lease shall contain the express condition that the grantee or lessee shall use the property exclusively for public park, recreational, and conservation purposes. ..." {Act of Congress of June 6, 1942[56 Stats. 326; 16 U.S.C. 459t].} The state expressly agreed to these terms in accepting the transfer. Under any reasonable interpretation of the purposes for which the Woodlands Area must be used, timber operations that do not directly contribute to recreation and conservation are prohibited.

Harvest Plans

The Draft Management Plan specifies two timber harvests within the next five years in the Special Treatment Area of the Woodlands. Both of these timber plans will detract

from the recreational values of the Mendocino Woodlands Camp, which is located within the Woodlands Area.

Railroad Gulch: The largest plan is 270 acres in Railroad Gulch, which borders on the west side of Woodlands Camp and spans one of the recreation trails most used by Woodlands Camp visitors, the Forest History Trail. (See Woodlands Logging Map). To allow logging in this protected area, the state in 1981 designated the 270 acres a Demonstration and Research Project of the University of California. It was logged initially in 1984 under this justification. The planned logging is also being justified as a continuation of this "research project." You may wish to point out that such a use is directly contrary to the clear legislative purposes of the entire Woodlands area.

26 Even the research justification for the new plan is questionable. The original research design called for a second harvest in 1990, 12 years ago. This harvest was never done, thus the original hypotheses can no longer be tested.

CDF has entered into a Memorandum of Understanding with State Parks that allows it to conduct logging operations within Railroad Gulch right up to the edge of Woodlands Camp (DEIR, p. 85). This is the sole exception to a 200-foot harvest-exclusion buffer from all camp areas administered by State Parks. You may wish to object to the lack of any exclusion buffer between the Woodlands Camp and the planned Railroad Gulch Harvest.

Thompson Gulch: The second harvest plan is in the north end of the Special Treatment Area. (See Woodlands Logging Map.) An old road that is often used for hiking crosses it.

The stated purpose of the harvest plan is to accelerate the development of "late-seral characteristics," which describe the forest structures found in old-growth forests.

27 There are no specifics given for the Thompson Gulch plan, precluding making an informed judgments about the environmental effects of the plan. Because this plan is stated to be a demonstration and model for future timber operations throughout the Special Treatment Area, and because of the great ecological value of the Special Treatment Area, detailed specifications for the plan need to be a part of the EIR.

28 With respect to the EIR treatment of harvest operations in the Woodlands Special Treatment area, informed decisionmaking and public participation are impossible because the plans are not described in meaningful detail and there is no consideration given to the recreational and wildlife benefits of undisturbed forest. Moreover, the original deed transfer of this land precludes any timber operations that don't contribute to recreation, park, or conservation use. The Railroad Gulch plan clearly violates this clause.

4.3.1.4 Impacts

Section VII-2.5 lists two aesthetic impacts and mitigations

Impact 1: *Even-aged timber harvest would have a substantial adverse effect on scenic vista.* (Less than Significant with Incorporation Mitigation)

C&Q: The proposed mitigation is to have an RPF evaluate the visibility of even-age harvest plans and "Where appropriate to visually soften and mitigate impacts .. on the integrity of views visible to the general forest visitor..." through a possible combination

29 of modifications to the THP. (DEIR p. 90.) No quantitative standards are specified for the possible mitigations, precluding informed decisionmaking and public participation.

Impact 2: *Timber harvests and related activities would substantially degrade the existing visual character or quality of the site and its surroundings.* (Less than Significant with Incorporation of Mitigation)

The DFMP prescribes restricted harvesting operations with 23 identified "Special Concern Areas," including Forest Boundary neighbors, but specifies buffer size and allowable operations only for a few of these. The DEIR proposes a **mitigation** similar to that for Impact 1 for "all timber harvest plans conducted within or adjacent to Special Treatment Areas or buffer areas that are identified but not specifically defined in the DFMP..." (DEIR, p. 91) The specific modifications made to a THP is to be determined by a "qualified professional as determined by CDF." No size or range of size or minimum size the buffers are specified in the mitigation. Harvest practices within the mitigation buffers are specified to be a one or a combination of single-tree selection, hazard tree removal, or no harvesting as appropriate. Single-tree selection can occur in a wide range of percentage tree removal. The absence of quantitative minimums and ranges for buffer
30 size and allowable percentages of tree removal for each type of Special Concern Area preclude informed decisionmaking and public participation.

4.4 Recreation

The DFMP fails to accord recreation consideration equal to other specified secondary values of state forests. This is arbitrary and denies the public one of its most desired products of the forest.

Section 4651 of the PRC says that the forest will be managed for production of forest products "while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment." Note that recreation is listed as the first of the secondary values of the forest. Yet, the DFMP (p.3) says:

> This plan builds on the 1983 plan by elevating wildlife, watersheds, and ecosystem process to a level of importance equivalent to the timber management and the research, demonstration and education programs.

Recreation is notably absent from the list of elevated values, despite being the first of the legally mandated secondary values.

The DFMP does not contain a recreation plan, nor does it contain adequate current data on recreation use (only the number of camper days) or public desires. The absence of a
31 plan and data make impossible informed decisionmaking and public participation about future recreation uses in JDSF.

4.5 Economics

The DFMP fail to provide a meaningful economic analysis. The estimates of Economic Impacts (DFMP, p. 26) make the elementary error of assuming that people employed
32 processing timber from Jackson State Forest would not find employment elsewhere. Employment opportunities continue to grow in Mendocino County, and any unemployment tends to be short term. Furthermore, a detailed analysis of the

employment contribution of Jackson State Forest shows that about ½ of timber production reduction in Jackson State would be replaced by Mendocino mills from other sources; thus timber employment effects would be much smaller.[1]

33 Further, the DEIR does not consider at all the economic effects of making Jackson State into an old-growth forest with expanded recreation and wildlife habitat. The economic gains from Mendocino County from such a use of Jackson State may well dwarf the economic benefits from the preferred alternative. The lack of economic analysis of the alternatives in the DEIR precludes informed decisionmaking and public participation.

[1] Vince Taylor, "Economic Effects of Restoring Jackson State Redwood Forest: Dispelling the Myths, in *Conference on the Restoration of Coast Redwood Forests: Jackson Demonstration State Forest*, published by Dharma Cloud Foundation, November 4, 5, 2000. VT-IN-25.

Letter VT-241 (Campaign to Restore Jackson State Redwood Forest)

Response to Comment 241.1
The forest inventory, timber growth, and allowable cut information presented in the DFMP was subjected to an independent review as part of the DEIR process. The review indicated that JDSF personnel used "modern, best available techniques to ensure the growth and yield estimates utilized in the planning process were as comprehensive and accurate as possible" (refer to Appendix 8A – Page 15). The timber inventory and growth techniques used by JDSF staff are fully disclosed in the Appendix. The information is provided in the appendix rather that the body of the DEIR due to the technical nature of the material (CEQA guidelines section 15147).

Many of the comments included in the letter are aimed at management practices proposed in the DFMP or past actions of CDF. A reference to general response 1 is appropriate in many cases, however a more direct and detailed set of responses has been provided. Furthermore, Article 10 of the CEQA guidelines addresses many of the concerns included in the comment letter. Section 15146 states that the degree of specificity required in an EIR will correspond to the degree of specificity of the activity described in the EIR. A program EIR need not be as detailed as an EIR on a specific project that may follow. The level of analysis in an EIR is subject to the rule of reason. The information presented and the analysis needs to be specific enough to permit informed decision making and public participation. However, the need for thorough discussion and analysis is not to be construed to serve as an easy way for project opponents to defeat projects. Section 15147 states that information contained in an EIR shall include summarized technical data, and detailed technical data should be placed in an appendix. Section 15148 states that scientific documents relating to environmental features should be cited, but not included in the EIR.

Considering these guidelines, the amount of information and level of detail provided in regards to forest inventory, timber growth and allowable cut information presented in the body of the EIR, Appendix 8 and as cited is entirely appropriate for a program EIR.

Response to Comment 241.2
The inventory data in the DFMP and DEIR presents a detailed and accurate picture of the resource situation on the Forest, and is more than adequate for informed decision-making and public participation. The inventory results provided in Appendix 8 of the DEIR are aggregated by geographic area (east end and west end of the forest), vegetation and site classes. The inventory was designed for this scope of analysis and reporting and is consistent with standards of practice in the profession. This level of detail exceeds that contained in past management plans. All the inventory data for JDSF is publicly available in electronic form, and was made available to the commenter. The commenter is free to engage in any data analysis he sees fit.

Past management plans for JDSF and the inventory information therein exhibit a clear pattern of change over time as the management situation changed. Research and demonstration on JDSF is now shifting away from a primary emphasis on timber commodities to also include issues such as sustainable forestry, public trust resource protection and non-timber commodities. Many of the detailed timber resource reports of past plans have been replaced with other analyses more relevant to the challenges of forestry in the twenty-first century. The current JDSF management plan continues the tradition of adapting to changes in societal priorities and forest research needs.

Response to Comment 241.3
The inventory and growth data presented in the management plan and reviewed in the DEIR are accurate and unbiased. The data is presented in a logical, organized fashion that enables the reader to evaluate the proposed management plan. JDSF inventories were developed according to accepted scientific and professional standards by licensed professional foresters. CDF believes the inventories supporting this management plan to be correct and unbiased, and constitute the best available evidence of inventory and growth information on JDSF.

The February 11, 1999 letter from then-Director Wilson to Vince Taylor answered the earlier questions raised and demonstrated that the concerns were groundless. Consequently, there is no reason for CDF to engage in further analyses.

The complete inventory data for JDSF was made available to the submitter on July 13, 2001. CDF believes that the data speak for themselves, and that an examination of the actual data will confirm CDF's analysis and results.

Response to Comment 241.4
This comment, and other related comments questioning the validity of the presented inventory and growth information, presents no analysis of the actual inventory data. Rather, the submitter presents only speculation about purported inconsistencies in CDF's published inventory reports spanning four decades, selectively quoting summary statistics out of context and incorrectly interpreting results. This speculative line of theorizing about likely problems with JDSF's inventories are groundless. They are also wholly irrelevant because the inventory data are hard facts, not subjective opinion. The actual inventory data can easily be examined to indisputably verify or refute CDF's inventory estimates. All JDSF inventory data were made available to the submitter on July 13, 2001. CDF believes that the data speak for themselves, and that an examination of the actual data will confirm CDF's analysis and results.

Response to Comment 241.5
The management plan was not based on the IFI alone, both the IFI and the CFI served as a basis for the plan.

The discussion of discrepancies in growth estimates mixes apples and oranges by comparing different definitions of growth. The forestry literature identifies at least four different definitions of stand growth, incorporating different combinations of mortality, ingrowth, and harvest. A rigorous explanation of the different components of growth can be found in most forestry textbooks.

The most recent 1999 CFI remeasurement supports the IFI inventory results. The IFI and CFI are independent sampling efforts, with different objectives and sampling designs. They are not directly comparable. Both inventories must also be tempered with an understanding of the nature of statistical estimates. For these reasons it would be unreasonable to expect them to give the exact same results.

The underlying premise that a lack of close correspondence in estimates between previous generations of CFI data and recent IFI data in and of itself is indicative of an error in the IFI, CFI or both, is intrinsically invalid. It is unreasonable to demand perpetual consistency between inventories over time, especially over a time span of four decades. Forest inventories are moving targets because forests are dynamic living systems that continually alter their growth relationships with time. Inventories are used as adaptive management tools that enable the scientific and professional community to acquire new knowledge over time. This in turn may warrant taking a fresh look at old assumptions and revisiting the analysis of old data.

It is relatively easy to find inconsistencies in any time series of data that spans 40 years of measurements, if one sets out to do so. Such an approach however, fundamentally misses the point. Rather than a liability, CDF believes such inconsistencies constitute a compelling testimony to the CFI's proven value as an adaptive management tool. The JDSF CFI data is an unequalled repository of historical resource information in the redwood region. The CFI system is still in use for both research and management, which is a testament to its quality and value as a feedback mechanism.

Response to Comment 241.6
Initial CFI inventories incorporated the premise of harvesting exactly equal to growth, thereby maintaining the initial age structure of the Forest and obviating the need for measuring heights at every remeasurement. The fact that past CFI reports did not update the height-diameter relationship to account for a maturing age structure over time does not indicate that historic nor current results are wrong. It simply reflects a gradual discovery of the fact that the Forest was not cutting as much as it was growing thereby creating an older forest and gradually requiring an update of the height-diameter relationship.

The commenter selectively quotes one of several factors of the cause of changes in diameter-height relationships in a forest over time, and incorrectly labels it as CDF's explanation. The February 11, 1999 letter from then-Director Wilson to Vince Taylor resolved the issues raised here.

The comment includes a CDF document that explains the differences between the CFI and IFI inventory results (comment attachment VT-IN-11). The comment provides figures 1 and 2 of the CDF document as comment Figures 2-7 and 2-8, and refers to them as showing volume as a function of diameter. This is not correct. The figures show the relationship of tree diameter to height. While the comment may be correct in stating there is about a 7% difference in the segment of the curves for redwood trees from 12 to 30 inches DBH, this is a difference in height, not volume. When this difference in height is converted to difference in volume, the difference is 14% as demonstrated in the CDF document provided with the comment. The CDF document also demonstrates how this 14% difference accounts for the majority of the difference in the CFI and IFI inventory results, given the statistical accuracy of the two inventories. The difference in diameter-height relationships is based on measured differences, not theoretical as indicated in the comment.

Response to Comment 241.7
A review of the CRYPTOS methodology used to estimate growth on JDSF is provided in the JDSF Option A document. Appendix 8A of the DEIR includes an independent review of the growth estimate on JDSF. The review indicated that although there are some concerns with the way CRYPTOS responds when trees are added to the understory of a modeled timber stand, JDSF was aware of this, made adjustments, and used the model appropriately. The modeled growth estimates were judged to be reasonable considering:

- modeled growth was more conservative than the measured growth
- future inventories would be used to monitor modeled growth against the measured growth, and
- adaptive management would allow JDSF to periodically adjust estimated growth levels.

Response to Comment 241.8
JDSF data collection procedures for the IFI and CFI, including the site index sampling protocol, is statistically unbiased and follows accepted sampling practices in professional forestry. This comment appears to arise from a lack of knowledge of the definition of site index in forestry and appropriate sampling procedures. Most forestry textbooks provide a thorough discussion of this subject.

JDSF data collection procedures for the IFI and CFI follow standard and practice in the industry. They are objective and unbiased.

The documents cited to support this comment, and other comments, question the validity of the data because field data collection procedures were clarified while in progress. To the contrary, this citation indicates that appropriate data collection quality control and quality assurance practices were in place. Check cruising field data and providing the results of the check cruise to the field crews is the standard practice. If problems are found or suspected, procedures are changed or other action is taken to address the problem. This is the process documented in the citation.

Response to Comment 241.9
This comment is incorrect. The 65 MMBF growth figure used in the DFMP and the DEIR is based on remeasurements of 141 CFI plots completed in 1999.

This comment appears to be based on an internal CDF memo describing a computer growth simulation based on remeasurements of 141 CFI plots completed in 1999. The memo in question simply describes an independent growth model projection done to compare with the estimated growth. It is standard practice in the industry to conduct independent simulations using several methods to compare with and validate an inventory or growth estimate.

Confusion may stem from the fact that the 1999 CFI remeasurement data was used in both the CRYPTOS run referenced in the comment and the calculation of the 65 MMBF growth figure used in the DFMP. It is interesting to note that the modeled future growth is fairly close to the measured past growth. The CRYPTOS run cited in the comment was completed by JDSF staff for in house use, not to support growth estimations for the Option A document, the DFMP or the DEIR. The allowable cut figure used in the DFMP is based on the JDSF Option A document. A separate set of CRYPTOS model runs were used in the Option A document. DFMP page 47 references the measured 65 MMBF forest growth and the Option A allowable cut of 39 MMBF.

All of the growth and allowable cut estimates are based on the standard of practice within the forestry profession and, while not directly comparable due to the different methodologies used and different objectives, they can be used in combination to develop a better understanding of forest growth on JDSF. As discussed in the Appendix 8A, measured growth provides insight on how the forest has grown in response to past management. Modeled growth provides insight on how the forest will likely respond to proposed management practices. Allowable cut estimations take into the various constraints that limit harvesting.

Response to Comment 241.10
CDF staff continually engages in vigorous debate about JDSF management. Sometimes they will exaggerate their discussion to get a point across, or play devil's advocate to explore the consequences of different viewpoints. CDF attempts to cultivate this kind of open discussion between our staff, and in fact view this as a strength rather than a weakness.

The material quoted represents one of many different viewpoints held by CDF Foresters on a variety of issues. Many of these communications constitute preliminary work products completed several years ago and appropriately should be interpreted in context of the eventual resolution of the issues that were discussed. None of this material present evidence to indicate the current management plan or DEIR is inadequate in any way. The DFMP and DEIR utilize current, statistically valid forest inventory information.

Validation: The IFI inventory was check cruised to rigorous standards and found to be accurate. The 1995 validation project was a preliminary work product. Its objective was to bring the IFI inventory data into a spatial GIS context. This was the beginning of a larger effort to begin a sustained yield plan project. The validation project was replaced by the sustained yield plan / habitat conservation plan project, starting in 1996.

This communication cited in this comment in regards to the validation project is quoted out of context. The remainder of the communication reveals that no concern about inventory accuracy existed. No particular problems were encountered beyond what is normal in inventory updates and data management.

Group Selection: Group selection is defined as an uneven-aged silvicultural method in forestry. The management plan proposes that the majority of JDSF acreage be managed under uneven-aged methods. It is also important to recognize that as part of JDSF's research and demonstration forest, the management plan attempts to maintain flexibility to implement as wide a range of different silvicultural methods as possible.

Response to Comment 241.11
The management plan describes in detail the criteria and decision process used in developing the five-year harvest schedule. JDSF foresters used IFI results along with other information including professional judgment and knowledge of on-the-ground conditions to develop the silvicultural allocation plan and the five-year schedule of THPs. This constitutes the standard of practice in the industry.

Response to Comment 241.12
The comment fails to include a critical component of the Forest Practice Rules (FPR) applicable to maximum sustained production (MSP). The code and regulation quoted in the comment provide guidance regarding MSP, while the FPR include a set of rules that THPs need to comply with to demonstrate MSP. The DEIR provides a discussion of the current rule requirements regarding MSP. Achieving MSP through compliance with the FPRs should also fulfill the Board's direction to manage State Forests to achieve MMAI. The Draft Management Plan and THPs on JDSF follows all the laws, regulations and policies pertaining to maximum sustained production, including the CMAI/MMAI mandate.

The CMAI construct by definition applies only to stands managed under even-aged silvicultural systems. The majority of the acreage on JDSF is managed under uneven-aged silvicultural systems, making CMAI a non-issue on the majority of JDSF acreage.

It is true that the point of CMAI for coastal redwood on medium to poor sites is not as well defined as for other conifer species in this area. The CMAI concept as used in forestry however, usually refers to stand growth not individual tree growth. Few if any stands on JDSF consist purely of redwood trees. Most stands contain a mix of redwood with other species such as Douglas-fir, for which the age of CMAI is well established. Consequently, the range of rotation ages we plan in the Management Plan are intended to bracket the age of CMAI.

The CMAI policy must be interpreted in context with all of the other BOF policies JDSF must comply with, in addition to the Forest Practice Act and the Forest Practice Rules. JDSF must balance the CMAI mandate with the requirement to annually sell high yield timber sales,

contribute to the local economy, and research and demonstrate a wide range of forest management practices. Elevating the CMAI policy to a status of exclusive priority would violate all of these other mandates.

CDF's approach to meeting all of the policies of the BOF has not changed since the last management plan in 1983. The BOF approval of the 1983 Management Plan indicates that CDF's balancing the CMAI mandate with other BOF policies as well as laws and regulations, meets the overall mandate of the BOF as expressed in their policies.

Some stands on JDSF, primarily on the east end, are below optimum conifer stocking according to many criteria. Achieving maximum sustained production in these stands may indicate harvesting before the age of CMAI.

Identifying the ages of CMAI for coastal redwood forests is an area of research that JDSF has engaged in for some time and that will continue as part of the research and demonstration mandate. Stands in old growth groves and many second-growth stands currently have and will develop rotation ages to bracket the CMAI of redwood trees.

Response to Comment 241.13
This conclusion is based on a misunderstanding of the requirements of the FPRs and the interrelation of the various documents that will govern JDSF management. As indicated in the DEIR, the management plan and the Option A plan to which the THPs will be tiered clearly demonstrates that all THPs on JDSF will achieve maximum sustained yield.

The discussion of criteria for developing the 5-year short-term harvest schedule includes management objectives articulated in the management plan, and stand manipulation priorities. Both criteria include the CMAI objective.

Response to Comment 241.14
The allowable cut is clearly defined in the DFMP. The management plan references the JDSF Option A plan for details of the methods used and modeling results used in deriving the allowable cut. CDF believes the JDSF Option A plan objectively establishes that this harvest level is sustainable and will not degrade forest values.

Response to Comment 241.15
This statement is not entirely correct. The inventory methodologies and growth estimations used to determine the allowable cut figure for the DFMP were evaluated as part of the DEIR process. JDSF has used currently accepted inventory methodologies conducted under the supervision of an RPF. Likewise, the growth estimations were conducted appropriately. When reviewed in its entirety, the determination of allowable cut in the DFMP is a conservative figure that should be below forest growth for at least the next several decades. The DFMP clearly outlined the process used to determine the allowable cut figure, and the DEIR conducted a review of that process and found it to be acceptable. There are many ways to conduct forest inventories and growth estimates. They each have strengths and weaknesses that need to be evaluated to determine the most appropriate method for a given set of circumstances.

Developing and conducting appropriate forest inventories and growth estimates for an ownership falls within the realm of professional forestry and professional foresters supervised the JDSF inventory and growth estimations. The comment indicates disagreement with the methodologies used, but this disagreement does not mean that the methods used or the results are invalid or incorrect.

Forests are characterized by very large areas and a large number of individual trees per acre, making inventorying parts of the forest each year and updating for growth and harvest on remaining acres a common practice. It is not uncommon for forest inventory data to be 10 – 15 years old. CDF's inventory efforts are continuously ongoing; parts of the Forest is inventoried each year. CDF's inventories and growth estimations reflect the standards of practice in the profession.

Response to Comment 241.16
The purpose of the Management Plan is to provide on-the-ground management guidance for JDSF foresters. The determination of the allowable cut and its supporting analyses is contained in the Option A plan for the Forest. The Option A plan includes the type of information requested in the comment regarding reduction of harvest potential in special concern areas. The Option A plan for JDSF has been submitted for approval to CDF Forest Practice and is currently under review.

The allowable cut calculation method used in past management plans and referenced in the comment is one possible approach to estimating an allowable cut. Many other approaches exist, including the approach used in the JDSF Option A plan. An allowable cut based solely on growth estimates and acreage reduction factors permits only a rudimentary ability to recognize constraints on timber production from other forest values. Such an approach allows no facility for evaluating the long-term consequences of proposed actions, an essential step in deriving a sustainable harvest level for forest stands, which can take many decades to grow to maturity. A long-term harvest schedule as used in the Option A plan, with explicit recognition of constraints on timber production from other forest values, allows a much more accurate estimate of the allowable cut. CDF believes the projections of forest growth used in the Option A plan accurately estimates true growth rates on the Forest.

Response to Comment 241.17
CDF believes the allowable cut estimate is conservative and constitutes an objective and accurate estimate based on the best available data. The methods used to arrive at the estimate are standard and practice in the industry and they are well documented.

The illustrative calculation provided to support the submitter's statement is meaningless in its oversimplification. Restricted acres are only in rare cases entirely removed from timber production; most often restrictions call for some kind of light harvest regime. Different stands in different areas of the forest have different rates of growth. The 1999 CFI data represents the most recent estimate of current growth on the forest.

Response to Comment 241.18

The DEIR does not and is not required to include all public comments submitted at the scooping sessions.

Response to Comment 241.19

Several comments request changes in the language of the management plan to correspond to the opinions of the submitter. CDF recognizes that there may be disagreements on many of the statements in the management plan. CDF however, believes the management plan, as supported by the EIR, is correct in its current form, and is based on substantial data, solid science and high professional standards.

The question the EIR needed to address is, given the current condition of the Forest, will the proposed action result in significant environmental effects. The EIR includes substantial discussion on past harvesting and silvicultural methods used on the forest that have resulted in the development of the current Forest condition. The effects of the proposed action on timber inventory and maximum sustained production of high quality forest products (MSP) is addressed in EIR section 6.3.6 Timber Resources - Project Impacts. The EIR found that when the proposed harvest levels are compared to either the measured growth or the modeled estimated growth, there would not be a significant environmental effect. This determination is based on forest inventory methods and forest growth modeling conducted under the supervision of RPFs. The DEIR, the DFMP and the Option "A" document all recognized the potential for discrepancies between modeled growth and measured growth. The DEIR determined that the periodic forest inventory updates were appropriate to monitor the relationship between modeled growth, measured growth, forest inventory levels and harvest levels.

Response to Comment 241.20

Several comments request changes in the language of the management plan to correspond to the opinions of the submitter. The comments presented are largely subjective opinion. CDF recognizes that there may be disagreements on many of the statements in the management plan. CDF however, believes the management plan, as supported by the EIR, is correct in its current form, and is based on substantial data, solid science and high professional standards.

Response to Comment 241.21

The commenter has presented no convincing evidence of inaccuracies in JDSF's inventory data, but merely speculative theories of "likely" problems with JDSF's inventory data and analysis. The JDSF inventory data support the statements made in the management plan and the DEIR. Comments focus on past management practices and largely disregards the management practices proposed in the DFMP currently under review. For example, it is true the old growth trees have been largely harvested from JDSF under past management plans. However, the transition from old growth harvesting to young growth management was considered beneficial, and demonstration of the orderly transition was one of the primary objectives of the State Forest

System. The DFMP focuses on retention of the remaining old growth and demonstrating continued management of young growth forests. The EIR recognized this and indicated that significant impacts to existing old growth resources are likely to occur.

The increase in miles of road reflects the relocation of roads from lower slopes with higher potential for impacts, to upper slopes with lower potential impacts. Although road miles may have increased, impacts have decreased. The road management plan included in the DFMP will continue this trend. This was recognized in the EIR.

Caspar Creek and Hare Creek were among the first areas logged during the original old growth logging, and therefore included the oldest young growth on the Forest. When JDSF started to harvest young growth, it was logical to start in the areas with the oldest young growth, with no thought given at the time to seral stage distribution. The clearcut harvest in the North Fork Casper Creek is part of the long term Casper Creek Watershed Study that has produced significant new understanding of forest management impacts.

Points (d) and (e) in this comment are misinterpretations of data as showing a negative impact or declining trend across the forest. Point (d) relies on figure 1 of the 1983 FMP, which shows a change in size class distribution over time, to indicate a declining trend. This data when considered alone is not enough to make such an interpretation. When additional factors such as age and volume are included, the size class distribution can be seen in perspective. When a stand increases in age and volume, as the other figures and tables in the 1983 management plan indicate, it would be expected to see an overall decrease in trees per acre and a shift in size class distribution with fewer smaller trees. This is indicated in figure 1 referenced above. Point (e) is a continuation of previous comments in general disagreement with current inventory results. However, the CDF document included as comment attachment VN-IN-11 demonstrates that the CFI inventory, when properly adjusted using the corrected diameter to height ratios, indicates a steady increase in forest inventory. As a final note, the EIR indicates that ongoing monitoring and studies show generally improving trends in watershed condition.

Response to Comment 241.22
It is not correct to assume that specific details of activities for the next five years are known now. Rotation ages, cutting cycles and specifics of silvicultural prescriptions are only specified in broad categories. Harvest plan boundaries, yarding methods, stream classifications, species occurrence during the year of operations and numerous other details are not know for individual projects. Completing a detailed analysis of these potential future projects would require a large amount of speculation and result in very uncertain findings. A detailed analysis of future harvesting will occur on a project basis through the THP review process. This tiered approach is in compliance with CEQA guidelines and is appropriate for the proposed management plan.

Response to Comment 241.23
CDF believes the statement is an accurate reflection of the contents of the management plan.

Response to Comment 241.24
The management plan strives to integrate all the plans for different disciplines into one consolidated management plan. CDF believes the recreation portion of the management plan is a solid basis for management guidance as well as public participation.

Response to Comment 241.25
Guidelines for forest management in neighbor buffers are spelled out in the management plan. Because of an infinite range of individual management situations, professional expertise of resource managers in each particular case guided by direction in the management plan is preferred. This is standard accepted methodology.

Response to Comment 241.26
The Railroad Gulch study is a long-term research installation. Logistical factors such as funding and staffing level commonly warrants modifying original study plans. CDF believes the Railroad Gulch study experimental design is robust to changes in treatment timing and the study continues to be viable.

Response to Comment 241.27
The Mendocino Woodlands special treatment area includes a portion of the Thompson Gulch watershed. The Thompson Gulch watershed also extends upstream beyond the boundary of the STA. One of the potential timber harvest operations identified in the short-term harvest schedule includes a portion of the Thompson Gulch watershed. The exact boundaries of the timber operations are not yet known. Those depicted on the figure constitute a very rough estimate. The upper Thompson Gulch operation, to the extent that specifics are known, will include a demonstration of silviculture designed to accelerate the recruitment of late-seral forest habitat. The specifics of the silvicultural prescription are unknown, and will not be known until such time as CDF personnel evaluate the area and consult with applicable fish and wildlife agencies on prescription design. DPR will also be consulted for that portion of the operation that may include the STA. The Department will not speculate concerning the specifications of this potential future plan or the environmental effects that may occur.

Response to Comment 241.28
Walter S. Roundtree, Deputy Attorney General, in opinion 47-4 (March 31, 1947) provided an interpretation of the types of uses that would be allowed in the Mendocino Woodlands Area based on the language contained in the transfer deed. In that opinion, a letter from the Assistant Secretary of the Interior dated October 31, 1946 is quoted as follows:

"I also believe that the harvesting of forest products in accordance with recognized conservation principles and practices, and the conducting of forest experiments and demonstrations would be compatible with the term "conservation purposes," since it is generally acknowledged that such economic and scientific utilization of timberland areas ultimately results in the conservation of our forest resources."

The Deputy Attorney General concurred with the Assistant Secretary of the Interior that the language of the deed does not preclude the logging proposed by the state.

Response to Comment 241.29 and 241.30
The forested landscape of JDSF is a constantly changing mosaic characteristic of a living ecosystem. The direction and rate of change varies with an almost infinite number of factors. This variability defies the imposition of rules, thresholds and quantitative standards. This issue is best dealt with on a case-by-case basis using professional judgment of experienced foresters familiar with the local conditions.

Response to Comment 241.31
The discussion of impacts on recreation in the DEIR uses standard techniques for analysis. CDF believes this discussion follows the standards of practice in the industry and is a meaningful basis for informed decision-making and public participation.

Response to Comment 241.32
An economic analysis of the alternatives is included in the DEIR. The estimate of employment related to timber harvest uses standard techniques for estimating short and medium term employment changes. Long-term studies of unemployed timber workers have demonstrated that workers do find other employment after their unemployment payments run out of if new opportunities emerge. The length of unemployment has been documented to be up to two years in many cases. Many workers have to take employment at jobs paying closer to the average wage in the county as opposed to the higher wage they received for their specific skill set in the timber industry. Economic costs to the state unemployment fund and individual workers will be high and directly proportional to estimated wage losses.

Response to Comment 241.33
A review of the economic effects and employment opportunities at JDSF from hiking, wildlife viewing, mountain biking, kayaking and general forest viewing showed no conflict between the recreation open access policy on JDSF and the limited acreage in timber harvests - they are complementary.

Tradeoffs between recreation values and timber values were considered in detail in the Option "A" harvest schedule that determined the allowable cut.

IV.10 Individual DEIR Mailed Comments P-186 to P-188

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

P-186

Wayne Thorstrom
29601 Sherwood Road ~ Fort Bragg,California 95437
Home Phone (707) 961-0374 ~ Email ATREAD@INREACH.com

February 20, 2006

To whom it may concern:

The issue I wish to discuss is the Jackson State Forest Management Plan and possible solutions that could be beneficial to the State of California and the men and women who risk life and limb to keep the logging industry healthy for all Californians.

1 Being one of five generations who have worked in the timber industry all our lives and have depended on our work to support our families and our neighbors as well as all the spin-off industries such as the furniture businesses, the building of houses and stores and all the items that support those industries, I therefore feel that I have the right to express my anger **and dismay regarding the problems that have arisen from those persons fighting and creating controversial arguments involving clear-cutting and the logging of Jackson Forest. The very fact that those yelling the loudest are from out of our area, and who only know the timber industries issues from "book-learnin"** (rather than hands-on learning)**, This is an insult! My family has worked in the woods for over one hundred years. Ask our advise!**

2

3 The forest is like a garden. A garden produces beautiful fruits and vegetables only when it is cared for in certain ways. When you neglect to prune a garden, for instance, the garden will not produce properly , if vehicles and/or people or animals are allowed to tromp all over it, the fruits mold and die or are not up to ones expectations. *A forest is not unlike a garden. A forest needs to be clear cut and the land left fallow for ten or so years. After re-planting, being fertilized, cared for and then, if left undisturbed the new forest is the beautiful renewable life giving resource it was intended to be. When the trees are harvested the stumps and bark and leaves are left as natural compost for the new growth and are mulched into the soil then the area is burned which cracks the seedlings insuring the new growth.*

4 **FACT: Select-Cut forest areas means that the logging company takes a few trees here and there and leaves smaller or undesirable trees all over the hill being worked on to be harvested at a later time, however, when, in a few years theses left over trees are big enough, the company goes in to fall them at the expense of pulling big equipment over and through the just planted areas killing all the new growth of the just planted trees. All the points spelled out above can be proven. An educated person can easily see the folly of the Select verses Clear-cut issue.**

5 **All our local newspapers have stated over and over that health benefits, jobs and related services are going to increase in cost by five-billion dollars in the next few years *and* the Governors' financial advisers are asking "where that money is going to come from?" Timber dollars have re-built San Francisco, have built the railroads ,paid for prisons, education, state workers, retirement, county taxes etc. TIMBER DOLLARS CAN SAVE CALIFORNIANS, AND SAVE THE BUDGET. Jackson State Forest if handled properly will save us for hundreds of years to come.**

Very sincerely yours,

Wayne E. Thorstrom

Wayne Thorstrom

Mailed Letter P-186

Response to Comment 1
The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in Section III.6.2 of the DEIR.

Response to Comment 2
CEQA requires that the EIR process allow for public comment, without regard to the area which they live. Many of the comments which express opposition to the proposed management are from the local area.

Response to Comment 3
The Board concurs that active management can result in increased productivity and a healthy forest. The Board recognizes that clear-cutting and other even-aged management systems have important economic and silvicultural advantages in many instances, and therefore they need to be retained as a management tool, but does not agree that all areas of JDSF require even-aged management to retain a healthy forest.

Response to Comment 4
The Board does not agree that (single tree) selection cuts are simply “high grading” with the result being a few trees that are small or undesirable left on the landscape. One of the guiding principles of forestry with regards to selection harvests is to leave the area well stocked, with the best growing stock retained, so that the resultant stand is highly productive and comprised of the best trees in all size classes (with the possible exception of leaving some lesser quality, broken topped or poorly formed trees due to their wildlife value). When properly applied, selection silviculture will not result in a first cut to remove the best timber, followed by planting, and a final cut to remove the remaining timber. Rather it is a continuous process of removing trees in all size classes, allowing for natural regeneration in the newly created openings, and for the remaining trees to utilize the newly created space.

The Board recognizes that selection harvesting, when compared to even-aged management, can require more frequent entries into a given stand and that damage to the residual stand and regeneration can be a problem. Also, for a given harvest level, the area affected by harvesting activities will be increased when utilizing uneven-aged management. However, much of the logging on JDSF will utilize cable harvesting systems which reduce the use of heavy equipment on the landscape.

Response to Comment 5
The Board agrees that it would be highly beneficial for the JDSF to fully resume management activities, so the Board is working actively to certify the DEIR and approve a management plan. The Board agrees that a resumption of timber production will have a positive impact for local, regional and the State economies. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

Fax:707-576-2608 Apr 10 '06 7:59 P.01

P-187

March 15, 2004

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460
Fax: (916) 653-0989

Resubmission
Jackson Forest scoping comments

Dear Mr. Gentry:

Thank you for the opportunity to comment on management at Jackson Demonstration State Forest. As we are in a scoping phase at this time, my comments will not be footnoted to voluminous supporting documentation. However, I will attempt to identify some of the sources for ideas I will present.

I also incorporate herein by reference the comments and materials I presented on February 27 in Ft. Bragg, and my comments regarding the previous draft Environmental Impact Report (DEIR) and the Final EIR (FEIR). My comments on the draft included substantial supporting documentation and I will
01 refer to it in this letter. Please note there is no reference to my comment letter in the Table of Contents of the Final EIR. However, the comments themselves may be found beginning at IV-359 and are cataloged as KB-255.

Additionally, the comments of Jim Strittholt, Director of the Conservation Biology Institute in Corvallis, Oregon are not included in the Table of Contents of the FEIR. Also, his comment letter is not included in the FEIR but rather only the cover page to the comments. CDF's response to
02 comments is included however. I am attaching the text of Dr. Strittholt's letter, which is an important one. But I do not have the supporting materials. I suggest you search through the files and find the original letter, which is catalogued as JS-239.

I recommend that, in addition to the above, you also particularly review submissions on the DEIR by:
Salmon and Steelhead Recovery Coalition SSRC-254
Save-the-Redwoods League RH-240
Mendocino Coast Audubon Society WW-237
S. Kim Nelson SN-200
Mad River Biologists RL-238
California Native Plant Society GJ-236
Patrick Higgins PH-250
Roger Sternberg RS-249

Regional Context

In my comments at the public scoping on February 27 in Ft. Bragg, I presented a brief version of the comments I made regarding the previous DEIR in relation to the immediate surroundings of Jackson Forest. In brief, these include:

Reply to: PO Box 256, Philo, CA 95466 707-895-3716 kb@pacific.net

Kathy Bailey, Sierra Club
JDSF scoping comments

03 Compared to other regions in the state, there is an extreme dearth of public forestland in the redwood region between San Francisco Bay and Humboldt County and in particular in Mendocino County. Jackson Forest is the only opportunity to protect and restore the region's depleted biological heritage and provide forest-based recreation for the public.

04 Jackson is surrounded north and south by the largest industrial timberland ownerships in the County, where intensive management has left these lands virtually stripped of trees in excess of about 40 years old. The land to the east of JDSF is in even worse shape. Stocking volumes and yield table comparisons were provided in KB-255. *Whatever one believes about the silviculture practiced on these adjacent timberlands, one must acknowledge they will not be late seral forests any time soon. Logging, agriculture, and development have virtually eliminated late seral forests in the region. KB-255 and JS-239 explain some of the reasons why late seral forests are ecologically important.*

05 The California Department of Forestry (CDF) has been intimately involved with enabling the loss of late seral habitat and other cumulative impacts that have occurred on the landscape. Jackson's management is rightfully proud to point out that Jackson's stocking levels are quadruple or more of what exists on the surrounding lands. But every one of the Timber Harvest Plans (THPs) that resulted in the low level of stocking on the surrounding lands, not to mention a radical change in the region's environment, have been approved by another part of CDF. In every instance, CDF approved the Registered Professional Forester's (RPF's) certification that the THP "will not have a significant adverse impact on the environment."

06 We can argue forever about the rules, CDF's application of them, and the causes that have led to the multiple federal and state species and water quality listings in the region. However, it boils down to this: Virtually everyone except CDF and the timber industry believes there has been an adverse cumulative impact on the environment in this region from the intensity of timber harvesting that has occurred here in the distant past, in the last twenty years, the last ten years, and yesterday. When the

07 public asks that management measures at Jackson make up for some of this by preserving and developing habitat, CDF prefers not to consider the regional context even though CDF is directly responsible for it being the way it is. This is one of the central disconnects between the environmentally oriented public and CDF managers.

08 Jackson is not only a unique opportunity. We believe CDF has a responsibility at Jackson to provide strong protection and consideration for wildlife, fish, plants, water quality, old forest characteristics, and native species diversity to provide some sort of mitigation for the immensely impaired condition of our region's forests. Additionally, as the largest publicly-owned forest in the area, Jackson also has a

09 responsibility to accommodate the public's desire for recreational opportunities.

10 To further clarify the legal underpinnings for management at Jackson, we are working with Senator Wes Chesbro on SB 1648 to update the management mandate and clarify further that research should be one of the most important functions at Jackson.

The Previous Plan

The previous draft management plan made a good first step when it stated that "equal consideration" would be given to non-logging concerns. We supported the Department in that statement. However, we think the plan itself was less than successful in implementing that intention because:

Kathy Bailey, Sierra Club
JDSF scoping comments

11 • Relatively small late seral development areas were designed as isolated islands rather than provided with the kind of connectivity that is important for biological functioning and resiliency.

12 • Watercourse zones were too narrow to function as late seral habitat while being counted as providing such habitat.

13 • Late seral targets for watercourse zones were vague.

14 • Class II and Class III watercourses received particularly low levels of protection, much less than federal standards for this region.

15 • The 80-120 year old stands, a rare resource in the region, received no consideration other than as timber production zones.

16 • Although some additional protection was afforded to the marbled murrelets nesting adjacent to JDSF, no real effort was made to implement the recommendations of the federal Recovery Plan and other murrelet experts to develop large-scale suitable habitat on the west side of the forest as soon as possible.

17 • The Resources Agency attempt to shift the focus for late seral development away from Jackson and onto its 2002 designated "Old Growth Development Area" was particularly inappropriate as the majority of this area had been recently clear-cut.

18 • Clearcutting under the guise of variable retention was a significant part of the logging program in spite of long-standing recommendations that it be eliminated except under very limited circumstances.

19 • The Plan characterized the concern about even-aged management and clearcutting as coming from "some people" rather than acknowledging that former CDF Director Richard Wilson's Citizens Advisory Committee for Jackson had recommended the timber program be conducted using unevenaged management except in rare circumstances.

20 • Key features such as the Camp One, Camp Three, Brandon Gulch area, West Chamberlain, James Creek, and the Road 408-409 intersection area did not receive effective protection from a diminishment of recreational values.

21 • Recreation planning was deferred to a future time in spite of copious existing information and interest.

22 • The old growth policy was not flexible or site sensitive enough to ensure that old growth in high elevations, dry locations, on the eastern side, or of Douglas fir was assured protection.

23 • The old growth aggragation policy did not include residual old growth.

24 • The commitment to protecting individual old growth residual trees except for those posing a safety problem was uncertain.

25 • The "small group selection" system (patch clearcuts generally 2.5 acres, but up to 5 acres in the older, larger forest stands) was a major component of the logging program (roughly one third) and characerized as "uneven-aged management" even though it is experimental and results in wildlife habitat that cannot even be classified under the Wildlife Habitat Relationship system.

26 • The snag and down wood recruitment policy did not establish clear and robust standards.

27 • The salvage logging program did not seem to be coordinated with snag and down wood recruitment considerations.

28 • There was no systematic monitoring program established to enable a forest-wide management feedback loop.

29 • No ongoing inter-agency input mechanism was established.

30 • No citizens advisory committee was re-established.

I regret if these remarks appear to be overly harsh, but it seems prudent to be direct. In spite of the concerns articulated, we recognize that the 2001 draft management plan was a major improvement

3

over the previous plan and was the product of thousands of hours of effort on the part of many people. The plan also had the strength of being relatively easy to comprehend by the educated layperson and not overly voluminous.

Two Separate Research and Demonstration Programs

There are two distinct sorts of research and demonstration occurring at Jackson:

31

1. *The overall, forest-wide demonstration of sustained yield logging and various silviculture techniques.* Aside from determining where to cut and how much, there is no scientific component to this demonstration. The money generated, roughly $14 million per year prior to the onset of litigation, was used for a variety of purposes including an insufficient level of funding for the operations and maintenance of the forest and an occasional burst of funding for research. I believe it is correct to say that a total of $600,142 was granted in fiscal year 1999-2000 for research in five of the state forests. As far as I know, this was the first round of state forest-generated research funding since at least 1992. So while there has been a glimmer of hope that logging could generate research funding, that funding has been the exception rather than the rule for most of the last decade. It is the logging program that has caused the controversy. Along with many others, we wholeheartedly support using money generated by logging to increase funding for forest operations and true scientific research. The total amount the forest is required to generate should be reduced.

32

2. *Specific research projects that are independent of the logging program.* Although these projects occur on Jackson and many of the other state forests, they are mostly independent of the logging program. The landscape of the state forest is the setting for this research but the research does not occur in conjunction with logging. Funding for the research comes from a variety of sources including, recently, the logging program at Jackson. There is virtually no controversy about most of these research projects. One exception was when large-scale logging and research combined at the Caspar Creek clearcutting trials. Another was the Railroad Gulch Uneven-Age management in the Woodlands Special Treatment Area. Again, when research requires commercial-scale logging *of mature forest*, controversy follows. Otherwise the public is supportive.

What is Being Demonstrated?

33

It seems worthwhile to discuss the logging demonstrations (that is 1, above) at greater depth because they are at the center of the controversy. CDF demonstrates various silviculture techniques that result in sustained timber production as defined by Board rules including a balance of growth and harvest over time. Logged units may be visited and one can search through the records to determine the silviculture treatments that resulted in the remaining stand. As far as we know, there is virtually no research function to most of the timber harvests. There is no process of: question asked, create a hypothesis, collect data, validate hypothesis. I do not know whether there is an attempt to predict growth of the stand for a period of time. I do not know whether someone ever checks whether, indeed, the predicted growth did occur. If these actions are taken, they are not reflected anywhere in the THP. The only validation I know of occurs at the forest-wide level when inventory is checked at specific inventory plots.

34

The principal demonstration for these THPs is that logging makes money. For instance, typical is the statement in the Brandon Gulch THP 99-483M, page 21:

> "The proposed timber harvest is expected to yield about 10-12 million board feet of timber and will contribute between $5,000,000 and $6,000,000 to the total timber sale revenue needs. [sic]

Kathy Bailey, Sierra Club
JDSF scoping comments

34 ctd

It will play a role in demonstrating the economic benefits of timber management and allow JDSF to meet the timber management objective of implementation of uneven-aged management to increase site productivity and realize maximum sustained production of high quality timber. The harvest will play a role in demonstrating the economic benefits of timber management in general while specifically demonstrating conversion of an even-aged stand to an unevenaged stand through single tree selection method while retaining the biological integrity of the stand.

"The specific timber management objective of this harvest is to begin the conversion of the stand from evenaged to unevenaged by establishing a regeneration age class while retaining sufficient stocking to support future regeneration entries."

I have included the entire section from the THP regarding the demonstration of the harvest lest I seem to be quoting selectively.

35

While I have no reason to believe the cut will not achieve these expectations, as far as I know there is no attempt to revisit the assumptions over time to see if the objectives have been met. The items that seem to matter most are the $5-6 million dollars and the forest-wide balance of growth and harvest.

36

There is nothing particularly wrong with this demonstration, but it seems to be demonstrating something long since accepted: Logging mature trees generates a significant amount of money. Sadly, these particular trees are among the few remaining stands of old second-growth in the County. According to the THP, page 19,

"Nearly all of the old growth timber in the plan area was harvested by steam donkey in the 1910s. Very few residual old growth trees remain (probably less than one tree per acre). There has been no harvesting to date in the second growth stand."

37

We can demonstrate that we can make money by cutting these trees. But isn't there some more "cutting-edge" [sic] way to utilize this stand? For instance, this area would seem to be one of the very few opportunities available to study natural regeneration after logging of the original old growth stand. What plant and animal communities rebounded by themselves? Which were lost? *Besides the opportunity for research that logging would foreclose, this THP is in the middle of the highest visitor use area at Jackson and has a high value left just as it is for recreation purposes.*

38

Some members of the public may object to any timber harvest in any location at Jackson. However, it is my observation that operation of selected THPs in specific places with high value to the public for recreation purposes cause the kind of outrage that leads to litigation. If CDF were willing to be flexible on the location and silviculture it uses in its timber production program, many of the serious controversies would evaporate. This may require not fully utilizing the immediate timber production capacity of the forest in the short term because one is "giving consideration to" recreation, wildlife, etc. The resource will still be there however. At the end of the10 year life of this plan, the decisions made today can be revisited. Meanwhile, the forest will continue to grow.

To Whom is the Demonstration Targeted?

At the February scoping event, a number of industry representatives said that the research done at Jackson is important to industry and is put to good use. Given the condition of local industrial timberlands, I have to assume they are referring to the scientific research done at Jackson, the specific

5

projects involving sediment production, etc. (type 2, above). If they were paying attention to the overall demonstration of sustained yield logging (type 1, above) local timberlands would more closely approach the stocking levels at Jackson instead of the 25% of that they actually have. This is not surprising as industrial timberland owners have a plethora of demands driving their timber production: debt service, mill utilization, stockholder expectations. Many of industry's financial imperatives do not drive timber production at Jackson. *It is when Jackson is made by Sacramento to emulate the industrial producers, when it is expected to produce $14 million a year for instance, that Jackson gets into trouble with the public.*

39

There is no point in continuing to hope that if Jackson demonstrates sustained yield silviculture the industry will follow. Their constraints make it unlikely, and it's too late already anyway. Additionally, they have in-house staff to design their timber management programs. However, Jackson might still be of service to the industry by experimenting with developing understocked or suppressed stands, hardwood utilization, and invasive weed abatement. Some stands at Jackson are already suitable for these demonstrations.

40

There is another audience that could benefit from logging and sustained yield demonstrations. Non-industrial timberland owners own half of the region's timberland. Some of those lands are stocked a lot better than industry lands and are capable of producing a significant yield of timber. These owners could sustain some of the region's timber production capacity and bridge the timber supply gap on industrial land. Non-industrials for the most part do not have staff resource management professionals so they need to turn to outside guidance. *Jackson could be a resource for non-industrials and the RPFs that work with them.* For the most part, non-industrials manage their timberlands for a variety of values: In addition to timber income generation, the land may serve as a first home, a second home, a recreation area for the family, or a business that provides recreation opportunities for the public. We believe that many non-industrials are likely to prefer uneven-aged management because it is more compatible to a multiple use situation. For a number of reasons, former CDF Director Wilson's Citizens Advisory Committee strongly recommended managing the entire forest using unevenaged management. Demonstrations on unobtrusive slash disposal, thorough post-operations clean up, and managing watercourses immediately come to mind. Unevenaged management (*not widespread group selection!*) (I have no complaint about cluster selection) would help alleviate many of the concerns about timber operations at Jackson.

41

Old Forest and Watershed Recovery
Research and Recreation Area (R & R Area)

Attached is a map of Jackson Forest in both a large 2 x 3-foot format and a smaller 14 x 17-inch format. It is built from the State Forest GIS with three additions. These are:

1. Recovery Research and Recreation Area (very light blue outline)
2. Marbled Murrelet Recovery Demonstration (turquoise outline)
3. Thompson Gulch Woodlands Special Treatment Area (STA) addition

42

Also indicated are vegetation by tree type, the existing old growth groves, the late seral management areas already designated by CDF in the most recent draft management plan, watercourses, conservation camps, selected roads, sub-watershed boundaries, adjacent state parks, previously designated research areas, campgrounds, and the enjoined THPs. The map expresses topography in shaded relief.

Kathy Bailey, Sierra Club
JDSF scoping comments

Recovery Research and Recreation Area

43 You need not faint. This is not intended as a no-logging zone although some features within it should certainly not be logged. The purpose of this area is to direct management toward:

- maintaining and developing older forest stands, including existing old growth and residual old growth
- strong protection for all watercourses and salmonid habitat
- careful planning to avoid diminishing values that are important for maintaining the enjoyment of low-impact recreational activities

44 The outline of this area builds on an area designated for uneven-aged management in the 1999 draft Habitat Conservation Plan (dHCP) (see dHCP map 14, Special Concern Areas). I removed a section on the west and added an area to the east in West Chamberlain that includes an old growth grove and old growth residuals.

45 The concept behind this R&R Area is to attempt to rebuild some contiguous older forest habitat, linking the existing old growth groves, some of the old second-growth, and including the Camp One area that is already a high use recreation area. Within the area is every old growth grove (459 acres total in 11 groves), much of the old growth residual, the already-designated late seral management areas, a significant chunk of the 100 year old second growth, much of the North Fork South Fork Noyo, West Chamberlain Creek, and North James Creek. These latter two are both tributaries to Big River, the other large watershed in Jackson along with the Noyo.

46 The idea is to *designate key features within this R&R Area as core protection areas that receive the highest level of protection.* Then, build out from them in a way that they are linked as soon as possible by developing older forest stands, particularly along watercourses, but also up and over watershed divides to link the three sub-watersheds. Rather than the island effect that occurs with the existing designated late seral management areas, contiguity would be established among these features that are so rare in this region. Although from the environmental perspective it would be great to see this entire area become an old growth development area, another approach would result in more modest, but still significant habitat improvement: Establish a watercourse-based core that links all the key areas. As one moves away from the key areas and watercourses, less stringent protection would be provided.

R & R Management Principles

47 Certain management principles should be in effect throughout the area:

- Maintain all old growth and old growth residuals except for safety concerns
- Use all old growth features as anchors for old forest development that create linkages
- Provide large watercourse zones that are at least equivalent to federal standards for this region
- Measure watercourse zones horizontally to automatically adjust for slope
- Enhance recruitment of snags and down wood
- Abandon timber operations at the Camp Three and Brandon Gulch THPs
- Maintain a component of the oldest, largest trees available during any timber harvesting, including healthy green trees
- The closer to the key features, the more old, large trees should be maintained and developed
- Provide visual buffers that emphasize large trees and enhanced post-operation clean-up on designated roads and trails including Roads 360, 361, 200, and 100, Trestle Trail, Waterfall Trail and others as appropriate

7

Kathy Bailey, Sierra Club
JDSF scoping comments

- Maintain and enhance appearance of ridgeline forest stands
- Use uneven-aged management and cluster selection
- Limit small group selection to specific research projects
- Encourage research on natural recovery processes

Key Features

For those who are not overly familiar with the forest, I am including a narrative that hopefully explains some of the rationale for designating something as a "key feature." Starting on the west, here are the key features and some of their attributes:

North Fork South Fork (NFSF) Noyo Core: Camp One, Camp Three, Brandon Gulch, designated late seral development area with old growth core, NFSF Noyo River, Roads 360 and 361, Trestle Trail.

48 Beginning at Camp One at the confluence of the South Fork Noyo and the NFSF Noyo is an area of 100 year old second growth that includes numerous long-established camps and campsites, the Department of Fish and Game egg taking station, Road 300 to Road 361 along the NFSF Noyo, and Road 360 along Brandon Gulch. This is one of the highest visitor use areas at the forest. The entire area is currently characterized by closed canopy redwood forest (regionally rare) and appears to be relatively stable. *Road 361 along the NFSF Noyo is an extremely rare resource in this region as it travels along a flat to low gradient stream reach with major year-round stream flows. Being deeply in the forest there is no highway traffic and the surrounding redwood forest is peaceful and well-healed from the historic logging. Roads with these sorts of attributes are close to non-existent elsewhere in the region.* It is regularly used by hikers and equestrians. The much shorter Road 360 along Brandon Gulch, tributary to the NFSF Noyo is more trail-like with more of a gradient along a lesser watercourse. It is nevertheless a favorite forest walk from the nearby campsites.

49 Within the Camp Three THP is one of the highest peaks in this section of JDSF at 900 feet. It is poised over steep terrain leading to Road 360. A review of dHCP map 6b, Slope Class, indicates that this ridge overlooking Road 360, as well as part of the Brandon Gulch plan across from the Camp Three THP are within the steepest slope category mapped: over 50% slope, relatively unusual in this part of the forest. *The designated late seral development area is adjacent on the west of Camp Three THP and is also shown to be over 50% slope.* Standing near the tractor unit at the top of the Brandon Gulch THP that was partially operated, one can look east along the NFSF Noyo valley to a vista that includes the Camp Three THP and the designated late seral development area. The hillsides and ridge tops are, for the most part, closed canopy and lush green. The recreation experience at Jackson would be better maintained if they stayed that way.

50 The Trestle Trail takes off from Road 360 uphill toward the late seral development area at the headwaters of the NFSF Noyo (see next section). The Hi-Lo Trestle THP, completed around 2000, is adjacent on two sides to that late seral area and also adjacent to the Waterfall Grove area. Trail attributes will take some time to recover and logging has made the late seral development area into something of a peninsula.

NFSF Noyo to West Chamberlain Core: Designated late seral development area with two old growth groves at the headwaters of NFSF Noyo; adjacent designated late seral development area including Eric Swanson Memorial Waterfall (old growth) Grove; West Chamberlain residual old growth: Road 200, Waterfall Grove trail, Camp 20 old growth.

Kathy Bailey, Sierra Club
JDSF scoping comments

These two adjacent late seral development areas encompassing three old growth groves span the divide between the NFSF Noyo and West Chamberlain Creek, tributary to Big River. North of the Noyo-side late seral area is an area that was logged prior to 1986. The Hi-Lo Trestle plan logged directly adjacent to the northeast and south of that late seral development area. The north forest boundary is nearby, as is Road 1000, a major forest roadway that in many places forms the north boundary. Depending on the east-west location, the other side of the boundary is either Hawthorne/Campbell (toward the west) or Mendocino Redwood Company (toward the east). One generally does not need a map to discern the boundary line. A few large trees, including some old growth are scattered along Road 1000.

51

The Eric Swanson Memorial Waterfall Grove is the highest use feature within the forest according to CDF and has a small late seral development area designated around it. It is a fairly steep climb along the Waterfall Trail down to the multiple tier waterfall. A brass plaque recalls the late timber reform advocate Eric Swanson. The grove, at a fairly high elevation, is notable for its very small diameter, yet tall redwood trees. The grove exhibits distinctive features that are not generally seen in more lowland old growth. Road 200 descends at a noticeable slope along West Chamberlain Creek toward mainstem Chamberlain and Highway 20. The roadside is characterized by rock outcroppings, delicate understory plants, and scattered residual old growth, for the most part Douglas fir. It has been quite some time since timber operations in West Chamberlain, well prior to 1986. The road is heavily traveled both because of traffic to the waterfall and Road 1000, but it is also the only road used to access the Boy Scout Camp along the mainstem Noyo River to the north of Jackson. Campers, adult volunteers, and staff regularly travel up and down Road 200. Naturally, traffic is heavier in the summer, but staff accesses the camp year around. Road 200 is also a conduit for those accessing this part of Road 1000 for firewood collection or other purposes.

52

Road 200 travels down past the junction with Road 250 and then travels along the mainstem of Chamberlain Creek, crosses it and passes the Conservation Camp just before hitting Highway 20. There is a modest loop trail along the hillside in a modest old growth grove. Camp 20 is a major wayside stop for those traveling from Ft. Bragg to Willits. Across Highway 20 is Jackson's new Forest Learning Center. Chamberlain Creek meets Big River here.

53

James Creek Core: Road 231 Ridge, James Creek, North Fork (NF) James Creek, Road 100, NF James Creek old growth and designated late seral development area.

Rather than connecting the R & R Area along Highway 20, the large power line right-of-way and Big River in a steep and twisting gorge, I have set the linkage from Chamberlain east to James Creek over the ridge transected by Road 231 to the south of Park Gulch, a tributary to Chamberlain Creek. James Creek, a tributary to Big River, is the most easterly watershed on the forest. It has not been logged for a long time, but the stand is very spotty. Coming into the drainage, Highway 20 follows James Creek. It is less than 10 miles to Willits from this point. Road 100 takes off at an acute angle. The terrain is very steep (mapped as greater than 50% slope) and appears to be quite unstable. For a time, road 100, James Creek, an old growth grove and Highway 20 share a very compressed horizontal plane with a big elevation change. Highway 20 would have likely dropped directly into James Creek if the old trees had been removed. Gradually, Road 100 moves away from Highway 20. At the fork, it follows North James Creek (to the west of the mainstem) and becomes separated from the highway by a ridge. In several places the very scattered dominant trees are old growth residual redwood and Douglas fir. The mid-canopy tends toward hardwoods, and conifer regeneration is evident. There is a very large slide on the east side of the creek.

54

9

55 Eventually, Road 100 follows along North James and crosses it at a parking area where an unnamed tributary joins it. There has been a lot of riparian salvage logging in this area and the stream is backed up and more or less buried in a number of places.

56 Those who fail to proceed uphill again miss what is perhaps the most spectacular old growth grove on the forest, near the headwaters of James Creek. Old growth residuals appear and eventually merge into a very quiet, relatively large old growth grove of very tall, medium diameter redwood, with some Douglas fir. With the exception of Montgomery Woods State Reserve about 10 air miles to the south-southeast, this grove is the most easterly old growth coast redwood grove in the County. [Incredibly, much farther east there is a small grove of old growth redwoods in a gulch at the tiny Las Posadas State Forest near Angwin in Napa County. The forester there told me that as far as he knew the grove there is the most easterly old growth coast redwood grove known. The trees there are very small diameter, but old growth nonetheless.]

57 Continuing uphill on Road 100, one comes to the edge of the forest and a private gate that looks like it is often locked. Passing through it one joins Road 1000 again with a big view into the mainstem Noyo, MRC land, and distant meadow covered hills. Those attempting to follow Road 1000 west back onto Jackson again, can quickly become bogged down unless driving a serious four-wheel drive vehicle, even on a warm spring day with no rain for a couple of weeks. The absence of drainage is a typical situation on many stretches of Road 1000. Eventually it would be nice if Road 1000 could link the areas described, but it will take serious investment in road work to make that feasible.

Marbled Murrelets

58 The marbled murrelet (Brachyramphus marmoratus) is a small diving seabird that nests on the limbs of old-growth trees within, in California, approximately 25 miles of the sea. In early 1992, it was listed as endangered by the California Fish and Game Commission pursuant to the California Endangered Species Act (CESA). In late 1992 it was listed as threatened by the U.S. Fish and Wildlife Service in pursuant to the federal Endangered Species Act (ESA). Federal Critical Habitat was designated in 1996. The final federal Recovery Plan was published in 1997. Under the federal listing, Jackson Demonstration State Forest is designated as critical habitat for the marbled murrelet.

59 State agencies like CDF and the Board appear to have specific duties in relation to the California Endangered Species Act (CESA) that are more stringent than what would be applied to private ownerships.

> 2055. The Legislature further finds and declares that it is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species and shall utilize their authority in furtherance of the purposes of this chapter.
>
> 2061. "Conserve," "conserving," and "conservation" mean to use, and *the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.* [emphasis added] These methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition, restoration and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Kathy Bailey, Sierra Club
JDSF scoping comments

60 The federal Recovery Plan is the best available science regarding how best to conserve marbled murrelets. Its recommendations to develop new murrelet habitat should be applied at Jackson.

Marbled Murrelet Recovery Demonstration

61 On the map I have provided, two areas are outlined on the west side of the forest as a Marbled Murrelet Recovery Demonstration. Noted murrelet expert S. Kim Nelson commented during the previous EIR process that it is important to provide strong protection for existing murrelet sites and recruit habitat on the west side of the forest where access to the ocean is good. These Recovery Demonstrations are proposed to address her concerns and the recommendations in the federal Recovery Plan.

62 In addition to the outlined areas described below, potentially suitable recruitment habitat appears to exist on the eastern segment of the Woodlands STA adjacent to habitat on the Mendocino Woodlands State Park directly to the south as well as in Thompson Gulch (discussed below). We recommend consultation with State Parks and the Department of Fish and Game regarding management in these areas.

Russian Gulch Watershed

63 One demonstration is proposed for the headwaters of the Russian Gulch watershed, upstream from Russian Gulch State Park, the location of one of only four confirmed nesting sites for marbled murrelets in the region extending from the north Mendocino County line to San Francisco Bay. This area was targeted for two special treatments under the Old Growth Development Area designated by the Resources Agency in 2002. Most of it was designated as "JDSF old growth development." The remainder was designated "unevenaged management with structure retention." There is a potentially significant difference between managing forestland to produce big, old trees, and to produce suitable murrelet nesting habitat. We propose that this entire area be specifically designated for recruitment *as marbled murrelet habitat*. As forest openings are potentially very negative for murrelet nesting success, the entire outlined area should be recruited rather than simply a portion of it.

64 The current forest cover includes a variety of species, ages and size classes. The most southerly portion of this proposed demonstration area is adjacent to the new Big River Estuary State Park that was also designated by the Resources Agency for old growth development, although as I pointed out in February, most of the new acquisition has been recently logged. This most southerly edge of Jackson is within around a quarter mile of Big River in some locations, an important consideration for murrelet nesting.

65 Some of the land within this demonstration area supports pygmy forest that is obviously unsuitable for murrelet nesting. However, it will be important to manage the pygmy area in a way that supports nesting in the adjacent forest. For instance, avoiding garbage and other human-caused problems is necessary to minimize predation of murrelet nests by corvids.

Jughandle Creek Watershed

66 A second murrelet demonstration is proposed for the headwaters of Jughandle Creek, adjacent upstream to the Jughandle State Reserve, which was also designated by the Resources Agency as part of its 2002 Old Growth Development Area. The purpose would be to develop suitable nesting habitat

in a location that has favorable characteristics, in this instance, less than a 1.5 mile run to the ocean, all of which is already protected by State Reserve. Importantly, the headwaters area on Jackson is already forested mostly with older trees. A review of dHCP Map 12, Goshawk and Marbled Murrelet Surveys, indicates no murrelet surveys have been done in this watershed, at least on the Jackson part. When funding allows, undertaking such a survey may be advisable as this watershed has similar characteristics to the Russian Gulch drainage. Jughandle is separated from Russian Gulch by the Caspar Creek watershed.

Pygmy is also included in this area raising the same concerns as those noted above.

Marbled Murrelet Management Principles

Neither of these watersheds is ideal for murrelet habitat development but they appear to be the best choices among the available options. Ideally one would prefer a large intact watershed away from all roads and human activities. That murrelets are already nesting in Russian Gulch suggests they can tolerate something less than the ideal. Lessons learned from the Jackson demonstrations can be applied in other locations, for instance the new Mill Creek acquisition in Del Norte County. The murrelet demonstration should be managed according to the following principles:

67

- Collaborate with State and Federal wildlife agencies and other experts
- Maintain and develop closed canopy
- Avoid corvid perches that overlook nesting habitat
- Avoid garbage and activities that draw corvids
- Avoid firearms activity
- Experiment elsewhere with nest limb development
- Apply nest limb development techniques when perfected

Thompson Gulch Addition

68

An area directly north of the Woodlands STA is outlined on the enclosed map in pink. This is Thompson Gulch, a tributary to the Little North Fork Big River that flows through Mendocino Woodlands State Park. In the Resources Agency 2002 designated Old Growth Development Area, Thompson Gulch was slated for "unevenaged management with structure retention." We suggest that it should be designated the same way as the Woodlands STA and Mendocino Woodlands State Park i.e. Old Growth Development. Further, the area should be scrutinized for possible inclusion in the murrelet habitat demonstration. It has good access to Big River, already has some mature timber, and is relatively isolated from human activity. These characteristics make it attractive for potential murrelet habitat development although ocean access is more indirect compared to Russian Gulch and Jughandle.

Additional Recreation Concerns

69

Even though we haven't included the area in the mapped R & R Area, it must be acknowledged that Little Lake Road (Road 408) and Caspar Little Lake Road (Road 409) are conduits to Jackson for many recreational users, predominantly neighbors, bicyclists, walkers, and mushroom hunters. Some sort of balance among timber production, aesthetics, and fungi habitat will need to be struck if harmonious relations are to be maintained.

70

There also appears to be significant use of side roads around South Caspar Creek by bicyclists and hikers. Again, unevenaged management, increased

attention to clean-up, and perhaps some sacrifice in timber yield to maintain aesthetics could be the formula that allows competing interests to co-exist in these areas.

Fisheries

71 Although we have not gone into fisheries and watershed issues in detail here, one effect of the R & R Area would be to provide strong protection in the included area. The forest is operating on a "no-take" basis, and should consider the informed opinions of fisheries specialists who believe standard Board rules are not adequate to protect watercourses. The watercourse standards recently adopted by the California Department of Fish and Game are "incidental take" standards. "No-take" standards must be more protective.

72 In the previously approved plan, protection for Class II and Class III watercourses was particularly disappointing. It should be recalled that the National Marine Fisheries Service guidelines provide protection for Class II *equal to* Class I. This is a reasonable approach that should be adopted at Jackson. Class III protection is one of those places that Jackson could do some serious research, research not driven by the desire to prove that current Board rules are just wonderful. This goes back to the question of who we are demonstrating for. Let us admit that Board rules are greatly influenced by the economic constraints of the timber industry. If Jackson is to demonstrate management techniques for non-industrial owners, as we believe it should, then you are liberated to work on standards that are more multi-purpose. Sure, Mom and Pop want a decent return, but they may want to fish again someday too.

Old Growth Policy

We make the following recommendations regarding further strengthening measures that should be taken:

73
- Retention standards: A review of presumed old growth trees should be undertaken to determine whether the 48" dbh default standard is appropriate, particularly for Douglas fir old growth, and particularly on the east side, in the higher elevations, or on poorer soil sites on the forest. The point should be to determine a standard that is the most inclusive practicable, even if it is necessary to distinguish standards among species or sites. The 48" standard may be too high in some common circumstances.

74
- Aggregations: If taken literally, the aggregation policy would exclude the aggregation of scattered residual old growth because the standard requires "an obvious, intact, undisturbed remnant of the original stand...." By far and away the most common occurrence of scattered old growth for potential aggregation is among residual trees that were left after a stand was logged. These would not be either "intact" or "undisturbed." For instance there are many scattered residual old growth trees along West Chamberlain Creek, but the stand has obviously been logged in its history. Besides changing the language of the aggregation policy, I strongly suggest that specifically you designate the West Chamberlain area as an old growth aggregation. There are, no doubt, many other areas of scattered residuals that should be aggregated as well. These should be designated as soon as possible, and mapped.

75
- Single Old Growth Trees: Recent research by M.J. Mazurek of the Pacific Southwest Research Station, US Forest Service, confirms that even single old growth trees provide important habitat.

Kathy Bailey, Sierra Club
JDSF scoping comments

Except for imminent threat to human life that cannot be mitigated, every old growth tree should be retained at Jackson. Considering this plan is likely to be in effect approximately 10 years, we should err on the conservation side when it comes to virtually irreplaceable old growth trees, regardless of their size and location.

Information Requests

76 It would be helpful to have the location of the 80-120 year old stands mapped. These are unusual resources and whatever is decided about their management should be done with a conscious knowledge of their whereabouts. Mapping would also help facilitate research on the range of responses these stands exhibit after a century without much human interference.

77 It would also be helpful to have the location of concentrations of residual old growth mapped. This would not have to be overly precise. A shaded area indicating general location would be sufficient. Although I have identified at least two concentrations of residuals, others may exist that I have overlooked.

Previously Adopted Mitigations that Have Been Withdrawn

State Forest Director Chris Rowney indicated in late February that one effect of the court order setting aside the FEIR was to undo mitigation measures that had been adopted as part of the EIR process. In looking over the mitigations that were included in Section VII of the FEIR, I see that I am making
78 recommendations that partially overlap and expand on Mitigation 11, Russian Gulch. Additionally, as a bare minimum, we support continued inclusion of Mitigation 6, Snags and recommend that it be
79 strengthened. Our failure to comment on other of the previously proposed mitigations should not be construed as lack of support, but rather lack of expertise. We will defer on these to those with greater knowledge.

Reinvestment in Forest Resources

80 Working under the assumption that a Management Plan and FEIR will eventually be adopted and implemented, we presume that at some point some amount of money will again flow from the forest. We hope that there is some way that there will be a very significant increase over past practice in allocating that income toward supporting the needs of the forest for personnel, maintenance, and improvements. For instance, the road inventory should be completed as soon as possible and maintenance and repair projects undertaken in an expedited fashion. The forest should be allowed to hold on to enough money to make up for the years when money has been tight to nonexistent until the program has recovered its strength.

Research

81 Again, assuming some money begins coming into the system, research should be the next priority after forest reinvestment. We would like to see some sort of research advisory committee convened that includes experts in a variety of fields, including fisheries, wildlife, botany, and ecosystem processes. Such a committee could advise CDF and the Board about priorities for research and demonstration.

14

Kathy Bailey, Sierra Club
JDSF scoping comments

Now is the Time

I am optimistic that the new lead agency situation provides a great opportunity to resolve this long-standing conflict. Now is the time to resolve controversies and to establish a mechanism that allows for the kind of on-going meaningful communication that can avoid the development of crises in the future. We hope to work cooperatively on these issues.

Sincerely,

Kathy Bailey
Forest Conservation Advocate

15

Mailed Letter P-187

Response to Comment 1
This is a procedural note associated with the EIR process of 2004.

Response to Comment 2
This is a procedural note associated with the EIR process of 2004.

Response to Comment 3
The DEIR provides substantial documentation of the public owned redwood lands throughout the entire redwood region. The comment somewhat arbitrarily identifies a portion of the range of redwood within California (San Francisco Bay to Humboldt County), stating that Jackson Demonstration State Forest (JDSF) is the only opportunity to protect and restore the region's depleted biological heritage and provide forest-based recreation for the public. While JDSF represents a relatively large piece of public land within this geographical region, it is small relative to the range of redwood within this area and within the greater range of redwood. In addition, all redwood forest within the region represents an opportunity to protect and restore the region's biological resources. Within Mendocino County alone, there are over 20,000 acres of redwood forest in public parks and reserves. These areas, in addition to the many public coastal beach areas and JDSF, offer significant recreational opportunities for the public.

Response to Comment 4
The assertion that the surrounding private forestlands have been left virtually stripped of trees in excess of 40 years old is not supported. The Board agrees that there are many acres of timberland surrounding JDSF that will not be late seral forests in the near future, due to past management activity. There has been no inventory of regional forests by seral stage, but available data derived from remote sensing indicates that there is a considerable acreage of habitat for many species available on the surrounding lands, including habitat for the northern spotted owl. The northern spotted owl is known to roost and nest in stands greater than 40 years of age. However, relatively little old growth redwood forest is known to exist in Mendocino County.

Response to Comment 5
The comment is a general one on the effectiveness of the THP review and approval process as well as the effectiveness of the Forest Practice Rules at protecting late seral forest conditions. The comment is not directly related to the DEIR. The DEIR and RDEIR include sections that addresses cumulative effects (see DEIR Section VIII, RDEIR Section IV).

Response to Comment 6
The current DEIR/RDEIR includes an extensive analysis of the cumulative effects of land and forest management practices. That analysis concludes that environmental conditions on JDSF and adjacent ownerships within the analysis area have improved over time and are expected to continue to do so.

Response to Comment 7
The regional setting and the areas designated for assessment of impacts have been expanded since this letter was written in 2004.

Response to Comment 8
The Board believes that the Administrative Draft Final Forest Management Plan (ADFFMP) does provide the protections the comment identifies. The role of JDSF with respect to recreation is spelled out in the Public Resources Code (Sections 4631 et seq.) and Board Policy number 0351.5.

Response to Comment 9
JDSF offers abundant recreational opportunities and has plans to expand these opportunities (see ADFFMP, Recreation, Aesthetics and Public Use, and Appendix VII). In addition, please see General Response 14.

Response to Comment 10
SB 1648 was approved by the Legislature and subsequently vetoed by the Governor. Alternative F includes some provisions that are similar to elements of the proposed legislation.

Response to Comment 11
The effects of proposed management upon connectivity have been considered. The ADFFMP identifies forest stands to be managed in order to develop late seral forest conditions and older forest structure conditions in the future. This will represent an increase in this type of forest relative to what exists today, and represents a relatively new management proposal for the Forest that has not been included in prior management plans. See Spatial Pattern Analysis for Species of Concern, DEIR Pages VII.6.6-216-240.

Response to Comment 12
The ADFFMP proposes to develop late seral forest characteristics within the watercourse and lake protection zone (WLPZ), which represents a potential future increase in these forms of forest characteristics. It is likely to take additional decades or centuries for some of this area to fully develop into late seral forest. The functionality of the habitat that is created will vary by species that utilizes the habitat that is created in conjunction with other adjoining and nearby habitats.

Response to Comment 13
The goal is to retain and recruit large trees, native hardwoods, snags, and down logs, while also retaining a high level of overstory canopy and basal area. Due to the fact that a single unique definition of late seral forest does not exist, the characteristics of the forest habitat that develops will be quite variable. It is expected that future research projects and management planning efforts will help to define habitat targets in the future as conditions change and more is known about these forms of habitat.

Response to Comment 14
The level of protection that is specified in the ADFFMP is considerable, but represents a programmatic minimum that may be exceeded in individual projects. The planned protection measures will protect against sedimentation, while retaining and recruiting large trees, a high level of canopy and basal area, and a significant level of ground cover. Class III watercourses are those that generally flow seasonally in response to rainfall. The protection specified for these watercourse channels primarily consists of measures to limit or avoid slope instability and sediment introduction. As projects are planned in the future, the need for additional protection will be assessed.

The federal government has established interim watercourse protection standards for federal lands until site specific requirements are identified through watershed analysis. Watershed analysis has been conducted on JDSF.

Response to Comment 15
No regional inventory exists of young stands by age class. Stands of young-growth forest between 80 and 120 years-of-age are not considered a rare resource in this region, nor identified as such by the Department of Fish and Game. The potential impacts to forest species have been considered in detail (see DEIR section VII.6). The analytical approach of the DEIR was to use known stand characteristics (species composition, mean stand diameter, canopy closure, multi-layered structure) to describe stands rather than less certain and less descriptive information on stand age. These stand characteristics can be used in standard models of wildlife habitat and wildlife habitat quality (i.e., the California Wildlife Habitat Relationships System or CWHR). Stand age information does not provide a meaningful model input.

Response to Comment 16
JDSF has been classified as critical habitat for the species (see DEIR page VII6.6-88 for description of the designation). The ADFFMP has been formulated to prevent significant impacts to the species. The Department proposes to increase future habitat availability for the marbled murrelet, while recognizing that it may take decades to centuries for the habitat to develop. The ADFFMP proposes to designate 3,700 acres on the western side of the Forest for the development of late seral forest conditions that could provide potential murrelet habitat.

Response to Comment 17
The statement is not sufficiently clear to enable a reasoned response. The location of the area being referred to is unclear. Very little contiguous area of JDSF has been "recently clear-cut".

Response to Comment 18
The variable retention and clearcutting prescriptions are not the same. To-date, although the system has been in used periodically since the 1990s, the use of the variable retention system has not been wide-spread on JDSF. Most of the area that is harvested on an annual basis is managed on an uneven-aged basis that uses forms of the selection system. Variable retention is utilized to provide an improvement over the clearcutting system relative to habitat retention and recruitment. The ADFFMP includes very specific limitations on the use of clearcutting and other even-aged silvicultural methods.

Response to Comment 19
The Department did not imply that the term "some people" excludes the former Citizen's Advisory Committee, nor any other group or individual.

Response to Comment 20
In addition to the programmatic assessment provided in the DEIR, all proposed projects will be evaluated and their potential impacts upon recreation will be assessed at the project level. Plans will be mitigated to prevent significant impacts upon recreational users. Areas with concentrated recreational use, such as Camp One, Camp Three, Brandon Gulch, and West Chamberlain Creek, include visual buffers and restrictions upon silvicultural treatment, the timing of timber operations, and other activities.

Response to Comment 21
The timing of recreational planning is not a significant environmental issue. The existing recreational resources will be maintained and protected, and future improvements or additions will be considered. See General Response 14.

Response to Comment 22
The concern is not stated with sufficient clarity to enable a reasoned response. The policies proposed in the ADFFMP for protection of old-growth trees, aggregations, and groves apply in all areas of the Forest, and include individual old-growth trees with specified structural elements, regardless of tree size, conifer species, or diameter. See ADFFMP Appendix IX.

Response to Comment 23
The plan includes protection of individual old trees that meet the specifications outlined in the ADFFMP. Areas that have been logged previously do not meet the definition of an old growth aggregation. However, groups of old trees that meet the specifications for protection of the individual trees will be retained. Individual old growth trees will be retained as described in ADFFMP Appendix IX.

Response to Comment 24
The concern is unclear. The Board will not speculate as to why the policy is uncertain, nor can the Board speculate as to each potential situation where a public safety issue may arise.

Response to Comment 25
The group selection system is not an experimental system. The system has been in use for decades and is a widely recognized form of uneven-aged management. The system is well described in the literature (David M. Smith, The Practice of Silviculture, Eighth Edition, John Wiley & Sons, 1986). Limitations of the California Wildlife Habitat Relationships System (CWHR) in characterizing group selection does not invalidate the silvicultural method, which has been in existence for a much longer period of time than the habitat evaluation model. The Forest Practice Rules limit group selection openings to 2.5 acres [14 CCR 913.2(a)].

Response to Comment 26
The snag and down wood policies established by the ADFFMP provide clear standards for both numbers and sizes of snag and down log targets (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure and Appendix IX). Recruitment is augmented by mitigation specified in the DEIR (Section VII6.6.7) requiring that all snags be retained until the standards are met.

Response to Comment 27
As stated in the ADFFMP, salvage operations are generally limited to areas near roads, and other site-specific measures that are established by the forest manager, based upon observed conditions. The snag and down wood targets are to be averaged over a 160-acre area, leaving ample opportunity for recruitment, while taking into account variability in recruitment potential based upon stand age and silvicultural treatment. Snags may not be removed by salvage operations until targets have been met (ADFFMP Chapter 2, Salvage Sawlogs and DEIR Section VII.6.6.7). Also, please see ADFFMP management provisions for species of concern (Chapter 3).

Response to Comment 28
Please see the ADFFMP for a general list of research projects that may include monitoring, and a discussion of current and proposed monitoring practices (Chapter 5 and Appendix IX). These plan elements will enable a feedback loop directly to the forest management staff, since the forest management staff plays a key role in both planning and collection of monitoring data.

Response to Comment 29
The concern being expressed is not clear. Most of the major projects conducted on the Forest, including all THPs, are subject to interdisciplinary review, primarily by the Department of Forestry and Fire Protection, the Department of Fish and Game, and the Regional Water Quality Control Board. In addition, JDSF staff and staff of various agencies consult on potential research and monitoring projects.

Response to Comment 30
The Department has established an advisory committee for the state forest system independent of the JDSF management planning process. The committee has been conducting meetings, and has most recently provided comments to the Board regarding the JDSF EIR. Ms. Bailey is a member of the committee. The Director and Board will soon establish new a JDSF advisory committee, and the Board will re-establish a research advisory committee for the State forest system. Both the State-wide and JDSF advisory committees are expected to advise the Board and the Department on implementation and policy issues relative to the management of JDSF.

Response to Comment 31
Although not every forest operation contains a unique scientific component, all include preharvest forest inventories and written timber harvest plans that document stand treatments and logging operations. These management operations help to create the widely varied stand conditions found within JDSF that are sought out by researchers, often years after the actual operations have taken place.

The Board recognizes that the level of research that can be conducted is partially controlled by the level of funding and scientific staffing that is made available, and that an increase in this level of funding will result in a higher level of research and demonstration. The Board also recognizes that

the timber harvest program conducted at JDSF has been a periodic source of controversy. The level of revenue generated by timber sales at JDSF will ultimately depend upon the level of annual allowable cut and long term sustained yield (LTSY) and current market value. The harvest operations are capable of creating a highly variable set of forest conditions available for study, including conditions that are in common existence or considered desirable by owners of private forestland.

The Board also notes that legislation enacted in 2006 restricts the use of timber harvest revenues from the State Forests to support of the Demonstration State Forest Program.

Response to Comment 32
Virtually all research projects that have been conducted within JDSF have occurred in a managed landscape. While not always conducted simultaneously with logging operations, each research project is directly related to past or current forest management.

It is precisely the sustainable management of forest resources that the State Forest is intended to demonstrate. The level of potential sustainable production generally increases with stand age, up to a point. Very few of the forest stands on JDSF have reached the level of maximum productive potential. While some of the research and demonstration projects have invoked controversy, they have value and contribute to the mission and legislative intent of the state forest system. The Caspar Creek Watershed Study is unique and world class, and has produced multiple research papers of high value that are widely reviewed and cited by land owners, scientists, regulatory agencies, rule-making boards, and the public. The Railroad Gulch study is a demonstration of sustainable uneven-aged management that has been reviewed and cited by many private landowners and members of the public. Large numbers of tours have occurred in both of these study areas, and the scientific study is continuing. Both of these studies offer an opportunity for the Department to cooperate with the Department of Parks and Recreation to offer forest management, conservation, and ecology-based education to children, which is the primary legislative intent for the nearby Mendocino Woodlands Center (PRC 5821, SB 1063, 1976).

Response to Comment 33
See responses 31 and 32. Some harvest operations have included intensive permanent inventory plot systems that are periodically monitored, while others are not monitored and include no permanent inventory provisions. Due to many factors, installation of an intensive inventory system in all harvest areas is not possible or practical. However, each harvest area produces stand conditions that are available for future research and demonstration.

Response to Comment 34
It is broadly understood that one of the principle purposes of conducting forest management operations is to produce revenue, forest products, jobs, and tax revenue. The Board's policies encourage JDSF to make a significant contribution to the local economy (Section 351.1, Board of Forestry and Fire Protection Policies). JDSF serves as perhaps the best regional example of the productive potential associated with high levels of standing forest inventory. While quoting the text, the comment seems to overlook the THP purpose of “demonstrating conversion of an even-aged stand to an unevenaged stand through single tree selection method while retaining the biological integrity of the stand.” This kind of transitional harvest has significant demonstration value to private forestland owners who want to continue to economically manage their forest stands—many of which are even-aged stands created through earlier clearcuts—while avoiding the aesthetic effects of even-aged management.

Response to Comment 35
The level of follow-up and documentation is highly variable after forested areas are harvested. Some harvests are part of a planned research project, and intensive data occurs on a periodic basis. Others are not as well documented; however, the Forest staff visits these sites frequently to observe changes and conditions. The sites are also available to the public, landowners, scientists, and educators, and are occasionally visited and observed.

Response to Comment 36
See response to comment 34. The Forest manages timber stands to reach a high level of productivity, which tends to occur as stand age increases. This is appropriate forest management, and has often been encouraged by many. As the forest has been managed over the past several decades, the area of developing second-growth (established following cutting of the original old growth forest) forest has remained a significant and growing proportion of the total forest area. Stands that have been managed on a selective basis are dominated by second-growth trees, and contribute to the value of the forest for both habitat and production purposes.

Response to Comment 37
See response to comment 34. The vast majority of JDSF consists of second-growth forest that is either in an even-aged or uneven-aged condition, where regeneration and other processes can be studied and evaluated. Ample opportunities for the study of leaving stands as they are are available within JDSF, the county, and the region. There are now approximately 200,000 acres of young forest within the park system.

Response to Comment 38
The Board agrees that controversy tends to arise when harvests are proposed in specific areas, or when certain forms of silvicultural practice are proposed. The Board also believes that the existence or potential for controversy should not be the sole determinant of how and where JDSF is managed. The ADFFMP takes potential public concern into account. This was a factor in designation of certain special concern areas, management practices, and timber management areas. The ADFFMP proposes to harvest less than half of the current annual growth on the forest, and forest values other than production have clearly been given a significant level of consideration. The ADFFMP's provisions for a JDSF advisory body will help to provide additional opportunities for public comment on proposed harvests.

Response to Comment 39
Landowners may find JDSF research of value, and may apply some of what they learn without imitating the conditions at JDSF. The Board recognizes that land managers are subject to various pressures and have differing management objectives. JDSF is capable of producing a substantial level of revenue and forest products, while remaining sustainable, building timber inventory, and protecting public trust resources. JDSF has been managed according to management plans approved by the Board, and in compliance with applicable regulation.

Response to Comment 40
The level of potential productivity in this region is extremely high. As forest landowners apply intensive forest management methods, make substantial investments, and work to protect and restore the area's resources, a substantial increase in productivity is likely. The Board agrees that JDSF can provide a valuable research and demonstration purpose by demonstrating an increase in productivity associated with understocked or suppressed stands, hardwood utilization, and invasive weed abatement. Some stands at JDSF are suitable for these demonstrations, and the ADFFMP incorporates a management proposal capable of producing this type of demonstration.

Response to Comment 41
Both the Board and the Department agree that the non-industrial timberland owner represents an audience that could benefit from demonstrations at JDSF. Board policy section 351.3(A) clearly identifies the potential beneficiaries of these demonstrations, and Board policy is reflected in Goal #1 (ADFFMP Appendix II). It is the Department's intention to manage a significant portion of JDSF on an uneven-aged basis, utilizing many forms of selection silviculture. The Board also recognizes that some of the non-industrial timberland owners also utilize forms of even-aged management. Demonstrations of slash abatement, clean-up, and watercourse management would be of value, and are a current or planned form of demonstration at JDSF.

Response to Comment 42
The comment consists of a map description. The map was produced and submitted to the Board by Ms. Bailey, and is represented as DEIR Map Figure AA (Spatial Allocation Plan for Alternative F).

Response to Comment 43
The stated purpose of the map is to maintain and develop older forest stands, to provide strong protection of all watercourses and salmonid habitat, and to avoid diminishing values that are important for maintaining the enjoyment of low-impact recreational activities (see letter for exact wording). This represents a partial JDSF management proposal by Ms. Bailey.

The potential impacts upon terrestrial and aquatic species of wildlife have been thoroughly considered (see DEIR Section VII.6). In addition, potential impacts upon recreation have been thoroughly considered (Sections VII.14 and VIII.8). Please review the environmental assessment conducted for Alternative F in the various sections of the DEIR.

Response to Comment 44
Statement noted. What is presented by commenter is an alternative management proposal that does not include an expressed concern.

Response to Comment 45
This comment explains the reasoning behind designations on DEIR Map Figure AA. The proposal appears to include about 30 to 40 percent of JDSF in a contiguous area designated as a "Recovery Research and Recreation area" (R&R area).

Response to Comment 46
The basis for this comment is that the designation of the Recovery Research and Recreation area would link features that the comment characterizes as core protection areas by developing older forest stands to link the sub watersheds depicted within the R&R area. The stated benefit is to prevent the regionally rare core areas from becoming islands, to achieve significant habitat improvement, and establish a watercourse-based core that links the areas. Specific "management principles" are proposed in concern 47, and are discussed below in response 47.

A number of the concepts proposed in the comment can be found to a degree in the ADFFMP, in particular the Older Forest Structure Zone.

Response to Comment 47
The Board cannot infer specific environmental concerns represented by the brief management principles proposed by the commenter. These are similar to features of Alternative F, which was considered and evaluated. Many of the "R&R Management Principles proposed are similar to the measures proposed in Alternatives C1, C2, D, E, F, and G. For example, while not every old tree is proposed to be maintained in the adopted alternative G, all large old growth trees and trees with structural elements of value to wildlife will be retained. The old growth groves will be preserved, and most are augmented with additional area designated for development of late seral features. Alternative G will provide for the development of and older forest structure linkage between the old growth groves and augmentation areas, though the linking habitats will not be late seral development areas, except in the case of the watercourse zones. Alternative F includes the specification of protection standards that would include more than 50 percent of the entire JDSF forest area in watercourse protection zones. The commenter does not specify how snag and down wood would be enhanced; yet, an increase in snags and down logs is a shared objective in most of the alternatives.

The commenter proposes to abandon the existing approved THPs in the Camp 3 and Brandon Gulch areas. As approved by the Department, these THPs propose selection silviculture, retaining most of the larger and older second-growth trees, while promoting development of multiple canopy layers and a level of watercourse protection recommended by a NMFS biologist and geologist who evaluated

both THPs. The disposition of these harvests is subject to a court settlement agreement and existing contracts between the State and two private mill owners.

As practiced in the field, selective timber operations maintain a component of the oldest, largest trees available. In fact, this is also true of most of the even-aged harvests that have taken place over the past decade, but at a much lower retention density. Areas in close proximity to old growth groves, augmentation areas, and Class I and II watercourses include specifications for a high degree of retention. This is true of all alternatives except Alternative B. Visual buffers are also included along designated roads and trails, including most of the ones identified by the commenter.

While the management proposal in Alternatives C1, C2, D, F, and G share many specified management measures, the magnitude of many of the measures varies (e.g. silvicultural restriction, late seral development, watercourse protection zone width).

Response to Comment 48
Comments 48 to 57 represent the commenter's opinion as to key features present in the R&R area.

The area from Camp One, extending along Roads 360 and 361 is described as 100 year old second growth. It is also described as one of the highest visitor use areas at the Forest. Based upon an examination of the area, in conjunction with a knowledge of logging history, the watershed areas that bound these two roads include second-growth forest that varies in age, having been regenerated predominantly between 1905 and 1929. There are four small old growth groves in this watershed area as well, which total approximately 60 acres. Selective timber operations, including group selection, have occurred in approximately thirty percent of this watershed area, while retaining effective aesthetic buffers adjacent to trails and campgrounds. Most of the watershed area is covered by forest with a high degree of canopy closure, but the entire watershed area is not considered to be closed-canopy forest.

While the campgrounds in the Camp One area receive moderate use, and day use occurs in the Camp One area, the areas beyond the camp sites and immediate Camp One area do not receive a high level of use. JDSF recreation management staff characterize the public use level of the Brandon Gulch area trails as light-moderate use and the Trestle Trail as very light use, relative to most coastal and park trails, although small group hikes and rides do occur on both trails on occasion (Tess Albin-Smith, personal communication). The Brandon area trails, particularly the loop to Road 1000 and Road 380, is relatively popular with the equestrians who utilize the Camp One area, and to a lesser extent with the bicyclists.

Response to Comment 49
The characterization of an area within the Camp Three THP as a "peak" is subjective. There is a rounded high point along a segment of ridge of nearly uniform elevation that originates near Camp One and eventually surrounds the NFSF watershed, reaching an elevation of approximately 1500 feet at the head of the watershed. The forest is dense in the Camp Three THP, and no vistas are available from the high points, with the exception of those from existing roads along the ridges. This area is seldom visited by the public.

The steepness of slope within the THP areas is not unusual for this part of the forest. In fact, slopes greater than 50% are common in this area, and most of JDSF aside from ridges and valley bottoms.

The Board agrees that most recreational users may prefer to see uncut forest than logged forest area. However, the potential effects upon aesthetic resources as a result of operations in the two THP areas were thoroughly considered and the plans include a significant level of mitigation intended to prevent significant impacts to aesthetics and recreation. No significant impacts are expected to occur. The Board wishes to note, however, that the presence of vistas mentioned in the comment have been in part facilitated by the selective removal of trees associated with the timber operations.

Response to Comment 50
The Trestle Trail runs along the NFSF Noyo River for several miles. This trail receives very little public use. Upslope from the trail, two selective timber operations have taken place since 1999 (Bob Woods and HiLow Trestle THPs). Both operations included provisions to buffer the river, a Class I watercourse, and included provisions to protect the recreational experience from the trail. Similar mitigation is contemplated by the ADFFMP for any future timber operations in this area, and the entire sub-watershed has been designated as an uneven-aged management, late seral development, or older forest structure zone area. The late seral development area adjacent to the HiLow THP does not appear as an "peninsula" as characterized by the comment. Rather, it is a dense stand of second-growth forest adjacent to a stand of selectively harvested second-growth of the same general size and age. As the harvested stand develops, the level of canopy will approach a closed-canopy condition, similar to that for most of the late seral development area.

Response to Comment 51
The description of this general area appears to be accurate, except that the property line is not always easily discerned. There are many areas along Road 1000 where the adjoining properties are covered by larger second-growth trees or forest, and many acres have been harvested with partial cutting or selective methods (DEIR Map Figures G- J).

Response to Comment 52
The Waterfall Grove Trail receives a significant level of recreational use. The old trees within the grove vary in diameter, up to approximately 10 feet. As is the case with most of the remaining small groves of old growth on JDSF, this grove can be characterized as being in a general upland location, rather than a river bottom position, although a Class II watercourse flows through the area.

As described by the comment, Road 200 passes above the grove as it takes traffic from Highway 20 up the drainage to Three Chop Ridge, where it connects with Road 1000. Visitors and neighboring property owners utilize Road 200 for both commercial and recreational purposes. The Road eventually leads to a Boy Scout camp, a youth camp, industrial timberland, and non-industrial timberland. JDSF and surrounding timberland owners have utilized this road system to haul logs from multiple timber operations over the past 40 years.

Road 200, upstream of the Chamberlain Creek confluence, was constructed many decades ago, being built across very steep slopes immediately upslope of Chamberlain Creek. Bank sloughs are common during the winter, and this road is in constant need of maintenance to protect the slopes and the stream. The ADFFMP proposes to institute a road management plan that will provide for an inventory of road conditions, improved maintenance, and possibly consideration of a more environmentally suitable route.

Response to Comment 53
The paragraph appropriately describes some of the features in this section of the forest. The trail and grove mentioned appear to refer to the Camp 20 grove. Road 200 passes through an area of the forest that has been managed on a periodic basis, beginning in the 1920s, and most recently in the 1980s. The forest stands within the watershed include even-aged second-growth and stands of uneven-aged second and third-growth with scattered residual old-growth trees that were retained due to either their relatively small size or high level of defect.

Response to Comment 54
The paragraph describes some of the features in this section of the forest. The forest is quite variable in this area, being primarily a mixture of young conifer and hardwood trees regenerated by successive operations conducted to remove old growth and residual old growth prior to 1985. There are scattered residual old growth trees that were retained due to either their small relative size or high level of defect. Also in the James Creek watershed are some designated old-growth groves. The location of the "parking area" identified by the commenter is not known. There are no designated parking areas in the James Creek watershed. This may be reference to a road junction or old log landing location.

Response to Comment 55
The location of the "parking area" is not known. This may refer to an old log landing or wide spot at a road junction. There is an area in James Creek where the water table has risen due to an obstruction in the creek bed that may be either naturally-caused or a man-made feature. Some young redwood trees have died in this area, due to the high water table. The area that the comment refers to as having evidence of "a lot of riparian salvage logging" is not known. Most of the riparian areas in James Creek were badly damaged by repeated historic logging operations that utilized heavy equipment in or near streams, prior to the advent of stream protection regulations and management provisions.

Response to Comment 56
As stated by the comment, a small old-growth grove is located in the upper area of James Creek. Part of this grove has been selectively logged in the past, while some of it has not been logged in the past.

Response to Comment 57
The roads beyond the gate on Road 100 are on adjoining private timberlands, and are not open to public assess. Road 1000 is generally open to public travel east of the junction with Road 200, though it passes through private lands that are subject to closure. There is no public access from Road 1000 directly to Road 100 without using JDSF connector roads that are locked on a seasonal basis.

Response to Comment 58
The statement regarding the marbled murrelet is not an expression of concern. No response is warranted.

Response to Comment 59
The Board and CAL FIRE are aware of their responsibilities toward endangered species as described in CESA and Fish and Game Code Sections 2055 and 2061.

Response to Comment 60
The federal Marbled Murrelet Recovery plan, other more current scientific literature, input from the Department of Fish and Game and US Fish and Wildlife Service, and other sources of marbled murrelet expertise provided guidance to the development of the Contribution to Recovery of Marbled Murrelet Habitat additional management measure (DEIR Pages VII.6.6-118-119.).

Response to Comment 61
The issue of future habitat development for the murrelet is considered in Section VII.6.6.4 and 6, and the various alternatives are considered in Section VII.6.6.8. Alternative G includes a provision to study the issue in detail, in consultation with the state and federal wildlife agencies, and to consider establishment of supplemental habitat development areas. These areas would be in addition to the potential future habitat represented by the late seral development areas (RDEIR Map Figure 1).

Response to Comment 62
The Board agrees that these areas have potential for the development of future habitat for the marbled murrelet. Most of the Woodlands STA is designated as a late seral development area, a form of management that will create a habitat dominated by larger older trees (RDEIR Map Figure 1, and Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). Part of Thompson Gulch has been identified as an area where a late-seral Development prescription will be applied (RDEIR Map Figure 1). Upper Russian Gulch and lower Big River areas have also been designated for late-seral habitat development, with the intention of developing future habitat for the marbled murrelet (RDEIR Alternative G and ADFFMP).

Response to Comment 63
The Board agrees that many forms of older or late seral forest may not represent suitable marbled murrelet habitat. The Department has identified four areas on the west side of JDSF, two of which are adjacent to or in the upper watershed of Russian Gulch. See DEIR Page VII.6.6-78-82 and Figure VII.6.6.8b as well as the Contribution to Recovery of Marbled Murrelet Habitat management measure DEIR Page VII.6.6-118-119. The RDEIR designates the area of upper Russian Gulch and lower Big River to be managed to recruit late seral forest as habitat for the murrelet.

Response to Comment 64
The RDEIR specifies that Lower Big River will be managed to develop late seral habitat for the murrelet. This was one of 4 areas on the west side of JDSF identified in the DEIR as a potential Marbled Murrelet habitat recruitment area. See Response to Comment 63.

Response to Comment 65
The ADFFMP proposes to manage the pygmy forest in a manner that prevents damage. Most of the forest roads in the area are closed to public vehicle traffic, and JDSF maintains security patrol and refuse abatement program. The level of illegal dumping makes it difficult to maintain a refuse-free environment with the current level of staffing and funding.

This general area contains a number of rural residential inholdings, and as stated by the comment, is adjacent to state parks and other recreational use areas, and located only a few miles inland from the town the Mendocino.

Response to Comment 66
The Jughandle Creek area consists primarily of selectively harvested second-growth forest, along with some cypress groves and pygmy forest. No murrelet habitat is known to exist within this watershed, though a complete survey has not been conducted.

Response to Comment 67
This comment suggests some reasonable principles that can be applied to management for recruitment of marbled murrelet. While many of the measures have validity, not all are necessarily immediate considerations, and others may actually delay recruitment of murrelet habitat. For example, potential corvid perches overlooking murrelet nesting habitat cannot be avoided, since murrelets tend to nest below the top of the canopy, and corvids readily perch in the upper branches of large trees. Maintaining closed canopy in a dense stand of second or third-growth forest may actually delay the development of suitable habitat by a substantial degree, by reducing the rate of tree growth, though little is actually known about forms of management necessary to produce suitable habitat. In the years or decades prior to development of suitable habitat, there would be little justification for a ban upon firearms. The management principles offered in the comment are discussed in detail in the Marbled Murrelet species account DEIR Pages VII.6.6-52-90.

Response to Comment 68
A portion of the Thompson Gulch watershed is located within the state park and in the Woodlands STA. The remainder is scheduled for a habitat development management prescription following review by advisory entities. While designation of the area has some potential to increase the future habitat availability for the marbled murrelet, no significant adverse impacts to the species are expected to occur as the result of the ADFFMP. If the area is determined to be potential habitat for the murrelet, a survey will be conducted for the species and management operations altered to avoid take of the species.

Response to Comment 69
County Roads 408 and 409 are designated as a Road and Trail Corridor. This designation provides these roads with an aesthetic buffer and restricts the forms of silviculture that can be applied. The use of these roads by forest travelers and recreationalists is recognized, and individual projects will

be planned and mitigated to avoid significant impacts associated with aesthetics and recreation. The Forest area adjacent to these roads has a long and varied history of forest management operations.

Response to Comment 70
The Board agrees that planned management activities will need to consider recreational uses, in addition to the aesthetic and recreation-related mitigation measures specified in the ADFFMP (Chapter 3, Recreation, Aesthetics, and Public Use) and DEIR (Section VII.14). These measures may include uneven-aged management, slash abatement, and silvicultural prescriptions that consider and balance concerns for recreation and timber production.

Response to Comment 71
The Forest is managed to avoid take of endangered species, including the coho salmon. The measures applied in the field for the protection of aquatic resources have generally exceeded the minimum specifications of the Forest Practice Rules. The measures proposed in the ADFFMP exceed the minimum specifications of the Rules, and these measures themselves may be exceeded as deemed necessary and prudent for individual projects. For example, the two existing THPs that have been approved by the Department and have been partially completed, include a no-harvest measure for both Class I and Class II watercourses, along with a no-cut buffer along Class III watercourses. These provisions exceed the minimum level of protection provided by both the Forest Practice Rules and the ADFFMP.

Response to Comment 72
It is not clear from the comment which National Marine Fisheries Service guidelines are being referred to. In most cases, however, fisheries agencies and experts recognize that a greater degree of protection is needed for most fish-bearing streams (Class I) than for Class II streams, which vary from large perennial streams to small intermittent streams. The Department and the Board agree that JDSF is a viable location for research and demonstration associated with protection of watercourses of all classifications. The ADFFMP designates three areas of the Forest as Riparian Restoration Demonstration Areas, where the kinds of research questions posed in the comment can be pursued by researchers, preferably in collaboration with relevant state and federal agencies.

Response to Comment 73
The comment represents a miss-characterization of the old-growth retention standards proposed in the DFMP. All old growth conifer trees that exhibit unique structural characteristics will be retained, regardless of tree diameter (DFMP Chapter 3, Old- growth Stands and Trees). Old trees less than 48 inches in diameter that do not possess unique structural characteristics are not structurally unique as components of a forested habitat, though it is recognized that trees of any size are a component of all forested habitats and should be considered as such. The Department recognizes the fact that lower sites and various species tend to exhibit smaller diameters. However, it is also true that defect is prevalent in these sites and many, if not most of these smaller old trees will be retained, due to presence of characteristics specified in the ADFFMP (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). The retention guidelines also do not preclude the possibility that some or all of these trees would be retained in order to satisfy the management objectives of a planned timber harvest. There are many trees growing in the forest that may be classified as "old", yet they may be virtually indistinguishable from second-growth trees, and have no unique habitat value. Most of these trees were historically not harvested due to small size or a high level of defect. Many of these trees with a high level of defect from a commercial perspective are likely to possess characteristics that are of value to wildlife and will be retained.

Response to Comment 74
The term "aggregation", as applied to the retention of old trees, is defined in the ADFFMP (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). All old trees that meet the specifications for retention in the guidelines, regardless of their existence as individuals or in groups, will be retained according to the guidelines. The purpose of the aggregation protection policy is to preserve unmanaged remnant patches of old forest. Groups of old trees outside of identified groves and aggregations have been managed in the past, and are not intact remnants of old forest.

The commenter suggests that West Chamberlain be identified and protected as an aggregation. It is unclear what management restrictions she is proposing in the area. The West Chamberlain Creek watershed consists primarily of second-growth forest and mixed second and third-growth forest stands with scattered residual old growth trees. Similar conditions can be found within the entire eastern third of JDSF.

Response to Comment 75
M. J. Mazurek conducted a research project that included study sites on JDSF. The study involved the monitoring of singular old trees and nearby second-growth trees for evidence of use by terrestrial species (M.J. Mazurek, The Importance of the Individual Legacy Old-growth Tree in the Maintenance of Biodiversity in Commercial Redwood Forests, FINAL REPORT, April29, 2003, Pacific Southwest Research Station,US Forest Service). The author found that old trees with basal hollows and other structural characteristics were utilized more frequently than nearby younger trees without unique structural characteristics. This study supports the retention standards proposed by CAL FIRE.

Response to Comment 76
The location of these stands can be roughly estimated from harvest history maps kept at JDSF. The maps have been shared with the commenter in the past. However, the results should be considered only as an estimate, because some relatively historic harvest operations were not mapped, and other non-harvest events that impact stand development (e.g. stand replacement fires) have not been recorded. See also the response to Comment 15. JDSF staff have developed a roughly estimated harvest map as described here and provided it to the commenter and other members of the public, along with an acreage summary derived from the map.

Response to Comment 77
Inventory information at JDSF indicates that there are residual old growth trees throughout most of JDSF, depending upon historic harvest operations. The old trees in the eastern third of the forest are more easily observed because they extend above the tops of the much younger forest in the understory. Further to the west, older trees do not differ much in height from the second-growth. No estimate of relative residual old growth tree concentration exists. The results of the inventory may not reflect actual numbers, due to the difficulty that can exist in differentiating old trees from young trees, particularly those that do not possess structural characteristics associated with old growth. JDSF does not currently have the information needed to produce the suggested map.

Response to Comment 78
The mitigation measures specified in the FEIR are a part of Alternative C2, which was considered by the Board.

Response to Comment 79
The commenter states that she supports Mitigation 6 from the FEIR, related to snag retention and recruitment.

Response to Comment 80
The Board is in general agreement with this statement. An increase in funding for forest management, including road inventory and maintenance, is a desirable goal that will be supported by the Board. The legislature in 2006 authorized a higher budget level for the Demonstration State Forest Program that would support much of what is recommended here. However, timber harvesting revenues must be generated on JDSF or other Demonstration State Forests to achieve that budget level.

Response to Comment 81
The Board agrees. The Board will re-establish its Committee on Forest Research. As designated in the ADFFMP, a JDSF advisory committee will be formed by the Department and the Board about a range of matters, including research.

Fax:707-576-2608 Apr 10 '06 7:47 P.01

P-188

Kathy Bailey
February 28, 2006
1

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

PO Box
Philo, CA
707-895-3716
February 27, 2006

Chairman Stan Dixon
Members
California Board of Forestry
1416 – 9th Street
PO Box 944246
Sacramento, CA 94244

Draft EIR for Jackson Forest Management Plan

Dear Chairman Dixon and Members of the Board:

Thank you for the opportunity to review and comment on the draft Environmental Impact Report (dEIR) for the Jackson Forest Management Plan (FMP). These documents are milestones on the long and pot-holed road toward our common goal of the rejuvenation of management at Jackson Demonstration State Forest. By taking to heart the information provided by the public's comments you will be in a position to move forward with removing the large landslides that have been blocking the way forward all these years. And with luck, the actual roads at Jackson will also get the much-needed rehabilitation work all parties believe they need. O1

As several Board members have no way of knowing who I am, I offer the following by way of introduction. These comments are made from the backdrop of my experience in Mendocino County where Jackson Forest is located. I have lived here since 1971 and have been active on forest related issues off and on since 1976. In response to my concern about the unsustainable pace of logging in my area, in 1988 I helped found the organization Forests Forever. In 1990 I was on the state steering committee for Proposition 130, the Forests Forever voter initiative, which proposed a major reform of forest practice rules to provide sustained production of timber while protecting the environment. The initiative also proposed a multi-million dollar bond for purchase of Headwaters Forest and other ancient forests throughout California. Unfortunately, in the face of a multi-million dollar campaign by the timber industry, the measure failed with a 48.7% yes vote.

In 1992, I began representing Sierra Club California regarding state-regulated forestry issues, and was until my "retirement" in 2001, the Forest Conservation Chair for California. In that position I was Sierra Club California's principle spokesperson regarding Headwaters Forest. I also represented Sierra Club at the Board of Forestry regarding Forest Practice Rules and other matters, and was appointed by former Resources Secretary Douglas Wheeler to the Coastal Salmon Initiative Policy Panel. I have presented testimony to the California Legislature on a number of occasions and have been the Sierra Club liaison regarding forest-related

litigation. I have reviewed and commented on numerous Timber Harvest Plans (THPs), including the two JDSF plans that are currently enjoined from operation by the court pending approval of the new FMP, and the other Jackson THP that has completed the review process but has not yet been approved. 02

In 1996, I began following management at Jackson when a series of protests and arrests brought the public's concerns to my attention. I advocated with former CDF Director Richard Wilson for the creation of the Citizens Advisory Committee that ultimately met for more than a year and produced a report and recommendations that are now being considered as Alternative D in the dEIR, an alternative that is not the preferred alternative. I was not a member of the CAC, but did attend many of its meetings. After the Davis administration failed to implement those recommendations and additional THPs continued to be proposed, in 1999 I sent a letter to CDF Director Andrea Tuttle on behalf of Sierra Club asking that THP approval be put on hold until a new management plan update was completed. 03 I also raised this issue with the Board of Forestry. Director Tuttle created a State Forest Advisory Committee and appointed me as a member. However it was not until the newly formed Campaign to Restore Jackson Redwood Forest took CDF to court in 2001 that the draft Management Plan was released. The Campaign subsequently won an injunction prohibiting operation of any THP prior to approval of the new FMP. Although Sierra Club is not part of the Campaign organization, I believe their litigation was a key factor in CDF releasing the new management plan. Of course, in subsequent litigation, the court ruled that the previous EIR was inadequate and that you, the Board, rather than CDF, is the Lead Agency. Somehow it's gotten to be 2006, ten years since I first began seriously considering management at Jackson.

Throughout the course of my forest conservation activities I have been, and remain, a volunteer.

Because I believe this Board is serious about resolving the long-standing issues at Jackson, I expected to be really happy with the dEIR. However, I found this dEIR very, very difficult to review. 04 I have to believe I am on the more skilled end of the spectrum when it comes to reviewing an EIR. I was Sierra Club's lead person in organizing the review of the Pacific Lumber Habitat Conservation Plan/Sustained Yield Plan Environmental Impact Statement/Environmental Impact Report (PL HCP/SYP EIS/EIR), a joint federal and state document that covered a complicated set of land management proposals for a 210,000-acre property. I reviewed and commented on the EIS for President Clinton's Northwest Forest Plan, which covered all National Forests in the coastal regions of California, Oregon, and Washington. I have reviewed and commented on numerous other EIS and EIR documents. I don't believe I have ever had a harder time wading through a document. Although size is definitely one issue, it is not the whole issue because the PL EIS/EIR was also voluminous. The best I can make out, the document suffered from a deadly combination of fear of the court and the desire to be thorough combined with ready

access to a ton of miscellaneous relevant and irrelevant information compounded by an in-house staff with serious computers who are used to churning out data-loaded documents using multiple modeling scenarios, some of which make sense, and some of which don't. Please don't get me wrong. I like it that the Fire and Resource Assessment Program (Is that what we call FRAP these days?) and CDF have technologically competent people on staff. But I think they may have forgotten that there's only so much that the layperson brain can absorb in 1400+ pages and an EIR is not supposed to be an exercise in the survival of the wonkiest.

05 That being said as general context, I was also troubled that the Alternatives were not spelled out in detail in text. I know staff believed that the charts were the most user-friendly way to present information, but I'd much rather read a few pages about the management proposed by each alternative than try to patch together a whole from multiple charts across a huge document. Even though staff was willing to work with us to improve the brief description of Alternative F, I continued to feel that the size constraints on how long the description could be were very limiting. This over-brevity on Alternative descriptions extended to all the alternatives, not just F. It was also depressing to discover that the improved description of
06 Alternative F was not used in the Executive Summary. Given the size of the document, the Executive Summary was probably the one section most people actually looked at. It was irritating to have to say to everyone that they should not rely on the Executive Summary, but rather look at Section VI for the Alternative descriptions. I am also attaching a copy of my scoping comments and Senator Chesbro's SB 1648 on which Alternative F is based. Without reviewing these
07 documents, I don't believe a reader can understand from the dEIR what was proposed as Alternative F.

Another disappointing feature of the dEIR was the information that was missing.
08 Missing particularly was specific stand-level timber information and visualizations of stand change over time under the various alternatives.

And overall particularly missing was any sense that the welter of information, much of which was both relevant and interesting, actually supported the conclusion that Alternative C1 (or even C2) really causes no significant impact, either short or long
09 term, at small scale or large. Nor did the information presented lead me to
10 understand why Alternative C1 is the preferred alternative. I do not believe that the dEIR demonstrated that Alternative C1 is the best way to implement the legislative
11 mandate, board policies, or the goals of the Forest Management Plan.

All that being said, I truly recognize the enormous undertaking that this dEIR represents, and the tremendous effort of the many, many people who contributed to it. Just because my role is to point out holes, does not mean that I don't appreciate how much work went into the document.

Following are specific issues that the final EIR should address:

12 **Map K "Vegetation Habitat Classes" and its Source Database are so Muddled they Cause Map R and the Spatial Pattern Analysis to be Wrong.**

- Map Figure K, "Vegetation Habitat Classes," or, more properly, the information on which it is based, is explained, barely, on pages VII.6.6-2 and VII.6.6-6. Unfortunately, in the dEIR text, the database on which Map K is built is called the "JDSF 2004 vegetation layer" while the map itself is titled "Vegetation Habitat Classes." Thus, no amount of Adobe searching for "Vegetation Habitat Classes" came up with the two sentences that refer to the "JDSF 2004 vegetation layer" in the text, nor the Tables on VII.6.6-6 that outline WHR vegetation codes in general. As far as I can tell, the text does not ever overtly refer to Map K. Having puzzled extensively over the information in Map K, I was happy to finally stumble onto the "JDSF 2004 vegetation layer" reference many weeks into the comment period. Pieces of the puzzle finally began to fall into place.

13
- Map Figure K, "Vegetation Habitat Classes," conglomerates two very dissimilar types of habitat as Redwood 6, leading to a lot of confusion.

14
- The Map K problems muddle the project baseline, the current habitat.

15
- Map K, and presumably the "JDSF 2004 vegetation layer" from which it seems to be built, characterizes an old stand of *closed overstory canopy* redwood with canopy layers *underneath it* as Redwood 6, multi-layered. It also calls a stand of *closed understory canopy* young regeneration redwood 3 with widely spaced residual old growth scattered around in something that can barely be considered an overstory as Redwood 6, multi-layered. These two stand types neither look like nor function like each other as either a timber stand or habitat. Yet they are called the same thing on Map K and presumably the JDSF 2004 vegetation layer.

16
- The conglomeration of distinctly different habitat types as Redwood 6 on Map K leads to incorrect assumptions about the extent and location of potential old forest habitat.

17
- This incorrect information is then used as the basis for the "Spatial Pattern Analysis for Species of Concern," VII.6.6-216-240.

18
- Neither the information generated from the "Spatial Pattern Analysis," nor map Figures N-T can be relied on to be correct at a minimum to the extent they rely on the Redwood 6 habitat category.

19
- In the spatial analysis and Map Figure R, Marbled Murrelets, the information is definitely wrong, identifying "fully suitable" marbled murrelet habitat where none exists.

20 • The Spatial Pattern Analysis then uses this incorrect information to extrapolate the effects of the various alternatives over time.

21 • This strikes me as an unfortunate example of the aphorism, "Garbage In, Garbage Out."

It took me a while to figure out what was going on here. That's my understatement for the year. I have spent a fair amount of time on the ground at Jackson and have spent a lot of time looking at various maps and satellite photos of the forest. I am also very familiar with the habitat needs of the marbled murrelet from my long years
22 of work on Pacific Lumber-related issues. The minute I looked at the Spatial Analysis map regarding marbled murrelets, Map R, I knew it was wrong. There is simply no possibility that the area to the west of Road 100 along North James Creek is fully suitable marbled murrelet habitat. It's a stand of fairly dense young regeneration with widely spaced old growth residuals and a significant hardwood
23 component. But Map K, built apparently from the "JDSF 2004 vegetation layer" characterizes this stand as Redwood 6, which one discovers back in the text of the dEIR, means "multi-layered." (The map key is not self-explanatory.) This stand is multi-layered but not in any way that murrelets can use because *the closed canopy is in the understory,* leaving the scattered residuals up there in the wind and open to any corvid predator that swoops by. Murrelets prefer a closed canopy of very old conifers to nest successfully, as your EIR correctly indicates: *"According to Ralph and Miller (1995), the most important factor in indicating occupied stands was density*
24 *of the old-growth canopy cover."* (Page VII.6.6-75) There is no distinct roosting and foraging habitat with this bird as they live at sea when not nesting, and they forage at sea for food daily during nesting season. So nesting habitat is the habitat that matters for murrelets. The Redwood 6 to the west of North James Creek will not do, yet your "spatial analysis" calls this area "fully suitable" murrelet habitat.

Along with personal knowledge, there are several other pieces of evidence that demonstrate the erroneous nature of Map R ("Marbled Murrelet"), which seems to be based on Map K, Vegetation Habitat Classes. An inspection of JDSF Forest
25 Management Plan (FMP) Map Figure 8, "Forest Vegetation" contradicts the information on Map K. Using the area west of Road 100 in the North James Creek area as an example, compare dEIR Map K and FMP Map Figure 8. Map Figure 8 clearly shows this area as "Mixed conifer/hardwoods size <18" dbh, density D" (i.e. mixed conifer/hardwoods size less than 18" diameter at breast height, density: dense). There is no way that trees less than 18" dbh in 2002 when the FMP was
26 published will be murrelet nesting trees in 2005. Eighteen inch dbh limbs might be suitable, but not 18" tree diameters! I'm not sure whether or not the JDSF 2004 vegetation layer is meant to supplant the FMP Forest Vegetation Map Figure 8, but regardless, there is no way this area became murrelet habitat in the few short years between the data that led to Map Figure 8 and that which led to Map K.

The dEIR Photo Sequences also contradicts Map R. Although it only captures a corner of the James Creek area I have been using as an example, the dEIR Photo Sequence 6, page V-23, helps verify the absurdity of calling the James Creek area "fully suitable" for murrelets. This photo sequence is located on dEIR Map Figure C, "Aerial Photo Sequence Locator Map." Map Figure K (Habitat) calls out the central
27 portion of this photo sequence as Redwood 6. Both the 1959 and the 1981 photo clearly show intensive recent logging. The logging definitely appears to continue north out of the frame of the photos. Although the regeneration is "multi-layered" because of the widely scattered residual old growth that was retained, there is no way one can remove most of the canopy in 1981 and, at the same location, have fully suitable murrelet habitat in 2006.

The muddled information on Map K has led to the mistaken spatial analysis represented on Map R. It is disappointing that CDF managers familiar with the forest either did not notice these errors, or were not listened to when they did. If
28 anyone needed an example of why the public is skeptical that CDF is serious about managing for habitat, this is it.

The JDSF 2004 vegetation layer that muddles two completely different stand types as Redwood 6 brings to light a whole other problem. **A multi-layer stand with a closed canopy of dominant and co-dominant trees in the overstory is**
29 **completely different from a multi-layer stand with a few residual dominants over a closed canopy of younger trees in the understory.** The former is often how a natural forest matures; the latter is how a managed stand sometimes ends
30 up. With the advent of more and more variable retention and other sorts of logging that leaves some structure in the overstory, the continued used of Redwood 6 (or Doug fir 6) to represent both sorts of habitat can lead only toward more and more
31 confusion. At a minimum, as a quick and dirty fix, we need to create a new WHR category: Redwood 7, to denote a stand with a closed understory and scattered residual trees in the overstory. In the long term, we need to get serious about a
32 better habitat typing system, one that actually makes sense in the redwood region. [See additional discussion of WHR later.]

To illustrate the problem with Map K, the faulty "fully suitable" for murrelets problem, and the general problem of Redwood 6, attached as Exhibit A, please find two photos along with a copy of the eastern portion of dEIR Map K. Photo 1 shows a
33 stand at Camp 20 designated by Map K as Redwood 6 with large old trees in the closed canopy overstory. Photo 2 shows a stand at James Creek near Highway 20 designated by Map K as Redwood 6 with a few residual overstory trees scattered above a closed-canopy stand of younger understory. The photos obviously depict significantly different habitat conditions that should not be clumped together if we wish to have a rational discussion of habitat at Jackson or anywhere else. (Photos by KB, taken February 23, 2006.)

Kathy Bailey
February 28, 2006
7

Map K and the JDSF 2004 Vegetation Layer Contradict Other Information in the dEIR at Numerous Locations, Most Profoundly in the WHR Analysis by Alternative that Begins on VII.6.6-149 of Section VII.6.6, "Wildlife and Wildlife Habitat." 34

35 • The WHR Alternatives Analysis Uses a Different WHR Database than the JDSF 2004 Vegetation Layer, and Presents Information that Contradicts the Introduction to Section VII.6.6, Wildlife and Wildlife Habitat.

36 • There is completely contradictory WHR information from one section to the next that leads one to be dubious about the validity of the entire WHR Alternatives Analysis. This is in addition to the separate problem with the Spatial Pattern Analysis.

37 • The WHR analysis is a fundamental part of the dEIR and its questionable validity jeopardizes the validity of the entire dEIR.

At the beginning of the "Wildlife and Wildlife Habitat" section, Page VII.6.6-2 it says: ***"All of the analyses involving vegetation found on the JDSF were done using the JDSF vegetation layer,*** whereas vegetation outside JDSF is derived from the FRAPVEG multi-source vegetation coverage.... ***The JDSF vegetation layer also uses a CWHR classification scheme....*** " [emphasis added] I strongly believe this statement is in error. A second WHR database is also in use. 38

Table VII.6.6.1 beginning on page VII.6.6-3 presents, among other information, how many acres of each vegetation type exists at Jackson based on the JDSF 2004 vegetation layer. Tabulating the presented information, **it shows:**
all Doug fir: 13,996 acres
all Montane Hardwood Conifer: 1,887 acres
all Redwood: 31,305 acres

39 Yet, **Table VII.6.6.18** on Page VII.6.6-150 shows the ***"Estimated CWHR (California Wildlife Habitat Relationship) acres on Jackson Demonstration State Forest. Alternative A" to have completely different information.*** Alternative A is identified in many locations within the dEIR as the "baseline" against which the other alternatives are compared. This table breaks down habitat acres by WHR type. It shows that in 2004 (baseline) Jackson had a total of
all Doug fir: 3,579 acres,
all Montane Hardwood Conifer: 14,551 acres
all Redwood: 29,490 acres
In relation to Doug fir, just for example, that's a difference of 10,417 acres between the two tables. Considering the entire forest is only 49,000 acres, that's quite a significant difference.

Every alternative is then analyzed regarding the effect on habitat through time with, in addition to the baseline, charts with data presented for 2030 and 2060. Verbiage and charts galore from page VII.6.6-149-216. These analyses would certainly have been different if the starting point was the 1,887 acres of Montane Hardwood Conifer from the JDSF 2004 Vegetation Layer, as reflected in Map K and Table VII.6.6.1, instead of the 14,551 acres of Montane Hardwood Conifer listed on Table VII.6.6.18 (and Tables VII.6.6.20; 22; 24; 26; 28; and 30), a difference of 12,664 acres between databases. The database used for the Alternatives Analysis that yielded Table VII.6.6.18 and the other Tables in this section seems to correspond with the information from the never-released 1999 draft Habitat Conservation Plan, for which I still have the maps, thanks to a Public Records Act request. The WHR acreage presented in the alternatives analysis closely corresponds to the dHCP WHR maps, but is wildly dissimilar to the acreage presented in dEIR Table VII.6.6.1.

40

41

In addition to the internal problems with the JDSF 2004 vegetation layer, the undisclosed use of two separate WHR-type data sets within the dEIR without disclosing the significant material differences between the two data sets is impermissibly confusing. One or the other of these data sets is likely to be more accurate. Or worse still, each may be more accurate about some aspects of forest habitat at Jackson and less accurate about others. In any event, even a fairly experienced document reviewer such as myself was left completely bewildered. The average layperson reviewer would be completely flummoxed. This level of confusion is impermissible in an EIR.

42

The Relationship Between Timber Stands and Habitat Never Comes Together

43

- ***The timber is the keystone species of the habitat*** but timber and habitat are classified using different systems and these systems significantly contradict each other regarding how to characterize significant swaths of the forest.

44

- Within Section VII.6.3, the "Timber Resources" section, under the heading Forest Vegetation Classification on JDSF (page VII.6.3-13) it says: "Three general vegetation classification systems have been used to describe and map the vegetation and habitat types on JDSF. The timber sections of this analysis use the **JDSF Vegetation Classification System**, the wildlife section (VII.6.6 Wildlife and Wildlife Habitat) uses the California Wildlife Habitat Relationship (CWHR) system and the botanical section (VII.6.2 Botanical Resources) uses a system based on the series and associations developed by Sawyer and Keeler-Wolf (1995) and Holland (1986). Each system has been used for a specific purpose based on the strengths of the system. [For the purposes of this discussion, I am skipping altogether the series and associations developed by Sawyer and Keeler-Wolf (1995) and Holland (1986) used to analyze "botanical resources."]

45

- The character of the existing forest stands and their spatial relationship to one another are a fundamental starting point to understanding how Jackson

currently functions as habitat or in analyzing recreation potential. Or in understanding the timber production capability there.

46 • It is necessary to start from a relatively accurate characterization of current forest stand conditions to extrapolate the effects over time of the alternatives.

47 • Although it is not strictly necessary to use identical stand characterizing systems when analyzing timber and habitat, it would be a tremendous boon to the discussion to do so. ***The timber defines the habitat.*** And at a bare minimum, the timber stand and habitat classification systems must be consistent within themselves and with each other. In this dEIR, they are not.

48 • In the dEIR of FMP, there is no visualization of habitat or timber stand changes over time

49 Thanks to a Public Records Act request dating from 2000, I have in my possession the maps from CDF's unreleased draft Habitat Conservation Plan dated April 13, 1999. Map 11 is captioned "California Wildlife Habitat Relationships System (CWHR), Current Habitat Types." This information is at least as current as other information used in the dEIR, including the inventory information provided in the Appendix. A comparison of this map with both dEIR Map K and FMP Figure 8, "Forest Vegetation" show major differences in how vast swaths of forestland are characterized. Comparing, just for example, the area that stretches from the northern corner of the forest where the North Fork Noyo exits north and proceeding east from there to the headwaters of Brandon Gulch, one finds that the dHCP WHR map characterizes the habitat differently than does dEIR Map K; and both are different from, and materially inconsistent with, FMP Figure 8. The WHR map, except for tiny pockets of Doug fir 4.2P and D, characterizes this whole area as Redwood 6 (Multistory). DEIR Vegetation Habitat Classes Map K calls this area a complex mix of Redwood 2, 3, 6, Doug fir 3 and 6, with a little Montane Hardwood Conifer 3 thrown in for good measure. FMP Figure 8 characterizes one stand within this area as Redwood 18" density S (sparse), while Figure K calls it Redwood 6. Another stand within this same area that is called Redwood 18" S in FMP Figure 8 is called Doug fir 4 on the Figure K map. To make it even more confusing, the differences among these maps is not at all consistent. For instance on the far northeast part of the forest, the dHCP WHR map is at least somewhat consistent

50 with FMP Figure 8, small Mixed Hardwood Conifer, but the darn Map K calls this whole area Redwood 4 and 6.

51 As noted above, even what the authors intend to portray by dEIR Map K is a matter of conjecture, as it is not explained anywhere in the entire EIR. Is this meant to

52 supplant the old WHR map? How does it relate to the FMP Map Figure 8, Forest

53 Vegetation? Who knows! Even if one ignores the dHCP maps, certainly the maps in the Forest Management Plan (FMP) should be consistent with, and not outright

contradictory to, the map provided in the dEIR, the document that is supposed analyze the FMP and compared it with other alternatives.

S4 And what has Map K been used for? Every statement in the dEIR indicates that the extensive wildlife analyses were done using WHR. Is this WHR as represented by dHCP Map 11? I have come to the conclusion that the Alternatives Comparison S5 used standard WHR as expressed in dHCP Map 11. And the Spatial Pattern Analysis used the Map Figure K data set. The Spatial Pattern Analysis starts in the middle of the same page that the WHR Alternative Comparison ends. No mention anywhere that two very different data sets were used to make these analyses. Only someone such as myself who has been deeply immersed in this stuff for a decade S5 and is familiar with the forest would ever pick up on this mid-page shift in methodology. This lack of clarity is a significant failing.

S6 Finally, there is no attempt to visualize the changes in timber stand and habitat over time. The old dHCP maps do this for WHR, and they very effectively convey how little of the forest will be maintained in old stands under CDF's preferred alternative C1, which is virtually identical to the never-released 1999 draft HCP. Even if the shortcomings of WHR mean it should not be used to map habitat changes over time, there should be some system in place to accomplish this. Otherwise it's very difficult to grasp how the effects of our actions will play out over time.

What does WHR tell us about the redwood forest anyway?

S7 • **From Limitations of the Modeling Approach (VII.6.6-134):**
"Vegetation typing for forest management often includes a more detailed classification scheme than is found in CWHR. [emphasis added] In order to utilize CWHR as a habitat evaluation and planning tool, forest vegetation typing systems must be converted to CWHR habitat types. The conversion process to CWHR tends to simplify the vegetation typing into the three criteria of forest type, average tree diameter, and average canopy cover. The amount of information lost in this process is largely unknown.

"The CWHR habitat classification system was designed primarily for single-storied stands, i.e. stands that had one dominant canopy layer. The vast majority of forest types are categorized as single stored stands with all tree canopy contributing to a single level of canopy density. The CWHR habitat classification system includes only limited consideration of stands with multiple canopy layers, i.e., forest stands composed of large sized trees with small or pole sized trees in the understory (CWHR 6).

"Projections of CWHR habitat classes over time are based on rule-based algorithms that tier off projections from growth and yield models. These CWHR projections have not been validated against independent data in the same way as the underlying

growth models. While projections of CWHR habitat class distribution and changes over time is a widely accepted tool for scientific and applied analysis, it is important to temper interpretations of results with a recognition of the appropriate level of accuracy (landscape level, not stand level) and context (comparisons of trends for different management alternatives, not absolute magnitude, point-in-time estimates). **Making projections for the complex structures of CWHR 6 are particularly difficult."**

58 • According to Table VII.6.6.18, "Estimated CWHR acres on [JDSF], Alternative A" there are currently 25,873 acres classified as Redwood 6 on the Forest. That is almost 53% of the forest. It also happens to be the 53% of the forest that generally includes the stands the public cares most about—the older ones. (If one uses the information provided by Table VII.6.6.1, Redwood 6 totals 11,833 acres or 24% of the forest.) Yet, according to the EIR, "The CWHR habitat classification system includes only limited consideration of stands with multiple canopy layers, i.e., forest stands composed of large sized trees with small or pole sized trees in the understory (CWHR 6)."

59 The state's premier research forest can't do better than WHR when analyzing the effect of the proposed management plan? I believe it's true to say that Mendocino Redwood Company has managed to develop a system that more accurately reflects on the ground habitat and stand conditions. They've existed as a company since 1998. CDF's been around how long? If understanding and planning for habitat was really a priority equal to timber harvesting at Jackson, wouldn't we have a habitat typing system that actually works for redwood? Wouldn't someone be out there ground-truthing the habitat information in the same way the timber inventory is checked? Can we please make this a demonstration priority if the forest ever gets operational?

60 On the upside, at least this problem of WHR applied to multiple canopy stands was disclosed in the dEIR. However, the problem leaves the analysis within the dEIR too imprecise to be meaningful on key issues.

Missing Information on Forest Stands Not Logged Since 1925 or Earlier

61 • Sierra Club has repeatedly asked that a map be produced showing the location of the forest stands at Jackson that have not been logged since 1925 or earlier, in some cases much earlier. This was done both orally and in writing in our scoping comments. The dEIR provides no information about the extent or location of these stands, which range in age from approximately 80 to 120 years old. Jackson staff has verbally indicated in the past that there is between 10,000 to 12,000 acres at Jackson that fits into this category.

62 • The pre-1925 stands are of interest because they are likely to be much further along the way to becoming "late seral," that is older forest stands, than are younger stands.

63 • Additionally, there are some very old stands that were thinned at some point in the past, and are now robust, very old second growth. The location of these stands can only be surmised, yet they too may be much further along to being "late seral" than the younger forest stands.

64 • These old stands should be the first place to look for possible recruitment of marbled murrelet habitat.

65 • Although the dEIR discusses at length the importance of "late seral" forests as unique and regionally rare habitat, and makes a big show of identifying "late seral development areas" it fails to identify either the existence or the location of the oldest second-growth stands currently on the forest, some of which may already be exhibiting late seral characteristics.

66 • Based on personal knowledge, it appears that the 5-year Timber Harvest Projection Estimate printed in the draft Forest Management Plan as Map Figure 6, projects logging entries in the overwhelming majority of the old, Pre-1925 stands.

67 • Both of the enjoined Timber Harvest Plans are in these areas of old forest, and the characteristics of this old forest have led people to be interested in protecting the area around the main campgrounds at Camp One that includes the enjoined THPs for both recreation and habitat purposes.

68 • One of these enjoined THPs is adjacent to a CDF-designated late-seral "development" area but there is no acknowledgment of this or analysis of the effect on the designated late seral development area of logging adjacent to it in the old forest stand. Loss of existing old forest contiguity is one easily identifiable impact that the dEIR ignores.

69 • The dEIR should identify "fragmentation of existing older forest stands" as a potential impact to be analyzed. Alternatives B, C1, and C2, all would result in fragmentation. Neither Alternative E nor F would.

70 • Failure to identify the location and consider the short and long-term effects of logging in the old forest stands is a significant omission of information in the dEIR.

71 • The Impact analysis for Impact 2, "Protection of Late Seral/Successional Forest Characteristics" for the Preferred Alternative C1 as "Less than Significant and Beneficial" is in error because there has been no consideration of the effects of the plan on the forest stands most likely to develop late seral (old forest) characteristics soonest. There is no consideration of the effects of the 5-year Timber Harvest Schedule on these stands.

Kathy Bailey
February 28, 2006
13

72 What does it take to get this information officially acknowledged? We've politely and not so politely asked for it for several years. SB 1648, the Chesbro bill that is a component of Alternative F, focuses extensively on these stands, calling for a separate inventory for them. In the comparison charts in VI 16-53, these stands are referred to several times under the Alternative F column. Yet, there is no reference to them or discussion of the importance or extent of these stands in the narrative text of the EIR. There is no analysis of the effects of the alternatives in relation to them. Alternative F is designed largely around these stands both in the proposed "Recovery, Research and Recreation Area" and the "Marbled Murrelet Recovery Demonstration."

73 Failure to disclose the existence of these older stands also makes a mockery of the study used to back up the assertion (VII.6.3-33) that "Trees with late seral characteristics cannot be recruited during the life of the Management Plan." On Page VII.6.3-34-38 there is a lengthy discussion about a theoretical study published in the Appendix of the previous EIR regarding development of late seral conditions over time. At first glance, this study seems to support the contention that late seral conditions cannot be achieved in the 100-year life of the plan. However, a careful review indicates on Page VII.6.3-36 that after 100 years the oldest trees will be 150 years old. Simple math suggests that the model started with 50-year old trees. However, we know that there are, in fact, second growth stands well in excess of 100 years old at Jackson. Put another 100 years on them and by any standard currently applied, they would be considered "old growth," the older component of "late seral." Failure to do the late seral development analysis using the oldest available age classes as a starting point makes the whole exercise bogus for purposes of determining impacts at Jackson.

74

75 Is this a deliberate mis-representation? Or just sloppy analysis based on a failure to acknowledge actual conditions on the ground? Either way, it is a significant defect in the dEIR.

Definition of Late Seral Needs Clarification

76 • Failure to adequately define and describe the key concept "late seral" (used interchangeably with "late successional") forest cripples the dEIR's ability to adequately describe the alternatives and analyze how each alternative affects the maintenance and development of late seral forest over the planning horizon.

77 • "Late Seral" forest is properly defined as being on a continuum that has two components that are distinguished as to age of stand and stand characteristics: mature and old growth. To get to old growth, the stand must pass through the mature phase. Without adequate planning to maintain and develop the "mature" phase, the "old growth" phase cannot be achieved.

78 • The dEIR fails to adequately address how each alternative provides for maintenance and recruitment of the "mature" phase of late seral because it fails to acknowledge the existence of the "mature" phase. This is a material defect in the dEIR.

79 • According to the 1993 Report of the multi-agency federal Forest Ecosystem Management Assessment Team, independent of old growth, the mature forest component of late seral is important in its own right as habitat for large numbers of species.

80 • Failure to acknowledge the importance of the "mature" component of late seral results in the dEIR's failure to consider the effects of each alternative on plant and wildlife species associated with the "mature" component of late seral as distinct from the "old growth" component of late seral.

81 • The Five-Year Timber Harvest Schedule includes numerous timber harvests in areas that would be deemed late seral if the definition were correct. The dEIR's failure to disclose these problems and address the effects of near-term logging on these stands is a significant omission.

82 What is meant by the term late seral forest (synonymous with late successional forest) is a key concept for the JDSF FMP and dEIR. It is imperative to acknowledge that this term is NOT synonymous with "old growth" forest. Rather, "old growth" is a subset of late seral. "Mature forest" is the component that arises before the old growth condition and is a necessary step along the succession to old growth conditions. Collectively, in every common useage except the California Forest Practice Rules, these two stages in forest development are called late seral forest. The previous EIR Glossary (Appendix) correctly recognized this when it defined this term: "The stage in forest development that includes mature and old-growth forest." The previous EIR Glossary then went on to adequately define both "mature" and "old growth." All three of these definitions are reasonable adaptations of the federal definition published jointly by the US Department of the Interior and the US Fish and Wildlife Service in December 1995 in the Environmental Analysis for a 4(d) Rule for the Conservation of the Northern Spotted Owl on Non-federal Lands. The EA for the Northern Spotted Owl 4(d) Rule was specifically about the region that includes Jackson Forest.

83 A close reader appreciates that the author(s) of the dEIR attempt to draw a distinction between "late seral" and "late seral as defined by the Forest Practice Rules." This distinction is made because the author(s) almost certainly understand that the definition within the Forest Practice Rules (FPRs) is essentially in error. The bad definition resulted from a political compromise back in 1992 that left the definition more or less correct only as it describes the "old growth" component. The FPR identifies the true stand characteristics of "old growth" and erroneously applies them as the definition of "late seral" thereby eliminating the unwanted (by the

industry) necessity for giving special consideration to the "mature" component of late seral when submitting a Timber Harvest Plan. However, obfuscating the definition does not change the environmental effects on the ground. Although we understand why this is such a pretzel for CDF, the wrong definition of late seral in the dEIR is a significant deficiency that leads to incorrect analyses of environmental effects.

84

For instance, on Page VII.6.3-14 we find: "Based on the definition of a late seral forest stand contained in the forest practice rules, functional characteristics of late seral forests include large decadent trees, snags and large down logs. Similarly, late seral forests are characterized in the forest practice rules as having large trees, multi-layered canopy and a large number of snags and downed logs that contribute to an increased level of stand decadence."

Contrast this with the federal definition in the EA for the NSO 4(d) Rule (page 53):
"Late –Successional: The stage in forest development that includes mature and old-growth forests.
"Mature: Forest for which the annual net rate of growth has peaked; stands are generally more than 80 to 100 years old and less than 180 to 220 years old; stand age, diameter of dominant trees, and stand structure at maturity vary by forest cover types and local site conditions; generally contain trees with a smaller average diameter, less age-class variation, and less structural complexity than old-growth stands of the same forest type.
"Old Growth: An older forest that differs significantly from a younger forest in structure, ecological function, and species composition; containing characteristics that become pronounced at 180 to 220 years of age, including: (1) a patchy, multilayered canopy with trees of several age classes; (2) a multispecies canopy…; (3) the presence of large living trees, some with broken tops and other indications of old and decaying wood (decadence); (4) the presence of snags (large standing dead trees) and heavy accumulations of wood, including large logs on the ground; (5) moderate to high canopy closure; and (6) the presence of species and functional processes that are representative of the potential natural community."

85

The FPR definition has taken characteristics like decadence and down wood, that the federal government uses in its definition of "old growth," and requires their presence in anything to be characterized as "late seral" or "late successional," thereby obliterating the earlier phase of late seral: the mature forest. Fourteen years after the political dog-fight that resulted in this definition being enshrined wrong in the FPRs, aren't we mature enough to get past it for purposes of analysis at Jackson Forest? The time to sue on the FPRs about this point is long past. CDF could restore a bit of credibility by acknowledging reality on the definition of late seral forest.

86

Without understanding the ecological importance of the "mature forest" component of late seral forest, the public's concern for Jackson's older second growth stands will be wrongly relegated to the spheres of aesthetics and recreation. Older forests younger than-old growth are a crucial biological resource well prior to their attaining true old-growth characteristics.

The federal FEMAT Report[1], which is specifically about the Pacific Coast region, says: [page IV-20]

> In the current assessment, we reviewed and updated the list of species associated with old forests. Criteria based on those developed by Thomas et al. (1993) were used for this effort.... The number of species identified is greater than that shown by Thomas et al. because of new information and because this report focuses on all federal late-successional forests within the range of the northern spotted owl rather than just the old-growth component on National Forests. A total of 1,098 terrestrial species (not counting arthropods) are identified as closely associated with late-successional forests on federal lands...."

87 No specific information is provided in the FMP, dEIR, or the maps regarding the total acreage or location of forest stands that are non-old-growth, but nevertheless, late successional stands. At least some of the stands that have not been logged since 1925 or earlier would be considered late seral if late seral were defined consistent with normal useage. This is a significant omission, especially in light of the purported emphasis on "late seral development" in the FMP and the dEIR.

88 One would think the information base on the state's premier research and demonstration forest would include information about the location and extent of existing late seral (used interchangeably with late successional) forest stands. If such information truly is not available, there is a critical need to develop it. This could be achieved by hiring on-staff experts in forest ecology or by contracting with recognized experts in the field to survey, catalog, and map these stands.

The Late Seral Development Areas are Minimal, Fragmented, and Soon to be Diminished by Operations Proposed in the Five-Year Timber Harvest Schedule

89 • Jackson's 11 old growth groves combined total 459 acres. Three of these locations have buffers designated for late seral development totaling an additional 780 acres. These areas combined total 1,239 acres, or 2.5% of Jackson. This 2.5% is the entirety of late seral development on the eastern two-thirds or more of the forest outside Watercourse and Lake Protection Zones.

90 • 2,224 acres of the Woodlands Special Treatment Area surrounding Mendocino Woodlands State Park is also designated for late seral development. This constitutes another 4.5% of Jackson.

91 • Therefore, outside watercourse and lake protection zones (WLPZs), **7% of Jackson is designated for "late seral development." This is the extent of**

[1] USDA Forest Service, USDOC National Marine Fisheries Service, USDOI Bureau of Land Management, USDOI Fish and Wildlife Service, USDOI National Park Service, Environmental Protection Agency. *Report of the Forest Ecosystem Management Assessment Team.* July 1993.

what will develop into "interior" old forest, the sort of habitat most beneficial to locally threatened terrestrial species. Given that these areas are at least dual purpose, likely to benefit both habitat and recreation potential, this figure seems less than what would be necessary to truly elevate non-timber production values to the equivalent of the timber program, which is the stated goal of the FMP. 92

- According to the dEIR VII.6.1-18, there are 97 miles of Class I streams. With 150 feet on each side allowed to develop into late seral forest, at most this constitutes 3,527 acres, not accounting for the loss of acreage due to the difference between the ground-measured WLPZ width and the horizontal plane measurement of acreage. 93

- Class II streams are an additional 186 miles. Although the dEIR does not acknowledge this, *the WLPZ for Class II in the Forest Management Plan (page 70) is 50-100 feet, not the 100 feet generally mentioned in the dEIR.* Thus, the acreage of Class II streams that will develop late seral characteristics is at most 4509 acres and at least, 2255 acres, again not accounting for the fact that the WLPZs are measured on the ground, and acres are measured on a flat plane. In steep terrain, as Class IIs are likely to be, this difference could be very signficant. 94

- So totally, the Class I and Class II WLPZs constitute strips of terrain that total at most, somewhere between 8036 and 5782 acres. Someone somewhere must have decided to shave the baby, because on page 149 of the FMP, it says the WLPZs will total 7440 acres. Again, this may significantly overstate the actual acreage. The steeper the slope next to the stream, the less acreage a ground-measured WLPZ will actually cover. The primary beneficiary of the WLPZ late seral will be aquatic species. 95

- There is also a discrepancy in the language regarding how the WLPZs will be managed. While there is general direction to manage for late seral, the specific standards the FMP and dEIR describe may not lead to the WLPZs becoming late seral as soon as would be feasible. Particularly, the significant logging allowed in the "outer band" of both the Class I and Class II WLPZs seem to contradict the general direction to manage for late seral conditions. The dEIR does not discuss this contradiction or propose mitigations to address the problem. This contradiction could possibly be solved by clarifying that the WLPZs should be managed for late seral conditions to be achieved as soon as possible. 96

- Putting aside for the moment the remarks in the previous paragraph, using the lower figure of 5782 acres to somewhat account for the slope problem, this added to the 459 acres of old growth, the 780 acres of late seral development, and the 2224 acres of Woodlands STA, totals 9245 acres total for late seral development in all forms. This comes to around 19% of Jackson's land base. While this is a significant commitment to developing older forest, it is certainly not an expansive 97

commitment, one that would seem to be consistent with "elevating wildlife, watersheds, and ecosystem processes to a level of importance equivalent to the timber management and the research, demonstration and education programs." (FMP, page 3)

98 • Perhaps most important, the five-year Timber Harvest Schedule (see FMP map Figure 6) including the enjoined THPs, proposes near-term timber operations in areas adjacent to the designated late seral development areas that provide the core habitat. These operations will reduce existing older forest habitat next to the late seral development areas and leave the protected areas more isolated as islands, reducing their habitat value. Recent heavy canopy removal timber operations adjacent to one of the late seral development areas has already started this island-creation process.

99 • Additionally, the five-year THP schedule proposes operations in other old forest areas that should be considered for habitat development. For instance, in the West Chamberlain Creek drainage, operations are scheduled in an area with a very significant component of large residual old growth trees, and is also adjacent to the late seral development area near the headwaters.

100 • The EIR does not discuss or analyze the effects of the five-year THP schedule on either existing old forest stands or the designated late-seral development areas. This is a significant omission.

Conclusion

101 Adoption of Alternatives C1 and C2 are likely to lead to significant adverse impacts at Jackson Forest on terrestrial, avian and aquatic species and in relation to the extent and fragmentation of old forest habitat. The Board has several good alternatives in front of it. Alternative E, which the DEIR identifies as the environmentally superior alternative is just that. Understanding that the Board may believe that Alternative E is not feasible given the legislative mandate for the forest, we have provided the scoping comments and legislation that have been combined to produce Alternative F. The scoping comments, which we are re-submitting along with this letter, were drawn up with an eye to the existing legislative mandate and I view them to be completely consistent with current law. There are elements within SB 1648, for instance the citizens' and technical advisory committees, that seem likely to be within your current authority. You may wish to consider forming these committees. Alternative F provides a flexible approach to managing for enhanced habitat that can serve the needs of wildlife and people. Additionally, there are abundant research and demonstration projects that the Alternative F approach could facilitate.

102

103

104

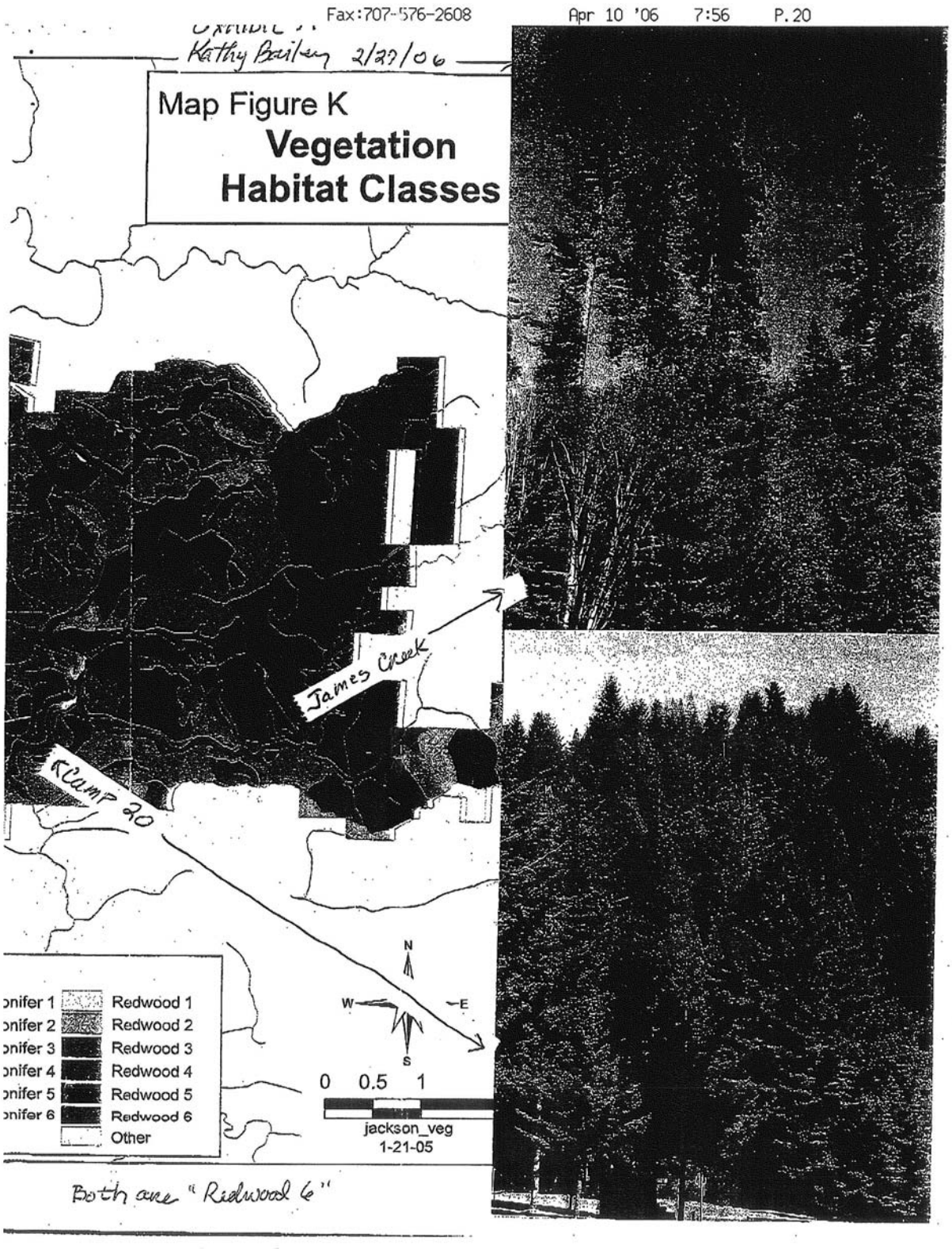
105 After reading Pat Higgins' letter to you regarding the dire need for the strongest possible protection for salmonids at Jackson, I want to re-emphasize the need to apply strong watercourse protection across the forest. This should be equivalent to federal standards for this region.

I truly hope the Board will take this opportunity to lay the controversy about Jackson's management to rest. It is possible that within a few years of improved management that Jackson could take the place it ought to have as a beloved state resource that everyone is proud of.

Sincerely,

Kathy Bailey
Forest Conservation Advocate
California Sierra Club

Attachments:
Map and photos - 4 copies
Scoping comments


Fax:707-576-2608
Apr 10 '06 7:56 P.20
Kathy Bailey 2/27/06
Map Figure K
Vegetation
Habitat Classes
James Creek
Ramp 20
Redwood 1
Redwood 2
Redwood 3
Redwood 4
Redwood 5
Redwood 6
Other
N
W
E
S
0 0.5 1
jackson_veg
1-21-05
Both are "Redwood 6"

Mailed Letter P-188

Response to Comment 1
The Administrative Draft Final Forest Management Plan (ADFFMP) proposes to establish an effective Road Management Plan. Due to recent reductions in staffing and budget, the Department's ability to maintain and improve the road system has been reduced. Since 2002, the staff of JDSF has lost a heavy equipment operator and a road management forester. In addition, operating funds dedicated to management of the road system have been cut, in the amount of $300,000 per year. It is anticipated that the staffing and budget associated with management of the road system will be restored and augmented after the management plan is approved and substantial revenue is produced. A second heavy equipment operator was added to the JDSF staff during 2007.

Response to Comment 2
Two timber harvest plans were approved by the Department's Forest Practice Program, and timber operations were initiated. These timber operations were halted at the order of the Superior Court, pending approval of the forest management plan. Two additional timber harvest plans for areas in Parlin Creek and Hare Creek, have been submitted to the CDF Forest Practice Program for review, but have not yet been approved. Review of these two timber harvest plans has been temporarily halted at the request of the Department, pending approval of the ADFFMP.

Response to Comment 3
The Citizen's Advisory Committee (CAC) was appointed by Director Richard Wilson in 1997, and produced a report in 1998 that included several recommended management measures. Several of the management measures recommended by the CAC were a matter of normal forest operations at the time that the recommendations were made. Others were implemented during or after the tenure of the CAC, while others were not implemented.

The court processes involving the issue of JDSF management plans and accompanying EIR is a matter of record. No timber operations within THP areas may be performed until a new management plan is approved by the Board.

Department staff began the preparation of a new management plan long before a suit was filed by the Campaign to Restore Jackson Redwood Forest.

Response to Comment 4
The comment is expressing a personal opinion as to the size of the DEIR ("voluminous") and reports to have found it difficult to review. The information contained within the DEIR is relevant to a consideration of potential impacts associated with the management of JDSF. Due to the complexity associated with analysis of several alternatives across an expansive assessment area, the document is necessarily large. In later comments, the commenter expresses the opinion that the document does not contain sufficient detail.

Response to Comment 5
The various alternatives are briefly described in the Executive Summary of the DEIR. More detailed descriptions are provided in text form in DEIR section VI. The greatest level of detail on the alternatives is provided in a comparative table in section VI (Table VI.1). A similar table is included in the RDEIR (Table II-4), adding detailed information about Alternative G. The comparative table facilitates the reader’s ability to easily compare the various features of the alternatives and to most easily understand the differences among them.

Response to Comment 6
The executive summary is intended to provide a brief overview or the document and review processes, but is not intended to provide sufficient detail to provide the reader with a full description of management proposals, alternatives considered, or impacts assessed. While details associated with Alternative F were expanded upon in section VI, the basic thrust of Alternative F was not changed.

Response to Comment 7
Alternative F is unique to the DEIR, and is one of seven alternatives that were considered. The alternative is self-explanatory, and does not rely upon external documents. The Chesbro bill (SB 1648) was specifically referenced in the discussion of Alternative F. This is a public document that is readily available to anyone wishing to refer to it.

Response to Comment 8
The DEIR utilizes information about the Forest that was reasonably available when the draft document was prepared. Reliable and tested timber information at the stand level was not available beyond that which is reported. Visual display of basic current forest characteristics was provided in Map Figures J and K. Visualizations of potential changes in forest stands over time under the various alternatives are not available, and represent a very complex and time-consuming exercise. However, the DEIR includes projections of habitat types over time throughout the assessment area. These are provided primarily in tabular form.

Response to Comment 9
The DEIR provides substantial information and analysis of potential environmental impacts and includes explanations of how the conclusions regarding potential environmental impacts were reached.

Response to Comment 10
Alternative C1 is presented as the proposed project by the DEIR, as this was the management plan that the Department brought forward for the Board's approval. Alternative G was subsequently formulated and proposed by the Board be to the preferred management direction for JDSF. Alternative G incorporates provisions from several of the other alternatives.

Response to Comment 11
The Public Resources Code (sections 740, 4645) gives the Board the responsibility to establish management direction for the Demonstration State Forests.

Response to Comment 12
As stated in the DEIR, Figure K presents habitat types that were developed by converting timber types into the habitat types described within the California Wildlife Habitat Relationships System (CWHR).

The JDSF 2004 vegetation is first discussed on the second page of the Wildlife and Wildlife Assessment section (VII.6.6-2). In this section, the tables beginning on the third page of the section are referenced. Those table report CWHR habitat types associated with JDSF vegetation, which is what is depicted on Map Figure K. Map Figure K is listed in the table of contents of the DEIR; however, the comment is correct in stating that Map Figure K is not directly reported in section VII6.6. While a comparison between the habitats reported in Tables VII.6.6.1 and VII.6.6.2 illustrates that the habitat types are the same, the reader must be somewhat familiar with the CWHR habitat typing system (cited on page VII.6.6-2 and further detailed in the tables on page VII.6.6-6) to make the most of the information.

Response to Comment 13
A reading of the CWHR habitat typing system indicates that Redwood 6 is multi-layered with size class 5 trees over size class 4 or 3 trees, with total tree crown closure greater than 60 percent (see Table VII.6.6.1.3 in the DEIR). It is recognized that this is a very rough and broad description, and that many different stand forms may meet this criteria. The information presented in the DEIR is not in error, it simply illustrates the range of conditions that may fit the description of Redwood 6.

Response to Comment 14
Refer to response 15.

Response to Comment 15
Refer to response 13. The CWHR system and its characterization of habitats was used as the basis for converting the JDSF vegetation types into CWHR habitat types. The JDSF vegetation layer differentiates vegetation characteristics to a greater degree than the CWHR, but this information cannot be used within the CWHR system to estimate the value of the habitat for various species. This is why the JDSF vegetation types were converted to CWHR habitat types. Map Figure K is not in error, but this concern serves to point out potential limitations in current habitat relationship assessment models for certain species.

Response to Comment 16
Neither Redwood 6, nor Map Figure K are intended to represent the extent or location of potential old forest habitat. Rather, they are utilized as an assessment tool regarding current and potential habitat availability for wildlife. It is well understood that there are limitations to the accuracy of the modeling process for certain species. As more and better assessment tools become available, they will be utilized in future project assessments to the extent feasible.

Response to Comment 17
As explained above, the information is correct to the level of detail available in the data and models that were utilized for the assessment. This limitation is recognized and disclosed in DEIR section VII.6.6-1 and 2.

Response to Comment 18
The limitations of the CWHR typing system and model are known, and must be considered when reviewing the analysis.

Response to Comment 19
The following explanation can be found in Section VII.6.6-78 (Marbled Murrelet): "In addition to old-growth stands, other forest stands of various CWHR classes may provide suitable habitat in the form of single or small groups of large old-growth residuals. However, specific data are not currently available. Therefore, for purposes of this analysis, JDSF provides 459 acres of old-growth and numerous scattered residuals that are considered potential murrelet habitat (DFMP Appendix V, Table 2). Marbled Murrelet habitat suitability would depend on the specific characteristics of the stand, including the presence of mature trees with large branches, deformities, and other formations that provide nesting platforms. For this analysis, these habitat types are used to represent potential habitat for Marbled Murrelets, although it is important to recognize that many of these stands may not provide suitable habitat."

Recognizing the limitations of the CWHR system relative to Murrelet habitat requirements and limitations associated with available survey data for murrelets and other species, it is possible and even likely that some of the stands identified as being either suitable or unsuitable for any given species may not be correct. In the absence of field assessment and survey at the stand level, it is impossible to state with certainty that a given habitat area is suitable or not suitable. The Department is prohibited by law from a "take" of the Marbled Murrelet. Prior to the conduct of projects that propose to impact potential Marbled Murrelet habitat, an assessment of impacts must be conducted, including survey for the species. In the case of identifying potential future murrelet habitat for management purposes, it should be recognized that the assessment can serve only as a rough indication, and that further, more detailed analysis, is required at the project level.

Response to Comment 20
The analysis is a projection based upon the best information available.

Response to Comment 21
The limitations of the data and models to which it is applied is clearly explained in the various sections of the DEIR.

Response to Comment 22
See response 19 above.

Response to Comment 23
The key for Map Figure K must be reviewed in conjunction with knowledge of the CWHR habitat typing system. The necessary description is found early in the Wildlife section at Page VII.6.6-6. A full description of the CWHR system is not of a practical size for placement within a map key. See response 19 above.

Response to Comment 24
The ecology of the Marbled Murrelet is fully explained, including references to research information, beginning at Page VII.6.6-52. It is explained in the section, as the comment states, that a reduction in old forest throughout the range of the murrelet is the primary cause for decline of the species.

Response to Comment 25
The maps and figures are not intended to represent the same information. Map Figure K represents vegetation habitat classes that correspond to the CWHR habitat typing system. Map Figure R is a spatial representation of habitat suitability predicted as output of the model BioView developed by the California Department of Fish and Game and US Forest Service (CDFG http://www.dfg.ca.gov/biogeodata/by_program.asp), which is based upon components of the CWHR habitat relationships model. Figure 8 of the DFMP represents forest vegetation as interpreted from satellite imagery, and is not utilized in the DEIR for assessment of habitats and potential impacts to wildlife.

Response to Comment 26
While Map Figure K is a spatial representation of CWHR habitat types, Figure 8 of the DFMP does not take scattered residual old-growth trees into account. Figure 8 is based upon satellite imagery, which is not well suited to the identification of scattered old trees. Figure 8 is not intended to be utilized in the assessment of habitats or impacts to wildlife. It is not stated, nor is there any intent to portray murrelet habitat development over a few short years. This development may take additional decades or centuries.

Response to Comment 27
See response 19 above.

Response to Comment 28
The assessment conducted for the Marbled Murrelet, beginning at Page VII.6.6-52 clearly explains the current extent of known or potential Marbled Murrelet habitat within JDSF. While CWHR, as utilized for this assessment, describes some of the area of James Creek and elsewhere as fully suitable for the Marbled Murrelet, the DEIR explains at Page VII.6.6-78 and 79 that only 459 acres of JDSF is currently considered to be potential Marbled Murrelet habitat, while recognizing that other potential habitat may exist in the form of individual old-growth trees or small group of old-growth trees, such as those found in parts of the James Creek watershed.

Response to Comment 29
The Board agrees that the two types of forest stand potentially represent two different forms of habitat, while both may meet the definition of Redwood 6 in the CWHR system. The limitations of the system are recognized by the Department, DFG, the Board, and the authors of the CWHR system. A more detailed analysis will be performed at the project level, and survey will be conducted when potential habitat is encountered that may be impacted.

Response to Comment 30
Both of the stand conditions described can occur naturally or through stand management.

Response to Comment 31
A broad set of individual forest stand conditions will fit within the Redwood 6 CWHR category. Many stand management techniques may ultimately produce stands that either fit within the category or develop into Redwood 6. Future improvements in assessment techniques, combined with more detailed, site-specific examination, will lead to improved assessment at the project level, and eventually at the regional level.

Response to Comment 32
The DEIR uses appropriate assessment methods and available information. While the Board recognizes that certain improvements in assessment tools, such as the CWHR system, would be beneficial, modification of the system would be a very involved, time consuming, and expensive undertaking; such efforts are beyond the scope of the DEIR. The Department and the Board are unable at this time, to create and provide the supporting analysis for a new habitat type and habitat suitability ratings for species utilizing that habitat type within the CWHR system. The Board supports this form of effort, and will participate in these future efforts as budget and personnel limitations allow.

Response to Comment 33
Exhibit A of comment letter depicts a photocopy of a portion of Map Figure K. Also in the Exhibit are two photos. The top photo appears to depict scattered overstory trees, with an understory consisting of both conifers and hardwoods. The location from which the photo was taken cannot be identified, but it appears to represent a fairly common stand condition in portions of the Chamberlain and James Creek watersheds that may be characterized as Redwood 6 on Map Figure K. The lower photo appears to depict a stand of fairly dense conifer forest. Based upon the presence of the Chamberlain Creek Conservation Camp sign in the lower photo, the photo was apparently taken facing in a generally eastward direction toward more than one stand, but primarily a stand that is classified as Douglas fir 4 on Map Figure K, not Redwood 6 as the comment states.

However, the Board recognizes that multiple stand forms may be included in the Redwood 6 habitat type.

Response to Comment 34
See responses below.

Response to Comment 35
The comment is somewhat unclear. The JDSF 2004 vegetation layer is not a CWHR database, but rather a depiction of vegetation types (not CWHR habitat types) across the JDSF landscape. The analysis beginning on Page VII.6.6-149 is an assessment of habitat availability over time. This assessment included a projection of stand development by using available forest inventory information and projecting it forward with a growth model. The modeling approach is fully described in section VII.6.6.8. This analysis utilizes available analysis tools and information. Due to varying levels of existing information, the analysis was performed with the best information available for each particular area of concern (inside JDSF, outside JDSF, etc).

Response to Comment 36
The "contradictory" information is not described, so a reasoned response cannot be made.

Response to Comment 37
There is insufficient detail in the concern to enable a reasoned response. See responses above.

Response to Comments 38 through 41
It is unclear what the commenter believes is an error in this statement. The paragraph which the commenter quotes from the DEIR does in fact state very clearly that two WHR databases are being used.

The explanation for the differences between the numbers in the two tables lies in the fact that two different data sets were used, for two different analyses - a large landscape regional level analysis,

and an analysis for the much smaller area defined by the boundaries of JDSF. This approach is a standard analytical practice. Detailed vegetation data exist for the Forest. For the large landscape regional level analysis, such detailed data do not exist, and less detailed, remotely sensed imagery is used. To claim that one of these data sources is right and the other is wrong misconstrues the purposes of the two analyses. The two data sets were compiled for different types of analyses and are not directly comparable. They both constitute the best available data for the scope of their respective analyses.

The differences in total acreage of a particular CWHR type noted by the commenter are to be expected when comparing the results of two different mapping methodologies and assumptions applied at two different scales for two different purposes. The Department used those data that were most applicable to the scale of analysis. It is highly likely that the JDSF-specific mapping effort is more representative of actual conditions on JDSF than the regionally derived data given the associated field verification and sampling conducted in the former. It was the more detailed JDSF-specific information that was used in the modeling exercises to represent conditions on the Forest.

Table VII.6.6.1 is found in the Regional Setting section and uses the California Wildlife Habitat Relationships System (CWHR) to describe extent of habitat types in a large landscape, regional context. In order to provide a relative comparison of habitat types for JDSF and the region in general, a common and regionally derived vegetation coverage was necessary. FRAP Veg was utilized for this purpose and reference to the mapping methodology used is noted in the footnote DEIR Page VII.6.6-2.

Table VII.6.6.18 describes the extent of CWHR habitat types for a much smaller area, within the boundaries of JDSF derived from vegetation mapping and forest plot sampling. The habitat type mapping completed at the more detailed scale of JDSF was used for alternative analysis and wildlife habitat relationship modeling.

It is not surprising that the JDSF vegetation data used in this analysis corresponds closely with forest information that was developed in prior management planning efforts, such as the one performed for a draft HCP effort, which was abandoned in the late 1990s. It is also not surprising that the WHR acreage presented in the alternatives analysis is different from that presented in table VII.6.6.1; they represent different data sets used to support different analyses, at the regional and forest specific levels of resolution, respectively. See also response to comment 39.

Response to Comment 42
See response to comment 38-41. Vegetation data derived from plot sampling analysis and field verification for JDSF was considered the most accurate data and the best available information for CWHR analysis within JDSF. Remotely sensed satellite imagery was considered the most accurate data and the best available information for the large landscape regional analysis. To the developers of the DEIR, the separation of data sets used for regional context setting from that of the JDSF ownership and in clearly separate sections of the DEIR was considered sufficient distinction for DEIR reviewers.

Response to Comment 43
Timber may be the keystone species of habitat for some mid- and late seral dependent wildlife species, but hardwoods, brush, ground cover, characteristics of canopy openings and many other parameters play a central role in defining habitat for early seral dependent species.

The JDSF vegetation classification system and CWHR classification systems provide reasonably consistent results given the difference in focus of the two systems. The commenter does not provide substantiation of where and how she feels the two classifications systems contradict each other and what is meant by the term “significant,” making a reasoned response not possible.

The timber stand and habitat classification systems are in fact consistent with each other; the JDSF vegetation classification system can be cross-walked uniquely into CWHR. In this analysis, they were analyzed and reported separately.

Response to Comment 44
The quotation from the DEIR is accurate.

Response to Comment 45
As yet, a single vegetation typing scheme is not available that is capable of relating timber, habitat, and recreational values associated with the Forest. Timber, habitat, and recreation are each assessed in varying ways, but in a manner that provides for a full assessment of potential impacts. Map Figure K provides important information on the existing forest characteristics across the Forest and their spatial relationship.

Response to Comment 46
The Board agrees with this statement, and believes that it has been achieved.

Response to Comment 47
The Board does not share the commenter's view that it would be a tremendous boon to the discussion to use identical stand characterizing systems when analyzing timber and habitat. In this situation, the benefit of increased accuracy of the respective analyses was found to outweigh the benefits of ease of understanding the discussion.

Timber types and wildlife habitat types have traditionally utilized differing classification schemes, primarily because they are intended for different purposes. Timber inventories are generally used to quantify stands for potential production and to enable forest managers to predict future yields, assess potential stand management, and predict future stand growth. Habitat types and their classification include the trees that may constitute timber, but also take into account other vegetation characteristics such as structural elements and other ground and canopy-related features that are not normally considered in a timber inventory.

It is not clear what the commenter means by "the timber stand and habitat classification systems must be consistent within themselves", consequently a reasoned response is not possible. The timber stand and habitat classification systems are in fact consistent with each other; the JDSF vegetation classification system can be cross-walked uniquely into CWHR. In this analysis, they were analyzed and reported separately. See also the response to comment 43.

Response to Comment 48
The Board has provided visualization of the expected habitat changes over time in graph form, but the data do not support a spatial visualization. Please see the various graphs in Section VII.6.6.8. In addition, the types of habitats that are expected to develop over time have been characterized.

Response to Comment 49
It is incorrect to state that the CWHR map layers from the draft HCP are at least as current as the information used in the DEIR. The Department did not utilize the draft habitat maps that are depicted in the draft HCP for the DEIR. The newer 2004 JDSF vegetation layer was used, which was considered an incremental improvement over the 1999 HCP CWHR layers, based upon field comparisons made by JDSF staff. It is not surprising that data sets, including CWHR layers, change over time as methodology improves and additional data become available. It is quite understandable that these types vary from those depicted on Map Figure K. Map Figure K represents a conversion of 2004 JDSF vegetation typing to CWHR habitat types. Map Figure K and DFMP Figure 8 utilize two entirely different classification schemes, so should not be expected to be the same.

Response to Comment 50
See responses above.

Response to Comment 51
As explained above, Map Figure K depicts CWHR habitat types. It is unclear what the commenter is referring to as "the old CWHR map". If this is a reference to the draft HCP effort, Map Figure K is the appropriate map to consider in the context of the DEIR.

Response to Comment 52
Map Figure K does not relate well to Figure 8 of the DFMP, since the two maps were compiled in different ways, and with differing vegetation characterization (see map keys). We note that Figure 8 of the DFMP has been replaced in the ADFFMP with the Map Figure 7, which is equivalent to Map Figure K from the DEIR, thus bringing the EIR and Plan into greater consistency.

Response to Comment 53
The DEIR is intended to serve as an assessment of potential impacts associated with future management of JDSF. The DFMP represents a plan of management, not an environmental assessment. In order to review an assessment of potential effects, the reader is encouraged to gain an understanding of the management alternatives and to thoroughly review the EIR for the assessment of potential impacts. See also the response to Comment 52.

Response to Comment 54
See response to Comment 49. Map Figure K was included in the DEIR to provide the reader with a spatial representation of CWHR habitat type and size class at current conditions. Map K is the starting point (Current Condition) for the non-spatial CWHR analysis of habitat extent over time by Alternative as well as the spatial analysis conducted for selected species of concern. Canopy cover classes were also used in these analyses but were not included in Map Figure K due to concerns over map readability.

Response to Comment 55
See response to comment 49. The non-spatial Alternatives Comparison and the Spatial Pattern Analysis used the same data sets for current habitat conditions. There was no mid-page shift in methodology that is not clearly described (See DEIR Page VII.6.6-216). Total acreage for Current Conditions under Alternative Analysis will not equal total acreage under the Species Spatial Pattern Analysis since acreage in the latter must have at least a “low suitability” value before being tallied.

Response to Comment 56
See response 48.

Response to Comment 57
The entire bulleted item consists of quotes taken from the DEIR.

Response to Comment 58
See response to Comment 39. The CWHR habitat classification system was developed to capture those forest structural conditions important to wildlife. The quoted DEIR sentence refers to the fact that CWHR 6 is the only habitat stage that describes multiple canopy layers. The sentence refers to limitations in the number of categories in which multi-layered conditions can appear and not the habitat predictive ability of CWHR 6 as a representation of this level of forest structure.

Response to Comment 59
The commenter states the opinions that CAL FIRE can do better than the WHR system and that a neighboring landowner has a better vegetation classification system. The limitations, benefits, and assumptions inherent in a variety of wildlife habitat relationship modeling tools were considered prior to choosing the models to apply to alternative analysis. The CWHR was judged to be the best modeling system available to examine trend in habitat capability for as many terrestrial vertebrates as were likely to occur within the project area. Also, there are compelling arguments for using a standardized vegetation classification system that is commonly accepted throughout the State. CWHR is the most comprehensive wildlife information system for vertebrates in California today --

containing life history, geographic range, habitat relationships, and management information on 692 species of amphibians, reptiles, birds, and mammals known to occur in the state.

CWHR is arguably the most supported, tested and maintained vegetation classification system currently in use in the State. Development of the CWHR System started in the late 1970s. The California Interagency Wildlife Task Group (CIWTG) was formed in 1981 to provide guidance for system development, with a final Memorandum of Understanding (MOU) signed by sixteen state and federal resource agencies and public universities in 1985. CIWTG continues to meet quarterly on scientific research and policy issues related to CWHR. The System represents nearly 30 years of work by wildlife biologists, vegetation ecologists, geographers, land managers and planners, computer programmers, Geographic Information Systems (GIS) analysts, statisticians, modelers, database managers, research writers, and wildlife artists working in a wide array of public and private organizations devoted to resource protection.

The CWHR System is managed by professional biologists and GIS analysts in the Biogeographic Data Branch (BDB) within the California Department of Fish and Game (CDFG). BDB actively acquires, integrates, improves, and distributes biological resource data sets in support of conservation needs. CWHR represents its most analytical tool, predicting species presence based upon geographic location and habitat conditions. It complements data representing wildlife sightings, such as the California Natural Diversity Database (CNDDB), because it predicts the presence of species in locations or habitats where they are likely to occur but for many reasons have not been seen. Many species are difficult to detect and many places in the state have not been surveyed often for wildlife. A model such as CWHR can alert land managers to the potential presence of a species that may otherwise be missed in a resource assessment based solely upon wildlife surveys and databases of positive wildlife sightings.

Response to Comment 60
The DEIR utilizes the best tools and information that are readily available and applicable to the resources in question. The DEIR discloses potential limitations in the tools and information that was used in the analysis.

Response to Comment 61
Maps that depict the estimated timber harvest history are available at the Department offices in Fort Bragg. These maps were initially created decades ago, and have been periodically updated to reflect more recent timber harvest. However, the maps do not represent an intensive evaluation of the extent of all historic harvests, and the origin of the data used to produce many of the maps is unknown. The 1925 date is somewhat arbitrary from an environmental point of view. Stands originally regenerated prior to this date may be quite variable, due to growing site differences, impacts of past management activities other than logging, variations in regenerative success, and the effects of fire and weather. In the case of wildlife habitats, the date of last logging is not normally a criterion utilized in habitat characterization, whereas, the current structure of the forest is a key consideration. Current estimates indicate that approximately 11,000 acres of JDSF has not been logged since 1925. Another roughly 14,000 acres of stands originally regenerated prior to 1925 has been partially harvested since 1925. These are rough approximations that are not based upon detailed ground-truthing. Maps and acreage summaries depicting this information have been provided to the commenter and other members of the public.

Information from spatially accurate resource surveys of current stand characteristics is a better indicator of the nature of those stands and their wildlife habitat values (for example) today than is a rough compilation of how those stands may have been harvested up to 80 or more years ago.

Response to Comment 62
Given the amount of time normally considered necessary to develop late seral forest, the level of development of stands in this direction is both relative and subjective. Differences of a few decades in one direction or the other are likely to result in only slight variations in stand structure, other effects aside.

Information from spatially accurate resource surveys of current stand characteristics is a better indicator of the nature of those stands and their wildlife habitat values (for example) today than is a compilation (of uncertain accuracy) of how those stands may have been harvested up to 80 or more years ago. The latter information was used to develop Map Figure K in the DEIR and to support the wildlife habitat analyses contained in it.

Response to Comment 63
See response 61. The term "very old" is not defined. The earliest logging of the area which is now JDSF is unknown, but evidence suggests that it may have been approximately 1850 to 1860. Areas regenerated at that time may contain second-growth trees up to 145 or 155 years of age. However, subsequent logging of the remaining old-growth, in combination with subsequent burning has resulted in significant changes to earlier regeneration and stand development.

Response to Comment 64
Potential recruitment areas for the Marbled Murrelet are discussed beginning on page VII.6.6-78. The current and potential habitats are discussed relative to the ecology of the Marbled Murrelet, including habitat location, structure, and general management. The DEIR provides the Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat. This additional management measure calls for a collaborative process (including DFG, State Parks, and others) to re-evaluate and potentially redistribute the marbled murrelet habitat recruitment areas established in the DFMP. If they can be identified, the older stands noted in comment 63 could be considered as a part of this process. Also, it should be noted that the ADFFMP provides for an additional area of 1,549 acres in the Russian Gulch/Lower Big River area to be designated for the development of late seral forest conditions to provide potential Murrelet habitat.

Response to Comment 65
Wildlife do not respond to the age of stands per se—stands of the same age in the same area can have significantly different habitat characteristics depending upon a number of factors (such as composition of the original stands, soils, aspect, intermediate treatments, fire, pests and diseases, etc.). Given this fact, information on actual current stand composition and structure are much more meaningful from a wildlife habitat perspective than stand age. Further, the available information on stand age at JDSF is of uncertain accuracy in terms of both stand establishment and stand modification over time, as well as spatial location. JDSF does have spatially accurate information on current stand composition and structure. This information can be classified for its habitat characteristics, and this classification information can be used in models to evaluate its value to various wildlife species. This is the approach that has been taken in the DEIR. Section VII.6.6, Wildlife and Wildlife Habitat, makes extensive use of the Department of Fish and Game's Wildlife Habitat Relationships System (CWHR) on both a spatial and nonspatial basis. Map Figures J and K provide CWHR habitat classification information for JDSF and the larger cumulative effects assessment area.

The late seral development areas were designated primarily due to their relationship with other forest attributes. For example, the riparian zones are so designated, due to the widely recognized value of riparian zones as habitat and corridors for many species of wildlife, as well as their value to aquatic habitat and water quality. Other late seral development areas were designated to form larger patches of late seral forest adjacent to existing old growth forest. The Mendocino Woodlands STA is designated due to a combination of factors, including proximity to state parks and the coast, as well as the fact that it represents a large contiguous patch of even-aged young forest that has not been significantly developed. The Russian Gulch/Lower Big River Marbled Murrelet habitat recruitment area was designated (in the ADFFMP) due to its proximity to areas know to be actively used by Murrelets and adjacent to State Park land. It is widely recognized that forest stands tend to develop characteristics of old forest as they age, including the development of unique structural elements, such as snags, down logs, cavities, large limbs, and broken tops.

Response to Comment 66
Some of the area included in the short-term harvest schedule has not been logged since 1925. Most of the proposed harvest in this area is selective in nature, although even-aged management also is proposed. The ADFFMP provides for a 3-year initial implementation period for the new plan, during which time there will be no even-aged management, except potentially as part of an experiment on the Caspar Creek watershed.

Response to Comment 67
The Board and the Department recognize the fact that recreationalists enjoy the view of these stands, and enjoy recreating in and near them. For this reason, a number of management constraints have been applied in these areas, including the establishment of buffers, limitations on the forms of silviculture to be applied, and specific management limitations near Class I and Class II watercourses. Some of the area in proximity of Camp One has been selectively harvested in the past, taking aesthetics and recreation into account. Recreation is a secondary, but recognized use of JDSF, and demonstrations of the compatibility between timber production and recreation are encouraged by the Board's policies. Final disposition of these two plans is subject to satisfaction of an existing settlement agreement and potential negotiations regarding the existing timber sale contracts.

Response to Comment 68
The late seral development areas have been identified as areas that will be managed to achieve late seral characteristics in the future. These areas are comprised primarily of second-growth forest that is not yet late seral in character. Selective harvest is proposed adjacent to most of these areas, but will not preclude the development of late seral characteristics within them. Habitat connectivity has been considered in detail within the DEIR analysis (see section VII.6.6, Wildlife and Wildlife Habitat). There is very little forest within JDSF that is currently classified as old forest. The second-growth forest exists in large patches that are well connected throughout the forest by riparian zones and other habitat types.

Response to Comment 69
The potential fragmentation of habitat for species has been considered in detail in the DEIR (see section VII.6.6, Wildlife and Wildlife Habitat). Results of the analysis indicate that significant impacts associated with fragmentation are not expected to occur. Alternative F does not entirely prohibit even-aged management; thus some minor fragmentation could occur under this alternative.

Response to Comment 70
The incremental and cumulative effects of logging on forest stands and watersheds have been considered in detail in multiple sections of the DEIR, including the individual resource analysis sections (see, e.g., VII.6.1, VII.10, and VIII..

Response to Comment 71
The analysis in DEIR section VII.6.6 considers the effect of harvesting on all forest stand types spatially within JDSF to the end of the first decade and non-spatially both within and outside JDSF to 2060. The analysis includes second-growth stands that, due to their current average tree diameter, composition, and structural conditions, might have the potential to develop late seral forest characteristics earlier than other stands. The analysis did not find that Alternative C1, including the effects of the short-term harvest schedule and the inclusion of the identified mitigation measures and additional management measures, would have a significant adverse impact on wildlife species or habitat.

It should be noted that the term “likely to develop late seral characteristics the soonest” is ill defined. For example, the term is not always synonymous with “oldest”. A stand of free to grow middle aged trees on a good site can easily achieve late seral characteristics sooner than a densely stocked stand of older trees on a low site. The commenter’s frustration over what she interprets as a lack of willingness to recruit late seral conditions from second growth stands on an oldest-first basis is

ultimately a reflection of a difference in management approach to cultivating late seral stands on the Forest.

Response to Comment 72
The tabular information on CWHR classification of forest area (found in section VII.6.6 of the DEIR) and Map Figures J and K in the DEIR present the best available information on the presence of these stand types on JDSF and within the larger cumulative effects assessment area used in the DEIR. This information was used as a key part of the impact assessment in the DEIR.

Response to Comments 73 and 74
See response to comment 72.

The commenter makes a key misinterpretation of the term "life of the Management Plan" used in the DEIR on page VII.6.3-33... The life of the management Plan is the next 10-15 years. Page 18 of the DFMP states: "The Forest Management Plan directs the management of Jackson Demonstration State Forest for the next 10 to fifteen years, or until a subsequent plan or major revision is approved." In general, the anticipated life of a management plan for a Demonstration State Forest is 5-10 years. This lifespan is based, in part, on Board policy that requires management plans to be reviewed at least every five years (Board Policy 0351.10).

There is solid commitment in the ADFFMP and the DEIR/RDEIR to create and maintain late seral forest conditions on JDSF. Contrary to the commenter's claim, the discussion on pages VII.6.3.34-38 clearly concludes that late seral stands will develop over substantial portions of the Forest. This result is backed up by the 100-year long term sustained yield analysis. Table 1 in the ADFFMP shows the desired future forest conditions, the overarching goals for all management of the Forest. Table 1 shows that the goal is to cultivate 45 percent of the Forest acreage in late seral or old growth, older forest structure, and mature and large trees.

Response to Comment 75
There is no intent on the part of the Board or Department to deliberately misrepresent information in the DEIR. See responses to comments 71-74.

Response to Comment 76
The definition and description of "late seral or "late successional" are sufficiently defined in the DEIR. Both terms are briefly defined in the glossary of the DEIR (see Appendix 2).
The commenter appears to request those defining characteristics of two stages of forest development that occur along a continuum. While stages at the extremes of that continuum and their characteristics are readily observed, those defining characteristics of closely related stages are not.

The US Forest Service sought to identify ecological characteristics for a number of forest types in the early 1990s (USDA Forest Service Old Growth Definitions—Characteristics for Eleven Forest Cover Types. Pacific Southwest Region, California, San Francisco.). "Successional stages are most often recognized by structural characteristics such as size of trees, distribution of tree sizes, presence and size of snags and logs, understory composition and heterogeneity, and horizontal diversity in structure. Late successional forests in general contain trees that are large for their species and the site, often a variety of tree sizes, large snags and logs, and a developed and often patchy understory. While the structural features of late successional forests, or old-growth, are generally recognizable, a myriad of community and ecosystem interactions (or functions) may also be diagnostic but are more difficult to measure and describe.... Stand age is often considered less important than structure in describing late successional forests because the rate of stand development depends more on environment and stand history rather than age alone."

Response to Comment 77
The terms denote a segment of the stand development continuum, as noted by the comment. Depending upon the source of reference, this may include the concepts of mature and old-growth forest. To avoid conflict and confusion, the DFMP and ADFFMP specifically identify stands that are

described as old growth and specifically identify stands that will be managed to develop into late seral and older forest conditions. The names applied to the phases of stand development bear less importance than the characteristics that are being managed for. As stated in the material quoted in the response to comment 76, stand age is considered less important than stand structure in describing late successional forests.

Response to Comment 78
As stated above, habitats have been projected independently of nomenclature associated with phases of stand development. The point at which any particular stand can be characterized as "mature phase" late seral forest is not distinct, and cannot be predicted with any certainty. Section VII.6.6 of the DEIR provides detailed CWHR classification projections for all alternatives over a period from 2004 to 2060. Readers can make their own conclusions as to how those classifications meet their conception of the vague concept of "mature phase" late seral forest.

Response to Comment 79
The Board recognizes that older forms of forest have value to many species of wildlife, depending upon the habitats represented and the range within which the forest type is found. This recognition is embodied in the ADFFMP's designation of one-third of JDSF for the development of late seral and older forest characteristics.

Response to Comment 80
The assessment of potential impacts to plant and animal species considered forest type, habitat type, presence of special habitat elements (such as snags and large woody debris), as well as potential future habitat development. This approach takes into account the characteristics of the forest to a greater level of detail than can be considered by using the term relatively less defined term "mature", which is a concept that potentially spans multiple habitat types.

Response to Comment 81
The short-term harvest schedule does not propose to harvest in forest stands that are late seral or late successional, based upon current information. If stands are found within potential harvest areas that meet the definition of late successional forest as described in the Forest Practice Rules, the potential impacts to species normally associated with this type of forest will be considered as the project is planned (Title 14 CCR 919.16). Other management limitations apply as well, including provision to retain old-growth trees, stands, and aggregations (ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure).

Response to Comment 82
Current "old-growth" forest stands are identified and mapped in the DEIR (see Map Figure D). In addition, individual old-growth tree characteristics are defined. "Late successional" or "late seral" as used in the DEIR and when referring to late-successional development or recruitment areas is meant to identify those forest stands that will be managed toward "mature" or "old-growth" conditions. The intent of the language used was to avoid confusion with current "old-growth" on JDSF that is recognized by the public. It is not determinable what proportion of late seral (successional) would be considered "mature", "over-mature", or "old-growth" over the planning period and within the designated recruitment areas given the forest structure underpinnings of the terms' definitions and their related positions along the continuum of forest development—although all of these forest conditions can be represented in the more general "late successional stage" of forest development.

A variety of management objective and ecological considerations (Marbled Murrelet habitat recruitment areas, Special Concern Areas for late successional development, rate of attainment of late successional conditions) went into the identification of late successional recruitment areas. It is highly likely that these areas currently contain stands that may be considered "mature" or individual "old-growth" trees.

Response to Comment 83
The Board defines terms in the Forest Practice Rules to make their meaning understood and a matter of law. It is incorrect to state that any single definition is either correct or in error. The terms late seral, late successional, and old growth have been defined in many ways. The reader is referred to DEIR Appendix 2. Also, see response to Comment #76.

Response to Comment 84
The Department defined late-seral and late successional in DEIR Appendix 2 page 5 for the purposes of environmental analysis on JDSF. The definitions provided, when considered with the definition's reference to the Forest Practice Rules would include forest conditions that the commenter considers "mature" and "old-growth". The phrase, "having biological characteristics and functions similar to old-growth forests," should denote forest conditions that are "mature" but have not yet attained those of "old-growth" but that can still be categorized under the more general term "late successional" or "late seral". See response to comment 82.

Response to Comment 85
This comment appears to be primarily about the Forest Practice Rules, not the DEIR or DFMP. The California Board of Forestry and Fire Protection defined the term "late succession forest stands" in the Forest Practice Rules for regulatory purposes. The definition should not be characterized as inherently incorrect for all circumstances. Mature forest is another concept that has been the subject of multiple definitions in the literature. The Board's definition of late successional forest stands does not include the concept of mature forest, nor does it need to do so to convey the regulatory requirement that was intended by the rules that accompany the definition (Title 14 CCR 919.16). The NSO 4(d) rule, cited in the comment, is another definition that accompanies regulation. A quick reading of the definition indicates that it is not precise and is intended only to generalize a very broad spectrum of potential forest conditions associated only with stand age. Neither definition is either correct or incorrect, but each has some regulatory significance.

Response to Comment 86
The relative biological value of forest conditions using species richness as a measure are described on DEIR Page VII.6.6-2 and Figure VII.6.6.2. DEIR Pages VII.6.6.17-22 also summarizes the relationship of species use to forest structure for meeting reproduction, foraging and cover requirements. Regardless of differing definitions of "mature" or "late seral" forest, the focus on late seral forest or older forest development on JDSF necessarily implies that current young growth stands will be required to transition through various stages of growth before attaining "mature," "older forest," "late seral," or "old growth" conditions.

Response to Comment 87
Acreage and location of "late successional" forest other than known "old-growth" stands is reported as stands with a CWHR habitat typing designation of 5M, 5D, or 6 (DEIR Section VII.6.3-13-15, VII.6.3-26, and VII.6.3-33-38). These CWHR labels are DBH- and canopy-closure based and are reported throughout the Wildlife and Wildlife Habitat Section 6.6.8 Comparison of Alternatives, beginning on DEIR Page VII.6.6-131. See also response to Comment #61.

Response to Comment 88
Comment noted. See responses to Comment #61 and #87.

Response to Comment 89
The statement correctly characterizes the DFMP. Also, under the now-proposed ADFFMP, substantially more area of the Forest is designated for the development of late seral and older forest characteristics (a total of one-third of the Forest area). Under the ADFFMP, the area of JDSF dedicated to preservation and development of late seral forest conditions includes the identified old-growth groves, identified augmentation areas around selected groves, watercourse and lake protection zones, the area of upper Russian Gulch and lower Big River, and most of the Mendocino Woodlands STA. In total, these areas comprise about 22 percent of JDSF.

Response to Comment 90
The statement is correct.

Response to Comment 91
Under the ADFFMP, out side of the Class I and II watercourse and lake protection zones, about 5,000 acres of JDSF, or 10 percent, is designated for late seral development or old growth. Additional area will be managed for the development of older forest structure conditions. In total, about one-third of the Forest will be managed for late seral, older forest structure, or old growth conditions.

Under the ADFFMP, even-aged management is permitted on only 26 percent of the forest area. Thus, most of the stream zone is located immediately adjacent to forest stands that will be managed on an uneven-aged basis. The designation of the contiguous 6,800-acre Older Forest Structure Zone, which encompasses most of the old growth groves and old growth augmentation areas, will help to increase the interior forest quality of these late seral forest areas see Map Figure 1 in the RDEIR or Map Figure 5 in the ADFFMP). The term “interior” is somewhat subjective, but tends to exclude forest near distinct stand edges, including area adjacent to residential neighborhoods, openings, or other forms of vegetation.

Response to Comment 92
As indicated in the response to the previous comment, the ADFFMP substantially increases the amount of the Forest designated for the development of late seral and older forest conditions. The ADFFMP also recognizes the recreation value of these areas. However, elevating the management-related importance of habitat and recreation is not exclusively synonymous with the concept of area dedicated to development of late seral or older forest structure. We note, nonetheless, that, dedication of area to preservation of old growth forest and development of late seral forest has not been represented in prior management plans.

Response to Comment 93
A complete survey of Class I watercourses has not been made on JDSF. The length of Class I watercourse is an estimate based upon past surveys, with the length of waterway taken from the geographic information system (GIS). As such, this length of waterway can be expected to be an under-estimate of stream length, since waterways tend to be much more sinuous than represented on maps.

The minimum width of watercourse protection zones is based upon slope distances specified in the Forest Practice Rules (Title 14 CCR 916.5). For JDSF, the minimum zone width for Class I watercourses is 150 on either side of the stream, beginning at the watercourse transition line, which may be many feet from the center of the stream. Zone widths are often expanded for individual projects, but may not be less than specified in the Forest Practice Rules or the management plan. Class II watercourse protection zones on JDSF may vary between 50 and 100 feet in width, depending upon side-slope and characteristics associated with individual streams and timber harvest proposals. It is quite common for zone widths to be wider than the minimums required by the Forest Practice Rules or specified in the management plan. As such, the representation of acreage associated with watercourse protection zones should be treated as an approximation, not an exact figure.

Response to Comment 94
See response 93.

Response to Comment 95
See response to comment 93.

As stated in response 93, the zone widths required by the Forest Practice Rules, and as specified in the DFMP should be considered minimums. The actual width of zones, as applied in the field, will vary on the high side from the specified minimums, due to many potential site-specific factors. The estimates of total potential zone acreage for JDSF come from estimates of current watercourse extent

and classification, and take into consideration adjustments where Class II watercourses join Class I watercourses or otherwise overlap.

The Forest Practice Rules specify generally wider watercourse protection zones in areas with steeper slopes, specified by a range of slope class (Table 1, Title 14 CCR 916.5). It is incorrect to state that steeper slopes result in lower protection zone acreage. For example, Table 1 specifies a Class II watercourse protection zone width of 75 feet where the sideslope above the stream is 30 to 50 percent, but a zone width of 100 feet where the sideslope exceeds 50 percent. Zone widths, as applied in the field, will vary depending upon site-specific conditions and other management considerations. While it is mathematically possible for an individual zone width to be narrower for a steeper slope under specific circumstances, in general, the widths specified in the rules and applied in the field tend to be wider for steeper slopes.

Response to Comment 96
No one can state with any certainty how long, and under what exact set of circumstances, a forest stand will develop late seral characteristics. Forest stands are dynamic and subject to many forms of natural disturbance. The management plan specifies measures to retain and recruit large trees within the watercourse protection zone, while maintaining native hardwoods, developing multiple canopy layers, and retaining a high level of basal area and overstory canopy. These measures, along retention of snags and down logs, and selective cutting within the zone, will move stands toward development of late seral characteristics. It is not known how long it will take for individual stands to achieve late seral characteristics.

Response to Comment 97
See responses 92 and 93. Under the proposed ADFFMP, one-third of JDSF would be designated for the development of late seral and older forest conditions.

Response to Comment 98
The ADFFMP dedicates specific forest areas to development of late seral characteristics. A speculative future demarcation between a late seral development area and managed stands that surround it is not a significant environmental issue. The ADFFMP proposes to increase the amount of late seral forest within JDSF to the benefit of species normally associated with this type of forest, resulting in a positive cumulative effect. Areas designated for development of late seral or older forest structure conditions have most of their adjacent JDSF areas designated for uneven-aged management, which will substantially reduce the potential for an “island effect” due to relatively continuous forest canopy. The late seral development areas designated for the Mendocino Woodlands STA and the Russian Gulch/Lower Big River areas are bordered to the outside in large part by State Park land.

Response to Comment 99
The forested areas of JDSF represent habitat for aquatic and terrestrial species. Management, combined with natural stand development and growth, produces habitats that vary and are preferred and utilized by a variety of different species. Forest management is appropriately proposed in stands that have achieved a high level of growth and potential production.

The stands in the West Chamberlain Creek watershed that are included in the short-term harvest schedule will be partially cut, utilizing a prescription called commercial thinning. Old trees will be retained as specified in ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure. Further, the initial implementation period harvesting constraints specified in the ADFFMP would apply. Based upon preliminary project planning in the field, the proposed harvest area will not adjoin the late seral development area, but will be located partially within the older forest structure zone. Partial harvest in this area has potential to accelerate the development of wildlife habitat structure normally associated with older forests.

Response to Comment 100
All harvesting proposed in the short-term harvest schedule was included in the wildlife habitat impact modeling conducted in section VII.6.6, Wildlife and Wildlife Habitat. This modeling included the use of the FRAGSTATS model, which is a spatially-based model that considers the adjacency of habitat types and their changes over time. This modeling did not indicate a potential significant effect.

In addition to the programmatic level assessment done in the DEIR and RDEIR, each timber harvest proposal listed in the short-term harvest schedule will eventually be developed as a timber harvesting plan (THP). During the planning process, operational specifics will be developed, including more refined estimates of the extent of the project area, the stand treatments to be applied, and timber yarding and log hauling specifics. In addition, survey will be conducted as necessary for plant and animal species of concern, and potential habitat-related impacts will be addressed. In addition, each project will include a cumulative impacts assessment that includes the immediate project area and the surrounding assessment area(s). This assessment will include a consideration of the habitats that are present. Without knowledge of these project specifics, an evaluation of the potential effects upon the individual old growth groves would be speculative.

The identified short-term harvests adjacent to areas designated for development of late seral conditions will not alter the designation of the latter areas. Areas designated for development of late seral or older forest structure conditions have most of their adjacent JDSF areas designated for uneven-aged management, which will substantially reduce the potential for an adjacency effect, due to the relatively continuous forest canopy that will be maintained (see Map Figure 5 in the RDEIR). The development strategy to be applied in each late seral development area has not yet been specified, and may involve adding or omitting a number of individual management actions. It is therefore speculative to suggest that a complete assessment of impacts can be performed at this time.

See also the above response to comment 81.

Response to Comment 101
The potential for cumulative impacts to occur has been thoroughly considered. The potential for adverse impacts due to the extent and fragmentation of habitat has been considered in detail in DEIR section VII.6.6, Wildlife and Wildlife Habitat. The comment does not provide sufficient detail to develop a specific response. Alternative and impact analysis with the implementation of mitigation and management measures identified indicates that significant adverse impacts will not occur, and some beneficial effects will result. The proposed ADFFMP designates substantially more of the area of JDSF for the development of late seral and older forest structure conditions than the DFMP.

Response to Comment 102
Comment noted. This comment is not an environmental issue.

Response to Comment 103
Comment noted. This comment is not an environmental issue.

Response to Comment 104
The Board agrees that each of the alternatives (excluding Alternative A) would facilitate abundant research and demonstration projects. However, as the breadth of potential forest management options is reduced, so is the number and variety of potential research and demonstration projects. The Board directed the development of Alternative G, which is embodied in the ADFFMP, specifically to strengthen the research and demonstration mission of JDSF.

Response to Comment 105
See the response to the referenced comment letter by Patrick Higgins (DEIR electronic comment letter E-26). The Federal government has not established watercourse protection standards for this region, beyond those that have been recommended as guidance for habitat conservation plans. The potential for cumulative impacts to salmonids has been thoroughly considered (see DEIR sections

VII.6.1 and VIII). Significant cumulative effects are not expected to occur. Also, note that the ADFFMP provides for the establishment of three riparian restoration research and demonstration areas.

IV.11 Individual DEIR Mailed Comments P-188B to P-197

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

P-188B

Kathy Bailey
Additional Comments, March 1, 2006
1

PO Box 256
Philo, CA 95466
707-895-3716
February 27, 2006

Chairman Stan Dixon
Members
California Board of Forestry
1416 – 9th Street
PO Box 944246
Sacramento, CA 94244

Additional Comments on
Draft EIR for Jackson Forest Management Plan

Dear Chairman Dixon and Members of the Board:

Having a couple of minutes left, I am offering some additional comments on issues that are of concern.

Mushroom Management

On page VII.6.2-10 there is a discussion of mushrooms and other fungi, the use of Jackson by the mushroom-interested scientific community, scientific literature that was generated from research at Jackson, and other related issues.

106 There is attached to this discussion, a map of the Mushroom Corners area, Figure VII.6.2.1, which in the key shows a "Mushroom Management Area." The text of this section does not mention a specific "mushroom management area." I quickly paged through the Forest Management Plan but could not find mention of such a mushroom management area. Is the inclusion of map Figure VII.6.2.1 to be taken as a commitment that there be a mushroom management area at the mapped location? If yes, what provisions will be put in place to protect the mushroom resources there?

Class II and Class III Watercourse Protection Needs Augmentation

107 Beginning on Page VII.6.1-6 there is a good discussion of the function and importance of headwater stream systems to both sediment production and amphibian habitat. It provides strong justification for highly protective aquatic measures for Class II and Class III watercourses. Yet, the FMP Habitat Protections outlined in VII.6.1.12 on Page VII.6.1-91 indicate protections for Class IIs are only modestly improved on standard FPRs, including a WLPZ that may be as narrow as 50 feet. This would be in contrast to the National Marine Fisheries Service recommendations of 180 feet in this region. The FMP proposed management measures include some tree retention, but a significant amount of logging in the 50-

107 100 foot Class II WLPZ, particularly outside the first 25 feet of the zone. This contrasts with the NMFS Guidelines for *no harvest except to accelerate late seral conditions in the full 180 feet on each side of a Class II stream.*

Class III fares predictably worse in the FMP. The only difference between standard rules and the FMP proposal is to ensure that there is an equipment exclusion zone of as little as 25 feet on each side of Class IIIs. NMFS Guidelines are for a 30-50 foot *no harvest zone* except for necessary crossings, plus additional measures.

108 The following excerpt of your own DEIR clearly demonstrates that the NMFS Guidelines are much more appropriate for application on our public lands at Jackson than what is proposed by the FMP. The DEIR fails to provide any sort of justification for the use of the lesser standards proposed by the FMP, especially in light of the information provided about the importance of Class II and Class III to the aquatic systems and dependent species. The DEIR also fails to identify that operations as proposed by the FMP for Class II and Class III will cause a significant negative effect on the environment.

Below, please find your DEIR discussion pasted from Page VII.6.1-6 to VII.6.1-8:

"**Headwater Stream Ecosystems**-Headwater streams and drainages (Forest Practice Rule Class II and III) are areas that contribute to stream ecosystem function. These areas can represent 60-80% of total channel length in mountainous terrain (May and Gresswell, 2003a). These small streams contribute structural components such as large woody debris, spawning gravels and stream substrate, and invertebrate and detritus inputs. These sites also contribute to water quality and provide for storage of potentially deleterious fine sediment. Similarly, they can have a strong influence on the rates of sediment and wood delivery to larger watercourses, and consequently, habitat value for a variety of aquatic and semi-aquatic vertebrates and other biota (Welsh et al. 1998). Efforts aimed at restoring structural and biotic elements of stream ecosystems must first increase normative conditions in the river system before sustainable species recovery is possible (Williams et al 1999). Management approaches aimed at restoration and management of watershed processes, rather than individual habitat characteristics, may be more effective in developing complex stream channel structure (May and Gresswell 2003b). The underlying assumption is that movement toward restoration of natural processes and levels of sediment production, large woody debris recruitment, and other stream function processes, will be positive for stream biota.

"Disturbance as an Influence on Headwater Stream Ecosystem Structure and Function
Disturbance as an influence on the structure and function of stream ecosystems has been extensively studied and reinforces the concept of the "river continuum" (Vannote et al. 1980). That being that energy and organic material inputs to stream processes change in a predictable way along the stream course from headwaters to downstream reaches. A variety of land uses, including timber harvest and forest management, can influence background erosion and sedimentation regimes, recruitment of large woody debris and other ecological

processes. The delivery, time in residence, and transport of these additional sediments and woody debris influence stream channel conditions and associated biota. Change in vegetation in the vicinity of headwater streams can markedly alter the function of these stream types and those larger stream systems supported. Change in the efficiency of the channel to recharge groundwater, meter trapped sediments and water flow, and process organic material and other nutrients for use by aquatic biota downstream can be expected. Past management practices that reduce local sources of wood and rate of wood recruitment increase the relative importance of wood contributed by debris flows in colluvial tributaries where this means of recruitment occurs.

"Most debris flows in the northern California Coast Ranges originate from zero-order colluvial-filled hollows. Increases in pore water pressures in convergent bedrock topography where soil and colluvium is relatively thick can exceed resisting forces to failure, resulting in debris flow initiation. These features can mobilize down steep channels and pick up additional debris as they travel, forming the characteristic Ushaped, relatively straight channel. The principle influence of vegetation along Class III channels on the mobilization of debris is the presence of in-channel large trees that could slow or stop mobilized sediment and debris under some circumstances or contribute large wood at other times. Because debris flow potential is not universal, WLPZ boundaries cannot be used as a surrogate to actual site inspection for potential zones of failure (T. Spittler pers. comm. 10/28/04).

"The type of disturbance also can have markedly different results on the structure and function of stream and associated riparian ecosystem processes. For example, floods, fire, mass wasting events are generally less frequent and result in large localized changes to stream system, whereas, timber harvest, land conversion, agricultural and urban development are more frequent and regional in effects. Regionally, the "natural" (fire, flood) and man induced (timber harvest, land conversion) disturbance regime within the redwood zone likely exceeds that under which the plant community and associated biota evolved (Reeves et al. 1995; Sawyer et al., 2000). Stream communities, as shaped by past and present disturbance events have led to widespread and long-lasting alteration of stream conditions. Principle among these is alteration of the amount, size, and recruitment of large woody debris and coincident metering of sediments through the stream system. Large woody debris increases the sediment storage capacity of headwater streams. With sufficient wood inputs, low-order channels have the potential of storing large volumes of sediment and are one of the dominant sediment storage reservoirs.

"Headwater Habitat Relationships Because of the small size of headwaters and close connection with uplands, these areas are readily influenced by adjacent land uses. Species that inhabit headwater environments can be especially vulnerable to habitat alteration. These species, amphibians and other taxa, generally achieve higher population densities in headwater habitats. In addition, individual species inhabiting headwater habitats generally exhibit low levels of vagility (mobility) sometimes spending their entire life cycle in a few square meters of habitat. Recolonization of suitable vacant habitat may require extensive periods of time or, lacking movement into vacant habitat, result in local population extirpation.

"Headwater stream reaches, lacking fish populations, provide areas with little or no fish predation pressure to the benefit of several aquatic and semi-aquatic amphibians. Amphibians that breed primarily in stream habitats represent a large component of stream biomass and in the Pacific Northwest may exceed fish in both numbers and biomass (Hawkins et al. 1983). Welsh and Ollivier (1998) examined the impact of sediments on aquatic amphibian densities in coast redwood. Three species were sampled in numbers sufficient to be informative: tailed frog (*Ascaphus truei,* larvae), Pacific giant salamander (*Dicamptodon tenebrosus,* paedomorphs and larvae), and southern torrent salamander (*Rhyacotriton variegatus,* adults and larvae). Densities of amphibians were significantly lower in the streams impacted by sediment. While sediment effects were species-specific, reflecting differential use of stream microhabitats, the shared vulnerability of these species to infusions of fine sediments was probably the result of their common reliance on interstitial spaces in the streambed matrix for critical life requisites, such as cover and foraging."

Road Rehabilitation is Too Slow

According to the DEIR:
"Page VII.15-7
The proposed Road Management Plan (DFMP, Appendix VI: Road Management Plan) specifies that a road inventory will be completed within five years following approval of the Forest Management Plan. This inventory will compile a list of roads for decommissioning, and establish the priorities and schedule for completing this work. The availability of alternative access for management, recreation, and fire control will be a critical factor in deciding whether a road is needed or not."

109

This is an incredibly modest goal considering the level of consensus regarding the need for upgrading the roads at Jackson. It should not take five years just to do the assessment. It all boils down to how much money the managers at Jackson will be allowed to keep from the proceeds of cutting the public's trees at Jackson. Assuming the forest goes back into production in the foreseeable future, the road inventory should be completed within a year at most and rehabilitation should proceed the next season on the highest priority road segments. Money should not be diverted to other purposes from Jackson's management until the high priority roads are fixed. As far as I can tell, the EIR has not identified the need for an accelerated road rehabilitation plan. Thus, the EIR has omitted a crucial feasible mitigation that has an absolutely complete consensus behind it as to need.

The West Chamberlain Creek Road (200) Should Not be Abandoned

Having stated the above, I was nevertheless surprised and concerned to see the following on Page VII.15-7:

"Wide-scale road decommissioning will not be conducted in areas with no alternative access. However, selective decommissioning of high-risk road segments in these areas may occur. "Road 200, for example, is a potential candidate for road abandonment due to its "somewhat hazardous and potentially damaging inner gorge location" (DFMP, Page 87). This road is currently used as the primarily route for logging trucks that haul out of the Noyo River drainage and by recreational vehicles that visit the San Francisco Boys and Girls Club and Camp Noyo Boy Scouts Camp. In order to facilitate potential decommissioning of Road 200, the Forest may examine the potential to acquire alternative public access along the Three Chop Ridge Road (also known as CDF road 1000) between the eastern Forest boundary and Highway 20, and incorporating the Three Chop Ridge Road into the Forest's road system. (See Map Figure A in the attached Map Figures section).

"Three Chop Ridge would provide a safer route of travel to the intersection of State Highway 20 for both commercial and recreational vehicle traffic. Incorporating Three Chop Ridge Road into JDSF would also provide the State with control of a major fire suppression ridge, which would benefit adjacent landowners as well."

110

I am willing to be convinced otherwise, but I believe many would strongly object to decommissioning Road 200. This is the primary access to the Waterfall Grove, which is generally considered to be the highest use feature on the forest. However, I do completely support the idea of securing the alternative access to Three Chop Ridge Road and using that for all logging and as much of the Boy Scout Camp traffic as feasible. If Road 200 were to be closed completely and traffic diverted to Three Chop Ridge (Road 1000), it would add many, many miles onto the trip to the Waterfall Grove from Ft. Bragg/Mendocino. And if staff at the Boy Scout Camp wanted to go to Ft. Bragg rather than Willits, it would also add many miles onto their trip. While Road 200 does have continuous maintenance needs, I am not under the impression it produces much sediment into the creek. Perhaps paving or chip seal might be an adequate mitigation short of decommissioning. Please consider this alternative.

Thank you for consideration of these additional comments.

Best regards,
Kathy Bailey
Kathy Bailey
Forest Conservation Advocate
California Sierra Club

Mailed Letter P-188B

Response to Comment 106
The provisions for protection and other considerations associated with Mushroom corners were developed in the DEIR (see page VII.6.2-46) and are as found in Chapter 3 of the ADFFMP and in Appendix IX. The general management plan language is roughly as follows:

Mushroom Corners:

The Mushroom Corners area partially overlaps the Caspar Experimental Watershed, Russian Gulch/Lower Big River a Late Seral Recruitment area, county roads with visual and recreation concerns, as well as proximity to State Parks and private land ownerships (see Map Figure 5). In California, there are no fungi species listed as Federal or State Endangered or in the more inclusive Department of Fish and Game, Natural Diversity Database special status lists. A long-beard lichen occurs on JDSF that has been assigned special status by CNDDB. This area is particularly important to the mycological research community, in part due to its ease of access and presence and abundance of a diverse number of species.

Although the analysis in the December 2005 DEIR did not find any potential adverse environmental impacts to the Mushroom Corners area, it did provide an additional management measure, which is included in Appendix IX.

Appendix IX
Mushroom Corners
Additional Botanical Management Measure 2

Harvests: The area is available for future study related to the relationship between fungi and the forested habitat. Most of the future harvests in this area will utilize various forms of uneven-aged management, including single tree and small group selection. Consultation will be initiated with representatives of the mycological research community while planning for future harvest activities.

Fire, Fuels Reduction or other Active Management: Consultation will be initiated with representatives of the mycological research community during planning of any management-related fire or fuels reduction activities.

Invasive Plant Management: Invasive plant control will have a high to moderate priority in this area to insure continued presence of native species that interact with the fungi in the area.

Monitoring:

Timing:	During the life of the JDSF Management Plan
Scope:	Mushroom Corners
Implementation:	CAL FIRE
Monitoring Responsibility:	CAL FIRE

Response to Comments 107, 108
The standards reflected in the management plan are expected to provide a significant degree of protection, and recovery of fully functioning stream ecosystems. It is important to note that the standards described are minimums that in practice are frequently exceeded based on site specific conditions. The protection applied in the field will equal or exceed these minimum standards, based upon a site-specific impacts analysis performed for each project or cumulatively for projects within a given assessment area. JDSF will manage forest stands in watercourse/lake protection zones (WLPZs) to promote their development to late-successional forest conditions (ADFFMP, Chapter 3). It is common for protection applied in the field to exceed the minimum standards by a considerable degree. The Board believes that the reference in the comment to protection standards provided by NMFS refers to habitat conservation plan guidance or general guidance in the absence of site-

specific analysis. The standards developed for JDSF were guided by the findings of watershed analysis work conducted on the forest.

It is not the objective of the Board to adopt a fixed set of standards that provides the maximum possible level of protection for watercourses. However, it is the intention of the Board to allow recovery to continue and to avoid significant impacts to watershed and aquatic resources and the taking of listed species. WLPZ standards specific to JDSF also provide a unique opportunity to monitor response and recovery of aquatic systems to varying degrees of management in furtherance of JDSF's research and demonstration mandate. The reader is referred to the analysis in DEIR Section VII.6.1 and 10. Significant impacts to watershed and aquatic resources are not expected to occur.

Response to Comment 109
The Board agrees that the inventory of roads should be accelerated, and the management plan has been amended to provide for a three year inventory period (see DEIR page VII.6.1-97 for one of several presentations of the additional management measures for an accelerated road management plan). Work to maintain, upgrade, and decommission roadways will not be deferred until the inventory is completed, but is expected to be incrementally implemented coincident to the inventory. Approximately 10 miles of roadway has been decommissioned in recent years, and additional decommissioning projects are being planned, including a DFG grant project to decommission roadway in Caspar Creek. The intent of the road management plan is to accelerate watershed recovery. The accelerated road inventory provision represents a positive cumulative effect.

Response to Comment 110
There are no current plans to decommission Road 200, but it is recognized that much of the length of Road 200 is located within the inner gorge of Chamberlain Creek and often within a very short distance from the stream, creating potential for slope instability and sedimentation, and occupying area that would alternatively produce forest, shade, and large woody debris of value to the aquatic system. No plans will be made to decommission this roadway until an alternative route from Highway 20 to Three Chop Ridge Road is found. It is speculative at this point in time to predict the location of an alternative route, or what effect this route may have upon travelers from either the inland areas or the coast. If the decommissioning of this roadway is considered, the potential for impacts to recreationalists and travelers will be considered in detail.

There are no current plans to alter the access to the Waterfall Gove site or trailhead.

P189

WILLITS REDWOOD COMPANY

QUALITY REDWOOD TIMBERS

220 Franklin Avenue
Willits, California 95490

(707) 459-4549
Fax (707) 459-0775

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 28, 2006

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460

Subject: Jackson State Forest Draft EIR

Dear Sirs:

We would like to commend the Board on the completion of the Environmental Impact Report for the Draft Jackson State Demonstration Forest Management Plan. The discussion of management options is ultimately as complex as the document itself, as forestry as a science is infinitely variable across the matrix of the landscape. What we all want for Jackson State Forest is to establish a framework 1 which allows Jackson State Demonstration Forest to continue to provide sustainable multiple benefits to our communities, both natural and human. For fifty years, Jackson State's management has provided clean water, wildlife habitat, and recreational opportunities while fulfilling its mission of demonstrating exemplary forest management practices, and continued timber production. We support the adoption of Alternative C-1 as the alternative that best allows for sustainability of Jackson State Forest programs, both ecologically and economically.

As you know, Willits Redwood Company remains under contract with the State of California for the Camp 3 Timber Sale on Jackson State Forest, a sale that was 2 purchased in April, 2003, and has not produced a delivered log to our Company. The timber supplies from that sale remain an important element of our raw material needs and plans for the 2006 and 2007 operating seasons. The California Department of Forestry and Fire Protection continues to hold an amount in excess of $110,000. of Willits Redwood Company's operating capital, without interest, as we await the opportunity to resume harvest operations.

Never-the-less, the importance of Jackson State Demonstration Forest to our communities is much larger than Willits Redwood Company or the Camp 3 Timber 3 Sale. The number of sawmill operations in Mendocino County has dwindled to five, with a major percentage of raw material supply coming from out of state or out of country. Productive timberland is being removed from the resource base at an alarming rate, as timberland ownership is viewed as an unattractive investment. The county is losing the benefits that properly managed timberland provides to our

3 communities; the trickle-down effect of stumpage dollars spent locally on both government and private ownerships, the jobs created locally in the woods and in supporting industries, and the tax revenues that sustain our infrastructure. We need Jackson State Forest now, more than ever, to demonstrate that forest management for timber production is compatible with multiple resource values, and we need the California Board of Forestry and Fire Protection to be an advocate for the broad benefits that forest management provides.

4 Thank you for your consideration.

Sincerely,

Chris Baldo
Owner

Bruce Burton
Owner

Mailed Letter P-189

Response to Comment 1
The Board shares the commenter's interest in a framework that provides multiple sustainable benefits. We note the support for Alternative C1, which was based on the May 2003 Draft Forest Management Plan. The Board has since developed Alternative G, which builds on Alternative C1, and a proposed Administrative Draft Forest Management Plan (ADFFMP), which is based on Alternative G. The Board believes that the ADFFMP will provide for ecological and economic sustainability.

Response to Comment 2
The Board is aware of the ongoing contractual relationship between Willits Redwood and the Department. Alternative G and the ADFFMP recognize the situation of the enjoined timber sale.

Response to Comment 3
The DEIR provides an extensive discussion of the regional and local importance of the forest products industry and the economic role of JDSF within that context (see DEIR sections III, Project Information, and VII.6.6.3, Timber Resources; or RDEIR section III.6.4). The DEIR and the ADFFMP recognize the losses of timberland that are occurring and that JDSF can help to reduce these losses through demonstrating, to small forest landowners, timber management that is economically and environmentally sustainable.

Response to Comment 4
The Board agrees to the importance of demonstrating forest management and timber production approaches that are compatible with multiple resource values.

OFFICERS
Sage Sweetwood
President
Kevin Johnson
Senior Vice President
Gary Patton
Vice President
J William Yeates
Secretary-Treasurer

PLANNING AND CONSERVATION LEAGUE

P190

REGIONAL VICE PRESIDENTS
Elisabeth Brown
Orange County
Phyllis Faber
Bay Area
Dorothy Green
Los Angeles

February 28, 2006

RECEIVED BY
FEB 28 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

Stan Dixon, Chair
Board of Forestry and Fire Protection
Box 944246
Sacramento, CA 94244

RE: Jackson Forest Management and DEIR

Dear Chairman Dixon and Members of the Board:

I am writing to comment on the Jackson Forest Management Plan, as the environmental review period comes to an end.

PCL has been following developments at Jackson State Forest for a number of years. As you know, PCL is California's only statewide environmental coalition. We were founded in 1965 by a group of citizens concerned about the uncontrolled development taking place throughout the state and the destruction that accompanied it. PCL has fought for more than forty years to develop a body of environmental laws that is the best in the United States. These laws include the California Environmental Quality Act (CEQA) and the California Endangered Species Act (CESA). We work to preserve the quality of life for all Californians, and have been deeply involved in forest practice issues.

1 Although there is much interesting and relevant information in the Draft Environmental Impact Report, crucial information about the extent and location of existing forest stands at Jackson seems to be absent. Additionally, it is difficult to ascertain how and especially where existing forest stands will change over time under the various alternatives. This is particularly true for the older forest types that are most important for threatened and endangered species. Additionally, these old forest areas are usually of particular interest to people who may wish to use the forest for recreation or personal enjoyment.

2 The DEIR notes the presence at Jackson of aquatic species listed as threatened or endangered, particularly Coho salmon. The information provided in the DEIR makes it plain that the Coho populations surviving at Jackson are among the very few in the immediate region that are not almost extirpated. This raises the threshold for the aquatic protection needed at Jackson, given the reality that Jackson is the only large publicly owned forest in the region. If we are to ask private landowners to be protective of public trust resources, we must begin by providing strong protection on public lands. The preferred alternative C1 and the similar C2, do not provide the sort of strong protection that we think is needed. While these alternatives do a somewhat better job than the standard Forest Practice Rules, both in zone size and protection measures, they fall far short of both sets of federal standards designed specifically for the region where Jackson is located. Taking account of Jackson's role as a demonstration forest, we urge the Board to consider an approach that would apply both sets of federal standards in a carefully controlled research project to determine the relative merits of each federal system.

1965-2005 40th
PLANNING AND CONSERVATION LEAGUE

921 11th Street, Third Floor, Sacramento, CA 95814 Phone 916-444-8726 Fax 916-448-1789
Website: www.pcl.org Email: pclmail@pcl.org

California Affiliate
NATIONAL WILDLIFE FEDERATION
www.nwf.org

3 On the issue of marbled murrelets, listed as endangered under CESA, Alternatives C1 and C2 do only the minimum of preventing "take" of the murrelets nesting on adjacent state park property. Your DEIR provides enough information about the sort of habitat that murrelets need for nesting, and the location near the sea where this habitat needs to be located, to justify adopting much stronger protection than what you currently propose. Certainly for murrelets, our public lands should be providing significant habitat for recovery of the species. The dearth of other appropriately sited public lands in the region makes it imperative that Jackson adopt an aggressive recovery-oriented strategy for marbled murrelets. Both Alternatives E and F provide such a strategy.

4 The management at Jackson has unfortunately been mired in controversy for almost a decade. Now that the court has ascertained that the Board rather than the California Department of Forestry (CDF) is the lead agency, we hope the Board takes this new opportunity carefully to consider the opinions of the general public regarding management at Jackson. We appreciate that CDF's management has left a landscape that is in relatively better shape than most of the other forestland in the region. But rather than simply continuing on as before, it is necessary to make your decisions in the context of the changed environment surrounding Jackson. The more diminished the surroundings, the more protective is the management warranted at Jackson. Certainly when it comes to old forest habitat, Jackson is likely to be by far the most significant regional resource for many decades to come.

We strongly believe the Board is up to the challenge of balancing the competing needs at Jackson. We stand ready to offer any assistance you think we may be able to provide.

Very truly yours,

Gary A. Patton, Executive Director
Planning and Conservation League

Mailed Letter P-190

Response to Comment 1
The DEIR, RDEIR, and Final Management Plan provide significant information about the extent and location of current stands on JDSF, as well as information about how these stands will change over time.

In the 2005 DEIR:
- Map Figure D shows the location of special concern areas, which include old growth stands to be protected in perpetuity, late seral development areas, pygmy forest, cypress groves, and riparian zones (on Class I and II streams) to be management for the development of later seral forest characteristics.
- Map Figures G and H show timber harvesting history from 1986 to 2004, which also provides insights in to stand conditions.
- Map Figure J shows the vegetation of JDSF and the cumulative effects assessment area in terms of California Wildlife Habitat Relationship System (WHR) classes.
- Map Figure K shows a more detailed view of the vegetation of JDSF in terms of California Wildlife Habitat Relationship System classes.
- Map Figure Z shows the types of silvicultural treatments to which various areas of the Forest are assigned under Alternative C2. This information provides insights into how areas of the Forest are likely to be managed and change over time.
- Map Figure AA, provided by the Sierra Club and consistent with Alternative F provides information on current forest vegetation, based on a simplification of the WHR system.
- The Wildlife Resource Analysis section (VII.6.6) contains many tables and graphs depicting current and projected stand types (in WHR classes) for the Forest and the various alternatives considered. There is also much written description of the vegetation and stand types found on the Forest.

In the 2007 RDEIR:
- Similar to Map Figure Z in the 2005 DEIR, Map Figure 1 shows the spatial allocation of silvicultural treatments, areas designated for the development of late seral forest characteristics, and areas designated for the development of older forest characteristics.
- Map Figure 2 provides insights into current forest stand conditions by showing the average number of trees per acre greater than 30 inches in diameter at breast height.
- Table II.1 shows Alternative G's desired forest structure conditions.
- Table II.3 lists the anticipated short-term harvest schedule for Alternative G, thus indicating the silvicultural treatments that would be applied to specified areas of the Forest, thus changing the stand conditions in commensurate fashion.

In the Administrative Draft Final Forest Management Plan (ADFFMP), which is based on Alternative G:
- Map Figure 5 shows the spatial allocation of silvicultural treatments, areas designated for the development of late seral forest characteristics, and areas designated for the development of older forest characteristics.
- Map Figure 6 provides a spatial depiction of the short-term harvest schedule (see below re Table 3.2).
- Map Figure 7 shows the current vegetation of JDSF in terms of California Wildlife Habitat Relationship System classes.
- Map Figures 8 shows information on per-acre density of trees greater than 30 inches in diameter at breast height.
- Table 3.2 shows the desired forest structure conditions.
- Table 3.4 lists the anticipated short-term harvest schedule, thus indicating the silvicultural treatments that would be applied to specified areas of the Forest, thus changing the stand conditions in commensurate fashion.

Response to Comment 2
The analysis in the DEIR indicated that Alternatives C1 and C2 would not result in significant adverse impacts to listed aquatic species and would contribute to their recovery in a number of ways (see, e.g. Table VII.6.6.34). The RDEIR found that Alternative G would provide enhanced measures for a number of species, such as the Marbled Murrelet. Based on Alternative G, the proposed Administrative Draft Final Management Plan provides a higher level of protection, relative to Alternative C1 and C2, to listed aquatic species through designation of additional areas for the development of late seral forest or older forest characteristics. The direction of the Administrative Draft Final Management Plan emphasizes the research and demonstration role of the Forest. As a part of this emphasis, it designates three areas of the Forest as Riparian Restoration Demonstration areas where riparian zone protection measures such as the FEMAT and NMFS approaches can be applied, evaluated, and demonstrated.

Response to Comment 3
The 2005 DEIR found that Alternatives C1 and C2 would not result in a significant adverse impact on the Marbles Murrelet (see, e.g. Table VII.6.6.34). Both provide for late seral forest development areas that could contribute to Murrelet habitat over time, with Alternative C2 providing a greater amount. Both Alternatives also include an Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat (see page VII.6.6-119). Through designation of an Older Forest Structure Zone, Alternative G and Administrative Draft Final Management Plan will further enhance the potential for development of suitable Murrelet habitat. The Administrative Draft Final Management Plan also includes the Management Measure for Contribution to Recovery of Marbled Murrelet Habitat.

Response to Comment 4
As noted in the DEIR and RDEIR, it is anticipated that substantial areas of the large forest ownerships adjacent to JDSF will see improvements in their forest conditions over time. Reasons for this expectation include the acquisition and planned restoration of the 7,334-acre Big River Unit of Mendocino Headlands State Park, the restorative management direction being taken by the Mendocino Redwood Company, and the acquisition of 11,600 acres on the Big River by the Conservation Foundation to be managed for restoration and sustainable timber production. The Conservation Foundation has expressed an interest in joining CAL FIRE and the Department of Parks and Recreation in discussions on how the joint 70,000-acre landscape to be managed to best achieve shared conservation and restoration goals.

P-192

RECEIVED BY
FEB 28 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

February 28, 2006

Mr. George Gentry, Executive Officer
California Board of Forestry and Fire Protection
1416 Ninth St.
Sacramento, CA 95814

Dear Mr. Gentry:

Please entry my comments into the official record relative to the Draft EIR for the Jackson Demonstration State Forest.

The DEIR is an excellent document, and staff should be congratulated on the job they did in presenting the advantages and disadvantages of each option!

Before discussing my input, I'd like to briefly outline my experience and expertise in relation to the Jackson DSF. I was a Forester assigned to the Forest from June 1962 to June 1969. While there I had considerable experience in all aspects of management of the Forest from sale layout to scaling to inventory to recreation, and extensive work on the Caspar Creek Watershed Study. From June 1981 through December 1991 I was a Staff Chief for Forest Management in Sacramento, with management responsibilities for the State Forest System. As such I was responsible for approving research proposals, timber sales, and overall management of the State Forest System. That said I would like to make the following input to the DEIR.

1

1. Option A is a no brainer! It conflicts with BOF policy and the PRC, and should be dismissed with no further discussion.
2. Options D, E, and F are likewise in conflict with the purpose of the State Forest System, and should be dismissed from further discussion.

2

3. I understand that the City of Fort Bragg, and the so called Citizens Advisory Committee prefers Option D. Under this option there would be no use of herbicides, which is my view is reason enough to dismiss it. There are extensive areas of Pampas Grass, and Gorse is often found in isolated patches. Herbicides are the tool of choice here. Furthermore, herbicide use is controlled by the County Agricultural Commissioner, and to not allow the limited use on the JDSF doesn't make sense. There has never been a great use, but it is one tool in the tool box that needs to be there. There are essentially no alternatives to chemicals to control Pampas Grass. It is ridiculous to ban the use of chemicals for this purpose. Other shortcomings of Option D include the ban on clear cutting. While not

a big fan of clear cutting, it should be allowed in some instances. Again, it's a recognized tool. Don't tie the staff's hands!

4. The allowable harvest should be a major concern. Option B would be the favored Option to maximize so called first period harvest with an annual cut of 35.6 million board feet per year. Option D would only allow 24.9 million board feet. Growth in the meantime has been estimated to be close to 60 million board feet assuming no restrictions on harvest. The difference between B and D means there would be approximately 100 fewer jobs relying on the JDSF harvests. That alone should shift the balance in favor of Option B. 3
5. Recognizing that things have changed, and compromises have to be made, Option C1 should be the selected option. While the initial harvest level would be lower, it meets the overall management objectives of the Forest, and is compatible with both BOF policy and the PRC. In addition it would provide for more recreational opportunities as well as research. 4

A few other comments are appropriate. JDSF is ideally suited for research on Sudden Oak Death and Pine Pitch Canker, and consideration should be given to adding a Forest Pest Specialist to the staff once funding is stabilized. 5

The State Forest pays "in lieu" taxes. State Parks don't. Consideration should be given to legislation returning the Mendocino Woodlands to JDSF. 6

Harvesting MUST begin as soon as possible! There is an immediate need to pay back loans totaling about $5 million to various state funds that were required to keep critical CDF programs operating. 7

The BOF should not retreat! If you give up a little bit now, the next time they will want a little bit more, and down the line you will have given up management of the JDSF entirely! 8

Thank you for allowing input to the DEIR. This is not a popularity contest. You will be inundated with form letters and emails. Don't emulate the Forest Service and count each form letter, and make the final decision based on a numbers game! 9

Brian R Barrette

Brian R. Barrette
CDF Staff Chief, Retired
Past Chair of NorCal SAF
Co-Chair Sacramento-Tahoe Chapter of SAF

Mailed Letter P-192

Response to Comment 1
Opposition to Alternatives A and D-F noted. The DEIR analysis found that each of the listed alternatives contained elements that are not consistent to current legislation and/or Board policy. Please see General Response 4.

Response to Comment 2
See General Response 7 and 10. The ADFFMP retains the use of herbicides and clearcutting as a management tool, although significant restrictions have been included.

Response to Comment 3
The Board recognizes that a reduction in the annual harvest will result in a decrease in employment opportunities. The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in section III.6.2 of the DEIR. The ADFFMP calls for harvesting approximately 20-25 million board feet annually which a fraction of current growth based on the 2005 re-measure of the Continuous Forest Inventory plots. This reduction in planned annual harvest is based on consideration of other public trust resource values including aquatic and wildlife habitat, recreation, and aesthetics.

Response to Comment 4
Support for Alternative C1 as the management direction with the best balance noted.

Response to Comment 5
One of the main objectives of the ADFFMP is to increase the emphasis on research at JDSF. Research on Sudden Oak Death is ongoing at both JDSF and Soquel State Forest. There are no current research projects related to Pine Pitch Canker on JDSF. Desire to add a Forest Pest Specialist noted. The current staff includes foresters with substantial expertise in forest pests, although there is not a dedicated specialist.

Response to Comment 6
The ADFFMP does not contain any plans to alter the status of the Mendocino Woodlands Camp.

Response to Comment 7
The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the DEIR and approve a management plan.

Response to Comment 8
The Board notes the statement of opinion. Management direction beyond this planning time frame is speculative at this point**.**

Response to Comment 9
The management direction for JDSF will not be based on a “popularity contest”. Each comment will be carefully considered regardless of the popularity of the position.

P193

Mike Anderson
PO Box 1266
Fort Bragg, Ca. 95437

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

George D Gentry
Executive Officer
Board of Forestry and Fire protection
PO Box 944246
Sacramento, Ca. 94244-2460

Re: Jackson Demonstration State Forest DEIR / Management Plan
2/23/06

Mr. Gentry,

The residents of Mendocino County are as diverse a group as you will find anywhere. Consensus does not come easily here especially on forest management issues. If an alternative can be crafted to satisfy this county the remainder of the state will be satisfied.

1 We have achieved significant consensus on most issues relating to Jackson Demonstration State Forest, unfortunately not all. Our Board of Supervisors inability to reach consensus and provide the Board of Forestry a clear message is disappointing to us all. Even age management and herbicide use are issues that require education and justification and are a hard sell to many residents of this county. I believe through the hard work of the local state forest managers they can convince our county's residents of the scientific basis and need for such prescriptions.

I am a Registered Professional Forester, a Licensed Timber Operator, and born and raised in Fort Bragg. I have operated many timber sales on JDSF including the two that are

2 currently the subject of litigation. Over the years I have developed the utmost respect for the integrity and management skills of the staff at the state forest. Based on my first hand knowledge of the past and current managers I see no need or justification for any management alternative more restrictive than alternative B. The management philosophy over the years has always been ahead of it's time and the leader in the forestry profession.

Mendocino County has some significant financial problems, being the most indebt county in the State of California. JDSF has the potential to play a significant role in helping this

3 situation by maintaining the timber industry, the needed infrastructure and providing for a significant number of living wage jobs in the county. The returns to state, and local governments in the form of taxes and sales receipts is in the millions of dollars per year, revenue badly needed by all.

I have attended numerous meetings on JDSF since the first lawsuit was filed in 2001 and there is considerable consensus. Almost everyone that comments wants to see the forest

4 back in operation. Everyone is interested in seeing the restoration work continue, both stream restoration and legacy road abandonment. Very little disagreement is found in the desire to protect existing stands and individual old growth trees. The need to maintain,

and increase the recreation component of the forest is another source of consensus. The need to continue and expand research opportunities is widely agreed upon. The benefit of a strong education component is seen as a must. If there is an aspect of the management 4 of JDSF that has been lacking, it is the struggle that has been taking place to get the full story out, of the many beneficial programs that come from the management of this forest. The public as a whole does not fully understand and appreciate the important role that JDSF plays in education, research and modern forestry, this story needs to be told!

I believe the real lack of consensus revolves around two issues even age management and the potential use of herbicides on JDSF. I would like the Board of Forestry to set policy 5 for the management team of the forest, requiring them to hold public hearings prior to considering the use of either of these practices. A well rounded team of experts should be able to make their case for these techniques, and at the same time educate the public. There are numerous unfounded concerns relating to these two controversial practices the staff of the forest and other professionals would have the opportunity to inform and educate their distracters.

A major point of the most recent lawsuit revolved around the cumulative impact report as it pertains to the timber stands that surround the state forest. Some of the public would like the Board of Forestry and the general public to believe there is a problem with the industrial forest land neighboring JDSF. 7,300 acres of the industrial forest land that 6 borders the forest has been sold recently and is now part of the Mendocino Headlands State Park. This acreage will be preserved for future generations and will in time be an old growth forest. The remaining industrial timber land that borders the forest was predominately harvested in the early 1980's using a mix of silvicultural prescriptions, under the most stringent forest practice rules in the nation. Today that land is made up of thriving young stands of timber with a well maintained road system, and little planned harvesting for the foreseeable future.

Alternative D has some serious problems as a long term management scenario. The width of the stream zones under this alternative would double and triple in size, which would force the harvest and research further up the slope. The problem is, this does not mimic what is happening throughout the redwood region, it ties the hands of researchers and 7 concentrates all harvests into a much smaller area. The stream zones in use on Jackson Demonstration State Forest have never been a contentious issue. The managers and staff of the forest have always worked very closely with the other agencies to provide the very best protection possible to all public trust resources. This alternative takes considerable land out of management and questions the relevance of this state's forest practice rules as the rules pertain to watercourse protection.

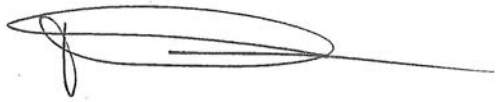
Jackson Demonstration State Forest has a long history of world renowned research. In order for this to continue the land managers need flexibility to manipulate the forest 8 structure to create a laboratory for future research. The results of the studies conducted on this state forest have far reaching impacts on private and public land throughout the nation. This necessary flexibility is built into both alternatives B and C-1.

Throughout this process much testimony centers on the need for preservation. We have preserved almost one hundred thousand acres of old growth Redwood and countless
9 thousands of acres of second growth. By doing this we are exporting management of timber to other states and nations. Many of the areas that are currently supplying the need for lumber in California have far less environmental protection, and far more significant environmental impacts.

It is my belief that this management plan is the most critical in the state forest system history. The Board of Forestry has the potential to not only map the next few years, but to answer the question; is the state forest system's future one of relevance, will we manage or preserve the forest. The individual proponents of the litigation on JDSF were asked by the Mendocino County Board of Supervisors what harvest levels they wanted to see on the forest in the future. All proponents present at the meeting stated they wanted no
10 harvesting at all. Often in the course of seeking compromise and consensus it is valuable to understand what it is individuals ultimately want to achieve. I believe it is the Board of Forestry's duty to provide the managers the necessary tools to manage the forest. It is the management teams duty to manage the forest with balanced attention towards the concerns of the stakeholders. It is also the responsibility of the managers and staff of the forest to educate the public, so they can better understand the need and purpose behind the various management techniques. As forest operators and sale purchaser it is our responsibility to harvest the forest in such a way, the public has confidence that all our long term goals are the same.

At no point during the debate on the JDSF management plan has there been testimony of shortcomings in the manner in which staff manages this state forest. Management of the
11 forest needs to stay in the hands of professionals with reasonable policy guidance from the Board of Forestry. There has been testimony concerning the use of even age management, and herbicide use. Both practices have been used as sparingly as possible over the years.

I would like the Board of Forestry to move forward with either alternative B, C-1, or an adaptation of them. I believe either provides the flexibility needed to manage a public
12 forest such as Jackson Demonstration State Forest. I would like to see the board set policy mandating public hearings in Mendocino County prior to considering even age management or herbicide use on the forest. I would also like the Board of Forestry to work in an expeditious manner to get this forest back under management.



Mike Anderson

Mailed Letter P-193

Response to Comment 1
The Board agrees that one of the principle purposes of JDSF is to demonstrate viable and effective forms of forest management for timberland owners and the general public. Elements of forest management, such as even-aged stand management and the appropriate use of herbicides are viable candidates for demonstration, research, and public education.

Response to Comment 2
Support for Alternative B noted. The Board believes that many elements of Alternative B have been incorporated into the future management of JDSF.

Response to Comment 3
The Board concurs that JDSF can and will make a significant contribution to the local economy.

Response to Comment 4
It is the Board's intention that the information and education role of JDSF and the entire state forest system be enhanced. Several provisions of the management plan are intended to meet this need, including greater availability of research and demonstration materials, expanded data banking, and an increase in local involvement in state forest planning and operations.

Response to Comment 5
The Board believes that it would be somewhat impractical to require the conduct of public hearings prior to the use of herbicides or even-aged management, but the formation of a JDSF advisory committee should provide ample opportunity for local public involvement in these management processes. The JDSF advisory committee will have an opportunity to review selected projects, and also to review the management plan and made both policy and implementation recommendations.

Response to Comment 6
Comment noted. The DEIR includes a detailed description of the assessment area.

Response to Comment 7
The ADFFMP provides a significant degree of protection for watercourses. The Board does not believe that the implementation of expanded watercourse protection zones as provided in Alternative D is necessary or warranted to prevent significant effects, because the DEIR and RDEIR did not find a potential for significant adverse impacts to watercourse-related resources, when management measures and mitigations were applied, for either Alternative C1 of Alternative G.

Response to Comment 8
The Board agrees that management flexibility is needed. Many of the provisions of Alternatives B and C1 are included in the ADFFMP.

Response to Comment 9
It is the intention of the Board that JDSF remain a viable resource for the demonstration of sustainable forest management.

Response to Comment 10
Comments noted. The Board generally agrees with these statements.

Response to Comment 11
Comments noted. The Board generally agrees with this statement.

Response to Comment 12
Comments noted. See prior responses above.

P194

BOARD OF FORESTRY
AND FIRE PROTECTION
FEB 28 2005
RECEIVED BY

15 July 2002

Christopher P. Rowney
Demonstration State Forest Program Manager
California Department of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Draft EIR for the Jackson Demonstration State Forest

Dear Sir:

Following are my comments on the Draft EIR for the Jackson Demonstration State Forest (DEIR). In making these comments I have extensively reviewed the DEIR and associated maps, the Marbled Murrelet (*Brachyramphus marmoratus*) Recovery Plan (USFWS 1997), Critical Habitat designation for the Marbled Murrelet (USFWS 1996), and various references on murrelet biology (see Literature Cited).

I am a Research Wildlife Biologist and Senior Faculty Research Assistant with the Oregon Cooperative Wildlife Research Unit (OCWRU) at Oregon State University. I lead the Marbled Murrelet research program for the OCWRU in the State of Oregon. I have been conducting research specific to the Marbled Murrelet since 1988. Most of my research has taken place in western Oregon but I have also conducted research projects in Alaska, Washington, and California. My research on murrelets has focused on their behavior and breeding biology (e.g., Nelson and Hamer 1995a, Nelson and Peck 1995), and nest-site characteristics and habitat associations (e.g., Nelson and Wilson 2001). In addition, I helped to develop survey techniques for this species and am an author of the Pacific Seabird Group (PSG) Survey Protocol for surveying Marbled Murrelets in forests (Ralph et al. 1994, Evans et al. 2000). I was Coordinator of the Marbled Murrelet Technical Committee of the Pacific Seabird Group from 1990-1993 and participated as an advisor to the U.S. Fish and Wildlife (USFWS) Marbled Murrelet Recovery Team from 1992-1997. I have visited most known murrelet nests in Washington, Oregon and California and am familiar with the habitat of many occupied sites in these three states. I am also familiar with the results of most murrelet research projects that have been conducted on murrelets throughout their range.

Marbled Murrelet Biology and Habitat Associations

The information you present on the biology and habitat associations of Marbled Murrelets (pages 245-249) is fairly accurate, but somewhat outdated (most citations from mid 1990s). The murrelet is known to nest in habitat other than old-growth; in Oregon nests have been located in

mature forests (80-200 yrs) and young (65-80 yrs) hemlock forests with mistletoe infestations (Nelson and Wilson 2001) and in California nests have been located in residual redwood forests (E. Burkett, pers. comm.). In addition, nests have been located in hardwood trees (Bradley and Cooke 2001) and in stands with low canopy cover (Nelson and Wilson 2001). The most important features of murrelet nest sites are platform abundance and the presence of nesting substrate (moss or duff; Meekins and Hamer 1999, Nelson and Wilson 2001). Canopy cover does not appear to be a key variable for selection of nesting sites (cover at the tree scale is more critical for successful nesting than stand-level canopy cover; in fact many nests have been located near canopy gaps).

This new information suggests that murrelets could be nesting in other stands besides the old-growth forests on JDSF and supplemental habitat (as suggested by the Marbled Murrelet Recovery Plan, see below) could be created in a relatively short time period given the current age of some stands on the JDSF.

Additional recent research on murrelet habitat associations at the landscape scale suggest that: (1) murrelet nests are less successful in areas close to human habitation or human use (Marzluff et al. 2000); (2) management efforts should focus on protecting or creating large, contiguous blocks of habitat, especially near the coast (Meyer and Miller 2002); and (3) murrelets nest in low densities therefore large forested reserves are needed to maintain and improve murrelet populations (Conroy et al. 2002).

Contrary to the discussion on page 248 of the DEIR, Marbled Murrelets are known to be occupying Russian Gulch State Park.

Data from Mendocino County

Marbled Murrelets are known to occur in Mendocino County. Birds have been detected in numerous inland locations including, but not limited to, Russian Gulch (adjacent to JDSF), Alder Creek, Admiral Stanley Park, Branscomb reserve, Big River, Greenwood Creek, Gualala River, Garcia River, and the Albion (J. Stein pers. comm.). Possible detections have been recorded at Digger Creek within the JDSF (DIER p. 247). Birds have also been sighted on the ocean adjacent to the Mendocino Coast (e.g., Gualala River, Tenmile River, Russian Gulch, Alder Creek, Stewarts Point; C. Strong, J. Stein, pers. comm.) and a murrelet holding a fish was seen at Galloway Creek (E. Burkett, pers. comm.). Recent radar surveys have further documented the occurrence and persistence of birds in Mendocino County (E. Burkett, D. Meekins, pers. comm). These birds do not appear to be part of the Santa Cruz population as all birds radioed at Ano Nuevo Bay, except one, did not venture north of Pt. Reyes (Z. Peery, E. Burkett, pers. comm.). In addition, no birds from the Humboldt population have ventured south of the Kings Range (based on 23 radioed birds; Golightly et al. 2002). All of these data point to the fact that murrelets are nesting in Mendocino County and probably in the vicinity of JDSF.

Because of the difficulty of detecting murrelets in "low use" areas such as Mendocino County (Evans et al. 2000), any future murrelet surveys should include very intensive surveys (more stations per acre and more surveys per year than required by the PSG protocol; Evans et al. 2000). Radar surveys should also be conducted in conjunction with the intensive protocol surveys. These surveys will be important for monitoring murrelets in the area and for making revisions to future management plans.

Marbled Murrelet Recovery Plan

The Marbled Murrelet Recovery Plan (USFWS 1997: p.129) recognizes the need for recruitment habitat in Zone 5, which includes Mendocino, Sonoma and Marin counties. This area is vital to the conservation of the murrelet and extremely important for the future reconnection of this population with those in Humboldt and Santa Cruz counties. The JDSF represents the largest block of public coastal forested land between Humboldt and Santa Cruz counties thereby offering the best opportunity to develop new suitable habitat and fill in the north/south geographic distribution of the Marbled Murrelet. In addition, because Russian Gulch State Park is one of only four nest sites of murrelets in Recovery Zone 5 known to date (USFWS letter to CDF dated 24 June 2002), the 80-110 year old habitat on JDSF adjacent to this park will be important for buffering and creating a large block of contiguous nesting habitat.

The DEIR does not point out that the DFMP does not meet the recommendations of the Recovery Plan nor does it provide mitigations in order to bring the DFMP in compliance with the Recovery Plan.

Critical Habitat Designation

> "JDSF was designated as critical habitat by the USFWS (USFWS 1996). Criteria for critical habitat include the presence of suitable nesting habitat, presence of murrelets, and proximity to foraging habitat. Critical habitat was also designated in zones of current low use by murrelets. These areas are intended to support the USFWSs goal to reduce gaps in the species nesting distribution, and help buffer the species from future catastrophic events such as oil spills and forest fires. JDSF is the largest contiguous parcel of public land on the Mendocino County coast. In California, 175,500 acres (71,040 ha) of state lands were designated as critical habitat, of which JDSF constitutes about 29 percent." (DEIR p.249).

The location and size of the JDSF is perfect for contributing to the survival and recovery of this state and federally listed species, which is why it was designated as critical habitat. Such an important role for the JDSF highlights the need to: (1) save existing older-aged forest stands; and (2) identify and create additional areas of suitable habitat for murrelets, beyond the preservation of the existing old-growth groves and proposed buffers. This should take place primarily on the west side of the forest, near to the murrelet's foraging habitat. The environmental gradient from wet on the west side to dry on the east side of the JDSF makes the east side less favorable for murrelet nesting (hotter microclimate and fewer nesting opportunities {less substrate for nests}).

The California Endangered Species Act (CESA; Fish and Game Code 2050-2116)

> CESA states that ".....it is the policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat..... It is also state policy to disapprove projects that are proposed without feasible mitigation to reduce the impacts below the level of significance and that would jeopardize the continued existence of any endangered or threatened species or result in the adverse modification of habitat essential to the existence of those

species." (DEIR p.260).

Further CESA states ".....to use, and the use of, all methods and procedures that are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary". This implies that "fundamentally the provisions of the CESA include those of the Federal recovery planning process under the Endangered Species Act " (ESA; USFWS 1997: p.79). Therefore, the California Department of Forestry (CDF) would appear to be responsible for contributing to the survival and recovery of the Marbled Murrelet in addition to the designation of the JDSF as a demonstration forest.

The Forest Management Plan Wildlife Goal (DEIR p.262) is to protect or improve current populations and habitat. In order to accomplish this for the murrelet, and meet the goals of the federal ESA, additional habitat, beyond the old-growth groves and associated buffers, would need to be provided, especially on the western portion of JDSF.

Compliance with CEQA

"Based on policy and guidance provided by CEQA (Public Resources Code (PRC) Section 21001 and the CEQA Guidelines), an impact of the proposed project would be considered significant if it results in one or more of the following:

- Have substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or State habitat conservation plan related to a wildlife resource.
- Cause a wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community.
- Reduce the number or restrict the range of a rare or endangered animal" (DEIR p.263).

The DEIR states that "The measures proposed in the DFMP will ensure that Marbled Murrelets or their habitats are not significantly impacted" (p.269) and "The proposed action, with the incorporation of mitigations....., does not have the potential to reduce the number or restrict the range of a rare or endangered animal." (p.272). However, the State Park Special Treatment Areas and WLPZs, do not provide an adequate buffer to the known murrelet site in Russian Gulch State Park, therefore any logging in the area would probably impact murrelet habitat and the murrelets nesting there. In addition, by not managing the habitat adjacent to Russian Gulch State Park as a future old-growth reserve, the range of this listed species will be restricted. A large late seral forest with no harvesting should be provided adjacent to Russian Gulch to prevent any impacts to murrelet habitat and provide for the survival and recovery of this species.

Watercourse and Lake Protection Zones (WLPZs)

The proposed WLPZs of up to only 150 ft will not be large enough to provide suitable habitat for murrelets. While murrelets have nested in small stands (smallest = 5 ac; Nelson 1997), nest success is usually low within 50 m of edges (27% success; Manley and Nelson1999, Manley et al. 1999). Murrelets will require larger-sized stands for successful nesting, therefore the WLPZs can not be counted as providing adequate habitat for murrelets, unless they are adjacent to large stands of late seral forests.

Recreation Areas

The campground, picnic, and trail areas will provide unsuitable habitat for murrelets because of disturbance and the potential for increased predator populations. Murrelets may be negatively affected by noise levels, motion under nest trees, and increased corvid (ravens and jays) populations. It has been demonstrated that corvid populations are higher in fragmented forests and areas of human activities (Brand 1998, Wallen et al. 1998, 1999, Brand and George 2000) and corvids are the major predator of murrelet nests (Nelson and Hamer 1995b, Manley 1999, Luginbuhl et al. 2001). Preliminary results from on-going research into human disturbance to nesting murrelets suggests that murrelets are affected by sound and movement within the forest (Hamer and Nelson 1999, Golightly et al. 2002). Therefore, recreation areas are also not suitable habitat for murrelets. Other late seral forests need to be established that meet the specific needs of the Marbled Murrelet.

Additional measures that should be taken to minimize the risk of predation on murrelets include: (1) using only predator proof trash cans in campgrounds, picnic areas and at trailheads; (2) hang signs in all human use areas that warn the public about the dangers and negative impacts of feeding wildlife and throwing garbage on the ground; and (3) institute an educational program to educate the public about the problems with supplemental feeding of wildlife (especially corvids), messy campsites, and garbage. Food attracts predators, which in turn prey on Marbled Murrelets. This is vital to maintaining healthy murrelet populations on the JDSF.

An additional problem with locating murrelet nesting areas in or adjacent to human use areas is hazard tree or limb removal (DFMP p60 and 76). Removal of hazard trees or limbs can remove or modify murrelet nesting habitat. Any areas where this will occur will conflict with murrelet habitat use. Murrelet habitat areas should be separated from recreation areas, and any hazard tree or limb removal near murrelet habitat should be fully justified and mitigated.

Habitat Management

Under the federal Northwest Forest Plan, thinning is currently being used as a means to accelerate the growth of mature forests with the goal of creating late successional forests in the near future. In general this management is being carried out without regard to the specific needs of the Marbled Murrelet (i.e., no one is looking at branch or epiphyte growth or the effects of thinning on murrelet nesting success). There are no data to demonstrate which thinning or other management strategy (e.g., tree topping, inoculation with mistletoe) is the best for creating murrelet nesting habitat. Studies need to be initiated to address the best and quickest means of creating murrelet habitat.

In addition, there are no data showing the effects of thinning on murrelet nesting success.

Given the high predation rates at murrelet nests (65%+, Nelson and Hamer 1995b, Manley 1999) however, many scientists are concerned with using thinning in currently occupied sites because opening up the canopy could allow predators greater access to nest sites. Thinning or partial harvests in stands adjacent to murrelet habitat could also provide perches for predators to watch and pursue nesting birds (Vega 1993; C. Chambers, pers. comm.). The juxtaposition of thinned stands with murrelet habitat should be minimized. There is evidence that pole and mature stands can buffer the effects of fragmentation and minimize predation rates at murrelet nests (Marzluff et al. 2000, Ripple et al. in press). These types of stands should be provided as buffers to murrelet nesting habitat.

When creating new murrelet habitat in the JDSF, a research project should be established to determine the best and fastest ways for creating murrelet nesting platforms. Different methods should be implemented including tree topping and light thinning. The growth rates of limbs should be monitored and cover around limbs measured to determine level of protection. This research should be conducted in a scientifically designed, controlled and monitored study by scientists at universities or agencies who are familiar with murrelet biology. These data will be important for helping land managers manage for murrelet habitat in the future and will make a significant contribution towards recovery of the murrelet.

Conclusions and Recommendations

This plan does not adequately address the value of the JDSF to the local population of murrelets, the distribution of murrelets in Recovery Zone 5, or in the long-term persistence of this species. Given the recommendations in the Recovery Plan, the designation of the JDSF as critical habitat for the murrelet, and the state's obligations under the state ESA and CEQA, the DEIR should have proposed to create a series of large, late seral stands on the west side of the JDSF, with at least one of them being adjacent to Russian Gulch State Park.

The ~1,200 acres proposed for development of older forest characteristics, in association with the existing old-growth stands, will be inadequate for maintaining and recovering murrelet populations given their small size and location primarily on the east side of the forest. Therefore, in addition to saving these areas, (1) a large reserve should be created adjacent to Russian Gulch State Park. The dense forest on the JDSF adjacent to Russian Gulch would make an excellent area for a murrelet reserve. Despite the proximity of this area to human use areas in Russian Gulch, a large reserve is vital to maintaining murrelets in this area; and (2) a second large reserve, linked to Russian Gulch State Park, should be provided to create a contiguous block of older forest adjacent to a known nesting area. While the Woodlands Special Treatment Area would seem to provide an excellent location for this second large reserve, it is located adjacent to Mendocino Woodlands State Park, which includes a variety of camping, recreation and human uses. This second reserve should be separated from areas of human use. Management in these reserve areas would need to be planned carefully to minimize the attraction of predators (see discussion on thinning above) and should be included in a research project to look at ways of creating murrelet habitat in the shortest possible time frame (see discussion on research above).

Overlap of proposed murrelet reserves with recreation areas should be minimized to mitigate any negative effects from predators and disturbance. In addition, locating single trees or large gaps in close proximity to areas set aside or created for murrelets should be minimize to

reduce effects of predation and changes in forest microclimate (changes in forest temperature can affect the growth of epiphytes on limbs which are important for murrelet nesting {Chen et al. 1993}).

Thank you for the opportunity to comment.

Sincerely,

S. Kim Nelson
1865 SW Roth Street
Corvallis, OR 97333

Literature Cited

Bradley, R.W. and F. Cooke. 2001. Cliff and deciduous tree nests of Marbled Murrelets in southwestern British Columbia. Northwestern Naturalist 82:52-57.

Brand, L.A. 1998. Edge effects in coast redwood forest fragments. M.S. Thesis, Humboldt State University, Acrata, CA.

Brand, L.A. and T.L. George. 2000. Predation risk of nesting birds in coast redwood forest fragments. Journal of Wildlife Management 64:42-51.

Chen, J., J. F. Franklin, and T. A. Spies. 1993. Contrasting microclimates among clearcut, edge and interior of old-growth Douglas-fir forest. Agricultural and Forest Meteorology 63:219-237.

Conroy, C. J., V. Bahn, M. S. Rodway, L. Ainsworth, and D. Newsom. 2002. Estimating nest densities for Marbled Murrelets in three habitat suitability categories in the Ursus Valley, Clayoquot Sound. Pages 121-137 *in* A. E. Burger and T. A. Chatwin, eds. Multi-scale studies of populations, distribution and habitat associations of Marbled Murrelets in Clayoquot Sound, British Columbia. Ministry of Water, Land and Air Protection, Victoria, BC.

Evans, D. E., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2000. Methods for surveying Marbled Murrelets in forests: an update to the protocol for land management and research. Pacific Seabird Group, Marbled Murrelet Technical Committee.

Golightly, R. T., P. N. Hebert, and D. L. Orthmeyer. 2002. Evaluation of human-caused disturbance on the breeding success of Marbled Murrelets (*Brachyramphus marmoratus*) in Redwood National and State Parks, California. Unpubl. Progress report, Humboldt State Univ., Dept. of Wildlife, Arcata, CA, USGS, Western Ecological Research Center.

Hamer, T. E., and S. K. Nelson. 1998. Effects of disturbance on nesting Marbled Murrelets: summary of preliminary results. Unpublished report to the U.S. Fish and Wildlife Service, Office of Technical Support, Portland, OR. 24 pp.

Luginbuhl, J. M., J.M. Marzluff, J.E. Bradley, M.G. Raphael, and D.E. Varland. 2001. Corvid survey techniques and the relationship between corvid abundance and nest predation. Journal of Field Ornithology 72:556-572.

Manley, I. A. and S. K. Nelson. 1999. Habitat characteristics associated with nesting success and predation at Marbled Murrelet nests. Pacific Seabirds 26:40 (abstract).

Manley, I. A., F. L. Waterhouse, and A. S. Harestad. 1999. Nesting habitat of Marbled Murrelets on the Sunshine Coast. Forest Research, Vancouver Forest Region, Extension Note EN-002, Nanaimo, BC, Canada.

Marzluff, J. M., M. G. Raphael, and R. Sallabanks. 2000. Understanding the effects of forest management on avian species. Wildl. Soc. Bull. 28:1132-1143.

Meekins, D. J. and T. E. Hamer. 1999. Marbled Murrelet nest site selection in relation to habitat characteristics in western Washington. Unpubl. Rep., Hamer Environmental, 19997 Highway Nine, Mt. Vernon, WA, 98274. 28 pp.

Meyer, C. B. and S. L. Miller. 2002. Use of fragmented landscapes by Marbled Murrelets for nesting in southern Oregon. Conservation Biol. 16:755-766.

Nelson, S. K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). Pages 1-32 *in* A. Poole and F. Gill, eds. Birds of North America, No. 276. The Academy of Natural Sciences, Philadelphia; The American Ornithologists Union, Washington, D.C.

Nelson, S.K. and T.E. Hamer. 1995a. Nesting biology and behavior of the Marbled Murrelet. Pages 57-68 *in* C.J. Ralph, G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, eds. Ecology and conservation of the Marbled Murrelet. U.S. Department of Agriculture, Forest Service General Technical Report PSW-GTR-152, Albany, CA.

Nelson, S.K. and T.E. Hamer. 1995b. Nest success and the effects of predation on Marbled Murrelets. Pages 89-98 *in* C. J. Ralph, G. L. Hunt, Jr., M. G. Raphael, and J. F. Piatt, eds. Ecology and conservation of the Marbled Murrelet. U.S. Department of Agriculture, Forest Service General Technical Report PSW-GTR-152, Albany, CA.

Nelson, S.K. and R.W. Peck. 1995. Behavior of the Marbled Murrelet at nine nest sites in Oregon. Pages 43-53 *in* S. K. Nelson and S. G. Sealy, eds. Biology of the Marbled Murrelet: Inland and At-Sea. Northwestern Naturalist 76(1).

Nelson, S. K. and A. K. Wilson. 2001. Marbled Murrelet habitat characteristics on state lands in western Oregon. Final Report to the Oregon Department of Forestry, Oregon Cooperative Fish and Wildlife Research Unit, Oregon State Univ., Corvallis, OR.

Ralph, C. J., S. K. Nelson, M. M. Shaughnessy, S. L. Miller, and T. E. Hamer. 1994. Methods for surveying Marbled Murrelets in forests. Pacific Seabird Group Tech. Pap. No. 1, USDA For. Serv., Redwood Sciences Lab, Arcata, CA.

Ripple, W. J., S. K. Nelson, and E. M. Glenn. In press. Forest landscape patterns around Marbled Murrelet nest sites in the Oregon Coast Range. Northwestern Naturalist.

U. S. Fish and Wildlife Service. 1996. Endangered and threatened wildlife and plants; final designation of critical habitat for the Marbled Murrelet. USDI Fish and Wildl. Serv. Fed. Red. 61: 26256-26320.

U. S. Fish and Wildlife Service. 1997. Recovery plan for the Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon and California. Portland, OR. 203 pp.

Vega, R. M. S. 1993. Bird communities in managed conifer stands in the Oregon Cascades: habitat associations and nest predation. Msc. thesis, Oregon State University, Corvallis, OR.

Wallen, R., C. Arguello, J. Friedman, and D. Baldwin. 1999. The corvids of Redwood National and State Parks: What is their relative abundance and how does abundance vary relative to human activities in the forest? Annual progress report for Redwood National and State Parks.

Wallen, R., J. Gordon, C. Arguello. 1998. Abundance of corvids in old-growth forest habitats in Redwood National and State Parks. Annual report of Redwood National and State Parks.

Mailed Letter P-194

See the response to Mailed Letter P-195

P195

23 February 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

RE: Draft EIR for the Jackson Demonstration State Forest

Dear Members of the Board:

1 I previously commented on the Draft EIR for the Jackson Demonstration State Forest (see attached letter from 15 July 2002). It has come to my attention that the preferred alternative (C1) in new Draft EIR has exactly the same management plan as the original proposal. This alternative ignores the comments made by myself and others in 2002 regarding the habitat associations of the Marbled Murrelet (*Brachyramphus marmoratus*), and the need to address the local murrelet population and the distribution of murrelets in Recovery Zone 5. New information on the status of the threatened (federal) and endangered (state of California) murrelet further accentuates the need to provide additional suitable habitat for rapidly declining populations in central California (McShane et al. 2004). Therefore, I am respectfully resubmitting my original comments for your consideration in creating a preferred alternative in the final EIR that addresses the needs of the Marbled Murrelet. As currently written, alternative C1 is inadequate for providing for murrelets, C2 provides additional mitigations that may help murrelets, but only alternative F provides adequately for murrelet populations and their recovery.

2

Thank you for the opportunity to comment. I appreciate your serious consideration of my recommendations.

Sincerely,

S. Kim Nelson

S. Kim Nelson
1865 SW Roth Street
Corvallis, OR 97333

McShane, C., T. Hamer, H. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson [et al.]. 2004. Evaluation report for the 5-year status review of the Marbled Murrelet in Washington, Oregon, and California. U.S. Fish and Wildlife Service, Region 1, Portland, OR.

Mailed Letter P-195

Response to Comment 1
The comment letter provided by S.K. Nelson on July 15, 2002 was a primary source for a significant expansion of the marbled murrelet species account in the current DEIR (pages VII.6.6-52 through -90). In addition, the comment provided by Ms. Nelson and US Fish and Wildlife Service and California Department of Fish and Game was the principle impetus leading to development of the Contribution to Recovery of Marbled Murrelet Habitat management measure (DEIR pages VII.6.6-118 through -119, Figure VII.6.6.8b and DEIR pages VII.6.6-79 through -82). This management measure would be applied to Alternative C1 as well as B, C2, D, E, and G. Finally, the management measure was written to provide additional opportunity for collaboration with wildlife agencies and other interested parties as habitat areas identified are evaluated on a site specific basis.

Response to Comment 2
New information concerning population status and habitat trends found in McShane et al. (2004) (Evaluation Report for the 5 year status review of the Marbled Murrelet in Washington, Oregon, and California. U.S. Fish and Wildlife Service is an important current reference and was cited extensively in the expanded marbled murrelet account. DEIR pages VII.6.6-72 through -75 and pages VII.6.6-75 through -84 summarize population and habitat issues respectively.

P-196

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

George D Gentry
Executive Officer
Board of Forestry and Fire protection
PO Box 944246
Sacramento, Ca. 94244-2460

Mr. Gentry,

I am writing to you as a 4th generation resident of Mendocino County and as the 3rd generation of my family to own and operate an industrial Logging Company out of Fort Bragg. I grew up in this industry working on various landowners properties and know first hand the management quality that has taken place on Jackson Demonstration State Forest, the managers should be the given utmost respect by people in this state not slapped in the face by frivolous lawsuits and hand tying regulation. There should be no question that past management has resulted in the best stand of actively managed timber in the world, and because of that I would like to see alternative B of the management plan approved so that this type of management can continue.

Obviously there are dramatic differences of opinion on what should be done with JDSF, however the Board of Forestry has the ultimate authority to set the coarse for the future of the State Forest and the impact on the citizens that it affects. Perhaps it is my practical approach to problems from my years at Cal Poly and UC Davis earning a Maters Degree in Engineering that forces me to use the facts to make decisions. At what point did Forest Practice leave the hands of Professional Foresters and become the domain of Lawyers and Judges? If this is the future of Forest Practice then the education system of California must be notified.

The Board of Forestry has the option to stop this movement with their decision on the management of JDSF and set what will be the new course for Forest Practice in the state of California. I am very concerned with the direction the Forest Industry is heading, what incentives are there for highly educated people to enter into the forest industry of California? Foresters learn the tools to manage timber land for production, environmental protection and a lot of other things, put together to make a "toolbox" full of options while in the education system. Upon graduation they enter the industrial setting and the tools that they were taught are thrown out the window and they enter a game of compromise to simply get a plan approved. What is best for the land is no longer a concern, now the concern is how to appease the "local" environmentalist and his friendly politician.

If the Forest Industry of California is going to have a future this movement must stop, and a good way to do it, is by the Board of Forestry doing the right thing and that is giving the Managers of JDSF the options needed to manage this forest into the future. Option B and C-1 I believe will give the Managers of JDSF the ability to keep the forest actively managed.

Our company is Master Logger Certified completing the circle of Certification requested by Environmental groups. We work for companies like Mendocino Redwood who is FSC certified and have seen the requirements put on landowners by these certification groups and a lot of it compares to practices that have been done on the State Forest for over 10 years. The same Environmental groups that want certification to require the best work and standards possible are also the ones tying JDSF up in litigation. That leads me to believe that these groups will never be happy until there is no active management on the State Forest and I hope others wanting to appease these groups realize this also.

This Environmental group or perhaps preservation movement has said grow bigger trees, JDSF has done that. They want certification, JDSF is managed by the group that regulates forest practice in the state. The Environmental movement has been successful in recent year in shutting down much of the Timber Industry of California, however the demand for timber products has not slowed down as fast. This group that claims to be stewards of the environment has pushed that demand to other states and countries with little to no forest practice regulation and much less productive timberland.

Mendocino County needs the revenue from this forest, as does the State of California and the many programs dependant on JDSF producing timber sales. The Timber Mills in Mendocino County are shutting down one after another, the work force is depleting and the educated people required for a strong industry are leaving for a more promising and rewording occupation. Getting Jackson Demonstration State Forest back into operation and keeping it there is a necessity for the County, State and Industry.

JDSF directly impacts a few people but affects the feelings of many. I am sure you are getting flooded with letters from all over the world as the environmental movement mails in their carbon copy letters making the people behind them feel good about themselves. It is time for the Board of Forestry, the group responsible for good forest management to stand up for their purpose and show the world that the management that they do on their own forest is right, has been right and will continue to be right. Do this by choosing a management option that is based on facts and supported by professionals, educated in the matter at hand, forestry. Choose management option B, C-1 or a combination and get this forest back into production. Getting this forest back into production seems to be the only thing people in this area can agree upon, make it happen.

Sincerely,

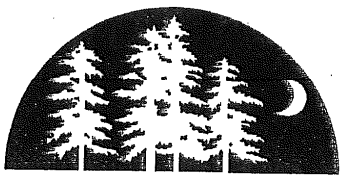
Myles Anderson

Mailed Letter P-196

Response to Comments
The comment provides no specific information regarding potential environmental impacts. Support for Alternatives B and C1 noted. While the Board generally agrees that the forest should be managed as determined appropriate by local professionals, the State Forest is a public resource that must be managed in a fashion that considers a broad range of interests, while remaining compliant with the intent of the Legislature and the policy of the Board. The Board believes that Alternative G is appropriate for the future management of JDSF.

It is the intent of the Board that the management of JDSF achieves a high level of sustainable timber production, generating revenue and jobs to the benefit of the local and State economy.

P-197



FORESTS FOREVER

50 First St. #401, San Francisco, California 94105
phone 415/974-3636 fax 415/974-3664
www.forestsforever.org mail@forestsforever.org

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

Feb. 23, 2006

George D. Gentry
Executive Officer
California Board of Forestry
P.O. Box 944246
Sacramento, California 94244-2460

Re.: Comments on Jackson Forest DEIR

Dear Mr. Gentry:

1 On behalf of the board of directors of Forests Forever and its 40,000-odd supporters in California I am writing in support of Alternative F of the current DEIR for Jackson Demonstration State Forest. We also oppose alternative C-1, the preferred alternative identified in the report.

2, 3, 4, 5, 6 The largest of California's state forests, Jackson is the only one that is home to a significant percentage of mature redwoods, an increasingly rare and valuable forest type for both recreation and wildlife habitat. The era of large-scale industrial-style logging and of clearcutting on this public forest must end. Gone are the days when this destructive kind of timber extraction can escape public attention and criticism.

7 In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and preserves according to an analysis published by the Save-the-Redwoods League in 2000. This context brings a heightened urgency to management issues at Jackson.

8, 9, 10, 11, 12 Alternative C-1 calls for too much logging– an annual harvest of some 31 million board feet– and allows clearcutting for "research" purposes and provides too little protection for old growth, wildlife and water quality.

13 Alternative F, the "Older Forest Emphasis" plan for management at Jackson, recognizes the statutory mandate under which Jackson is operating: Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Regionally scarce fish and wildlife habitat would be enhanced through this approach.

14 For the past 10 years there has been a high degree of public dissatisfaction with Jackson's

14 | management. I urge you to adopt the meaningful reforms that are outlined in Alternative F, and put the controversy to rest.

Sincerely,

Paul Hughes
Executive Director

Mailed Letter P-197

Response to Comment 1
Support for Alternative F and opposition to Alternative C-1 noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 2
Please see General Response 9. regarding “mature” redwoods.

Response to Comment 3
For recreation comments see General Response 14.

Response to Comment 4
For wildlife habitat see General Response 11 and 12.

Response to Comment 5
While no definition of “large-scale industrial-style logging” is provided in the comment, it can be assumed that the comment relates to the overall quantity of harvesting. While the comment does not go directly to the contents of the DEIR, or the analysis therein, the following response is provided.

The legislative mandate for the forest is to demonstrate sustainable and economic forest management. The economic component of this mandate requires the use of commercial logging operations. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below the current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to “less than significant”.

Response to Comment 6
See General Response 10 regarding clearcutting comments.

Response to Comment 7
See Form Letter 6, Response to Comment 2.

Response to Comment 8
See Response to Comment 5 above.

Response to Comment 9
See General Response 10.

Response to Comment 10
See General Response 8.

Response to Comment 11
See General Response 12.

Response to Comment 12
See General Response 11.

Response to Comment 13
Support for Alternative F noted. The Board has found that some elements of Alternative F may not comply with legislation and policy related to state forest management (see Table VI.1). Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. One example of the research and demonstration emphasis will be to test the cost and effectiveness of the riparian zone management approaches contained in Alternatives C1 and D-F. The results of these experiments will be utilized as part of the adaptive management process defined in Chapter 5 of the ADFFMP.

Significant impacts to fish and wildlife habitat are not expected due to management as approved by the Board. Please see Section VII.6.1 and VII.6.6 of the DEIR for these resources (see also General Response 11 and 12).

Response to Comment 14
Unfortunately, there is no alternative that “will finally put the controversy to rest”. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance the demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

IV.12 Individual DEIR Mailed Comments P-198 to P-229

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Some of the comment items in this section were provided in written form to the Board at hearings. Some items were provided to the Board outside of the CEQA comment period for the DEIR but are relevant to the record.

P-198

February 22, 2006

61 Park Way
Piedmont 94611

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

Dear Ms Gentry,

I am writing concerning SCH # 2004012025.

My first letter was returned to me, stamped "Not able to deliver."

I am opposed to this plan, as it does too much unnecessary damage to the environment.

There must be some way your planners can develop a plan with less impact.

Mary Santana
property owner: 15825 Bonneville Dear Ln
Meadow 95415
Road

Mailed Letter P-198

Response to Comment 1
The comment provides no specific information regarding potential environmental impacts. A reasoned response is not possible. The DEIR analysis found that implementation of the proposed project Alternative C1, as mitigated, would not cause any significant adverse environmental impacts. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. Implementation of the ADFFMP is not expected to cause any significant adverse environmental impacts.

P199

RECEIVED BY
FEB 27 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

California Native Plant Society

FAX

Date: February 27, 2006

To: State of California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94344-2460
(916) 653-0989 FAX

From: Lori Hubbart, CNPS/DKY
(707) 882-1655 Voice (707) 882-1645 FAX

Subj: Comment Letter -- Jackson Demonstration State Forest
Draft Environmental Impact Report

Pages: 7 plus cover sheet

Following is a letter to the BOF from the DKY Chapter of CNPS commenting on the Draft Environmental Impact Report for the Jackson Demonstration State Forest.

Please contact me at the numbers shown above if all pages do not transmit.

Sincerely,

Lori Hubbart

Lori Hubbart, President
DKY Chapter, CNPS

California Native Plant Society

Dorothy King Young Chapter – P.O. Box 985 – Point Arena, CA 95468

February 10, 2006

George Gentry, Executive Officer
California State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry and Members of the Board:

The Dorothy King Young Chapter of the California Native Plant Society (CNPS) would like to offer the following comments on the Draft Environmental Impact Report (DEIR) for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan, December 2005.

CNPS is concerned with assessments, management proposals and conditions that have a bearing on native botanical resources on the Jackson Demonstration State Forest (JDSF).

CNPS respectfully requests written responses to all the questions and concerns raised in this letter.

1 **Length and Organization of DEIR:** The California Environmental Quality Act (CEQA) stipulates that an EIR must be written in a manner that is understandable by the public, allowing members of the public to comment on the EIR. The language is supposed to be clear, and the information presented in an organized, systematic manner. (Pub. Res. Code § 21003 subd. (b) and CEQA Guidelines §§ 15006, 15120, 15140.)

2 The CEQA Guidelines state, "The text of draft EIRs should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages." It appears to CNPS that the California Board of Forestry and Fire Protection (CDF) did not comply with the intent of the CEQA Guidelines to "... reduce unneeded bulk in EIRs and to help the documents disclose the key environmental issues..." Instead, the sheer bulk of the DEIR makes it difficult for the public to identify these issues and evaluate them.

3 The DEIR also has mitigation measures and other information scattered throughout the document, undefined acronyms, and pages of highly technical verbiage that is not strongly tied to the conclusions reached in the EIR, but often appear to be arbitrary or subjective. How does CDF, in the DEIR, fulfill its obligation to the public to provide clear, understandable information?

4 **Mitigation Measures:** The DEIR fails to summarize proposed mitigation measures or provide a detailed plan for mitigation and monitoring of impacts covered by the management plan. Many mitigation details are omitted, with the explanation that they will be included at some unspecified later date in individual Timber Harvest Plans (THPs).

5 CEQA allows deferral of this kind only when a series of projects within a larger project are expected to occur in very similar settings and have very similar impacts. Does not this deferral misapply the intent that the state's Forest Practice Rules (and hence JDSF's Management Plan and individual THPs) be functionally equivalent to CEQA?

6 In fact, such deferral of mitigation measures is inappropriate in a setting like JDSF, which is characterized by complex variables such as diverse topography, different hydrological patterns, soil types and micro-climates. Please explain how the public could be expected to evaluate the sparse language about mitigation of environmental impacts contained in the DEIR.

7 Would not an analysis and summary by independent scientific professionals be needed in order for the public to understand and evaluate the scientific information?

6.2 Botanical Resources --6.2.1 Regional Setting
Bishop Pine Series

8 The discussion of the bishop pine series, a vegetation community dominated by *Pinus muricata*, fails to include the following information about how the California Department of Fish and Game (CDFG) ranks bishop pine forests:

9 The Northern Bishop Pine Forest vegetation type is recognized by the State as a sensitive and limited vegetation type in California, State rank S2.2 (endangered with 6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres, and threatened).

10 This vegetation type is currently listed in California Natural Diversity Database (CNDDB) RareFind Communities. The Northern Bishop Pine Forest is very limited in distribution, and is often poorly understood within its range.

11 How will this information be reflected in the way bishop pine forest is treated in the DEIR and the JDSF Management Plan?

6.2 Botanical Resources --6.2.1 Regional Setting
Pygmy Cypress Series

12 The DEIR text leaves out a crucial piece of information, namely that the total extent of Mendocino pygmy cypress forest has decreased markedly in the last few decades. It correctly states that the original extent of Mendocino pygmy forest was about 4,000 acres. It fails to take into account that due to permanent loss, significant amounts of pygmy forest have been extirpated. Recent estimates place existing pygmy forest at about 2,600 acres [Davis, F. W., D. M. Stoms, A. D. Hollander, K. A. Thomas, P. A. Stine, D. Odion, M. I. Borchert, J. H. Thorne, M. V. Gray, R. E. Walker, K. Warner, and J. Graae. 1998. *The California Gap Analysis Project--Final Report*. University of California. Santa Barbara, CA..]

13 The DEIR states that the pygmy forest at JDSF constitutes 14% of the total pygmy forest area. However, that statistic is based on the original pygmy forest acreage, rather than current estimates. If extant pygmy forest totals approximately 2,600 acres, then JDSF's 613 acres constitute nearly 25% -- one quarter -- of the remaining Mendocino pygmy forest. This would seem to place a great obligation on CDF to be a responsible steward of its considerable pygmy forest land holdings.

14 Please explain how this insight will change the language of the DEIR and the Management Plan for managing JDSF's pygmy forest acreage.

15 Please explain how CDF can responsibly manage its bishop pine forests and pygmy forests utilizing a Management Plan based on an EIR that omits or misrepresents basic background information on the regional setting for its botanical resources.

Threatened, Endangered and Sensitive Species

CNPS takes issue with the following text in the DEIR:

16 "Although CNPS is considered an authority on rare plants in California, and maintains an exhaustive database of rare, threatened, endangered and uncommon plants, they are a private organization operating independently of CDFG and USFWS. … CDFG currently accepts the premise that placement of plants on CNPS lists 1A, 1B and 2 provides a fair argument that they qualify as rare, endangered, or threatened under Section 15380(d) of CEQA."

This language implies that collection, development and review of CNPS data on sensitive plants are conducted in a completely independent manner. Is CDF aware that CNPS and CDFG share plant data
17 and work in partnership to develop and maintain databases on rare plants and vegetation classification? How does CDF in the DEIR plan to acknowledge this scientific cooperation between CNPS and CDFG?

Federal and State-Listed Plant Species

It is the position of CNPS that the salvage exemptions contained in the NPPA apply only to taxa
18 state listed as rare, and that the salvage provisions apply ***only after*** compliance with all provisions of CEQA. Please see Donald H. Weburg v. State Board of Forestry and Fire Protection, case #02-CS00204 – Sacramento County Superior Court, 04-02-02.

6.2.3 Project Measures for Protection of Botanical Resources

Under Goals and Objectives, the DEIR refers to pygmy forest as an "uncommon plant community"
19 apparently at the same level as something vaguely described as "meadows." How does CDF justify such imprecise, careless language regarding a rare resource like pygmy forest?

6.2.4 Specific Management Actions – Special Concern Areas and Unique Habitats

This section refers repeatedly to measures supposedly specified in the JDSF Management Plan. Since the final form of the JDSF EIR has yet to be determined, it follows that the Management Plan, the
20 "project" covered by the EIR does not yet exist in its final form. How can the public be assured by or comment on measures contained in a Management Plan that is not yet finalized?

Again, the intent of CEQA is to provide, in an EIR, clear, thorough and understandable information to
21 allow the public to comprehend and comment. How can CDF fulfill this mandate with a DEIR that is far too lengthy for CEQA requirements that refers the public to another lengthy document?

Plant Species of Concern

Habitat Management Practices-- CNPS absolutely opposes any plan for "Limited removal of species
22 in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly."

First, scientists do not really know that *Lotus formosissimus* is the host plant for the larvae of the lotis
23 blue butterfly. There is some evidence that this species might be the host plant, but it is far from certain.

Even if this *Lotus* is the larval host, this plant grows readily in wet meadows, so that other, more
24 suitable habitats for it can be found. There is no justification for sacrificing pygmy forest in order to foster the growth of this plant.

25 How does CDF justify an action that is not supported by science and that would leave CDF vulnerable to legal action?

Invasive Exotic Plant Species Control

Invasive exotic plants are a major environmental problem at JDSF, and have been for a long time. The
26 invasive weeds choke out native plants and present a considerable fire hazard. Please explain how emphasizing integrated weed management, a "prevention-oriented approach" will have an impact on an already-serious weed infestation.

27 None of the measures outlined in the DEIR address the large stands of macro-weeds like *Cortaderia jubata, Cytisus scoparius and Rubus armeniacus* (formerly *R. discolor*).

While CNPS advocates for an active, ongoing weed-control program at JDSF, CNPS is also concerned about the effects of herbicides on native plants. Herbicides are often applied *after* a THP is closed, and CNPS is aware of cases where herbicide applications were fatal to sensitive botanical taxa.
28 CDF claims that it has no authority over such applications, since the application is done after the
29 THP closes. Does not this constitute illegal CEQA piecemealing? Shouldn't CDF address all herbicide impacts, including cumulative impacts, in the DEIR, as well as in the THP process?

6.2.6 Impacts – Impacts 1 through 6

30 It is generally accepted in the scientific community that a complete biological inventory, resulting in baseline data is essential for creating a realistic management plan. However, the DEIR discusses methods of assessing impacts to botanical resources without reference to any baseline data.

The DEIR goes on to state that "An extensive inventory of the botanical resources of JDSF has not been conducted. JDSF maintains a map of known rare plant occurrences and has compiled available supporting documents. Inventory is planned to occur on a project-by-project basis through surveys patterned after currently accepted protocol."

31 Please explain what is meant by "accepted protocol" and by whom it is accepted. Please explain how piecemeal, project-by-project surveys (to be conducted by whom?), possibly influenced by project timetables can provide sufficient data to inform project planning?

32 Please explain how "pre-survey scoping consultation with DFG" could help with the design of mitigation measures? In the absence of baseline biological data, how would CDFG or CDF personnel have sufficient knowledge to design protections for botanical resources?

33 How does CDF intend to deal with the fact that many rare, herbaceous plants can be easily missed by low-intensity, non-floristic or off-season surveys?

34 How can CNPS, not to mention the general public, evaluate the DEIR's language on mitigation for impacts to sensitive plants, without measures targeted to specific plant taxa?

35 The highly variable natural features found within JDSF indicate the need for mitigations like buffer zones tailored to the needs of each project site. Mitigation measures designed to protect plants should also be informed by knowledge of pollinator populations and behavior and dispersal mechanisms.

36 Why has CDF failed to provide assessments based on past THPs of the effectiveness of mitigation measures in protecting or avoiding sensitive plants or habitats? If these data exist, why not utilize them? If these data do not exist, why don't they, in a state research and demonstration forest?

37 Please explain what the public can expect in cases where mitigation measures fail to protect or avoid sensitive plants or habitats.

38 CNPS would like to see areas containing rare plant populations or vegetation types set aside and protected from the effects of logging and related activities. This would include smaller, but significant populations, in addition to large blocks of habitat. Since this is the most effective, scientifically defensible way to protect rare plants and habitats, why does the EIR not specify reserves for botanical "hot spots"?

39 Please explain how the material in the Botanical Resources section of the DEIR supports the conclusion that there will be no significant impacts to botanical resources. Given the absence of botanical inventory requirements, survey protocols, monitoring plans or specific, targeted mitigation

39 measures, how does the DEIR provide assurances to the public about the conclusion of "no significant impacts" to botanical resources?

Impact 1: The project has the potential to threaten to eliminate a plant community (Less than significant)

Impact 3: Have substantial adverse effects, either directly or indirectly through habitat modifications, on any species identified as a candidate, sensitive, or special-status plan species in local or regional plans, policies or regulations, or by the CDFG or USFWS (Less than significant)

The DEIR proposes to avoid potential adverse impacts to plant species of concern by having a botanist or "trained personnel" periodically check plant occurrences.

40 Please explain how this simple tally of plants would provide meaningful data about any decline in plant health in time for CDF to take remedial action? What remedial actions would CDF take in such cases? Please explain why the public should be satisfied with surveys conducted by "trained personnel" when complete, accurate botanical surveys require qualified scientists?

41 Such monitoring is apparently intended only for areas "subject to management activities," which might exclude the plant species of concern in the pygmy forest areas. Please explain how this monitoring would be useful in assessing any decline in special-status, pygmy forest species not directly impacted by "management" activities.

42 Pygmy forest and the plant species of concern that occur there are extremely vulnerable to altered hydrology, changes in soil chemistry and surface erosion. Such adverse effects can be caused by grading and trenching, road building and by recreation involving motorized vehicles and trail bikes. These activities can be damaging even if they happen adjacent to, but not in the pygmy forest.

43 The fact is that the pygmy forest within JDSF has been very poorly managed. Mechanical disturbances that alter the hydrology, off-highway vehicles (OHVs) and dirt bikes, road building, poor road maintenance, invasion by exotic weeds, and trash dumping, continue to cause damage.

44 Please explain how the DEIR's proposed "incidental protection" for sensitive plant species in SCAs can be valid under such the existing scenario.

Impact 6: Cumulative effects resulting in a reduction in the range of a species, or local extirpation of a plant species on a spatial scale that includes the larger analysis area. This threshold includes changes in the environment caused by the interaction of ecological processes and multiple effects. (Less than Significant)

45 With respect to Mendocino pygmy cypress forest, cumulative effects to special-status plant species in the pygmy forest within JDSF have already occurred and are continuing to occur. These cumulative effects are the result of altered hydrology and continual erosion caused by poor road maintenance and off-road vehicle activity. Please explain exactly how the proposed management and mitigation can be expected to halt or reverse these impacts.

46 The DEIR refers to "future road management" and the future implementation of "measures for scoping, survey and mitigation" to be implemented at some later date, on a project-by-project basis. How do such vaguely described measures meet the CEQA mandate for a clearly written EIR understandable by the public, and avoid the CEQA prohibition against piecemealing?

47 The DEIR erroneously states that, "Pygmy forest and pygmy-type vegetation on private lands are subject to Mendocino County land use planning and are designated as Environmentally Sensitive Habitat Areas. These areas are subject to more rigorous environmental review and restriction than most other areas (Mendocino Co. Plan Sect. 20.532.060 and 20.496045)."

47 In fact, only the small amount of Mendocino pygmy cypress forest found within the California Coastal Zone receives consideration as an Environmentally Sensitive Habitat Area in Mendocino County.

48 Both allowable activities and illegal uses, such as OHV recreation have taken their toll. There has been little or no enforcement of regulations prohibiting vehicle activity in the pygmy. The DFMP and DEIR do not provide any detailed management plan to protect the pygmy forest from high-impact vehicle activity. If CDF cannot generate a good plan to manage the JDSF pygmy forest, would CDF be willing to transfer ownership of those lands to another organization?

49 Given the concentration of illegal activities in JDSF's pygmy forest, the plan in the earlier DFMP for annual review of reported nuisances is woefully inadequate. It states that, "Additional restrictions will be implemented as needed." Those restrictions have not been implemented yet, and they are needed now. Citations for illegal vehicle use, dumping, shooting, etc. represent an excellent potential source of revenue. Have CDF, State Parks, or the local law enforcement agencies considered this?

50 Please see CNPS comments above on plans to remove pygmy forest vegetation in a misguided attempt to "restore" habitat for the lotis blue butterfly.

51 CNPS could support projects to regenerate Mendocino pygmy cypress forest using prescribed fire, in cases where intact pygmy forest geomorphologic structure makes success probable.

Project Information

Goal #1. Research and Demonstration

52 A meaningful, long-term research program at JDSF that involves biological resources must be founded upon a complete biological inventory. Both the CDFG and CNPS guidelines require a complete *floristic* survey prior to commencement of operations. Surveys for only a set of sensitive taxa do not provide a sufficient basis for conducting research.

53 Even though JDSF is touted as a research and demonstration forest, JDSF currently has no on-site botanical staff, and virtually no science staff.

54 CNPS calculated in 2002 that JDSF's expenses were less than 17% of its revenues. CNPS believes that a portion of the substantial revenues derived from JDSF timber harvests should be returned to JDSF in the form of qualified botanical and ecological staff capable of actually carrying out a viable research program. Please outline the reasons why this has not yet occurred. CNPS requests a step-by-step proposal for re-investing a portion of JDSF's timber revenues in JDSF's research program.

55 As for the research program itself, CNPS advocates the establishment of a formal research program, with results published in peer-reviewed journals, data made easily accessible to the public, and formal agreements with academic institutions. the DEIR cites a focus on "...investigations directed to the needs of the general public, small forest landowners, resource professionals, timber operators, and the timber industry."

56 CNPS suggests that studies in the following areas would be of great interest and relevance to many or most of the constituents cited:

57 • The relationship between sensitive plant taxa that appear to flourish in forest openings (e.g., *Sidalcea malachroides* and *Astragalus agnicidus*) and timber harvest practices

58 • Projects to evaluate how increased regulation of timber harvesting will actually affect the economics of timber harvesting

59 • Examination of impacts to timber harvesting when tree species vulnerable to Sudden Oak Death (e.g., *Lithocarpus densiflora*) become state or federally listed. Such listing could cause a "train wreck" for timber harvesting, so research conducted on JDSF could help small timber owners cope.

60 • Research into silvicultural prescriptions, equipment management, and other exotic control technologies that can be effectively used to combat invasive exotics in the north coast forests

61 • Research into techniques for forest restoration to maximize biological diversity and ecological functions.

62 • Research projects that focus on compatibility of logging and preservation of biodiversity

63 • Restoration, recovery and fire regimes in the pygmy forest, since the current, damaged state of JDSF's pygmy forest would provide ideal conditions for such research.

64 Please provide a list of planned research projects that would have far-reaching relevance while anticipating future challenges to resource stewardship in California's forests.

65 CNPS is also concerned about the "demonstration" goals for JDSF. How can CDF justify "demonstrating silvicultural prescriptions that result in even-aged management, when such methods are already widely used and understood?

66 Any silvicultural prescription that is widely use and is a viable method, can no longer be considered "innovative", and is therefore not a fit subject for "demonstration" in a state forest.

67 CNPS does not see much evidence that logging activities at JDSF are actually geared toward the small timberland owner. Instead, activities on the forest appear to focus on large, corporate, industrial timber companies.

68 How does CDF plan to greatly minimize the emphasis on industrial timber, and replace it with activities that are truly relevant to small landowners (as well as the general public)?

Concluding Remarks

69 CNPS also wishes to address CDF's assessment of the public's responses to the DEIR. Written responses should be weighted in importance on the basis of their scientific and legal arguments, rather than by subjective measures like the number of responses.

70 With a well-written Environmental Impact Report and Management Plan, CDF would not have lost several years' worth of revenues from JDSF due to legal actions. Funding from JDSF revenues could have provided CDF with trained, competent professionals to write these documents.

Sincerely,

Lori Hubbart

Lori Hubbart
Chapter President
Dorothy King Young Chapter
California Native Plant Society

Mailed Letter P-199

Response to Comments 1, 2
The DEIR is not for a single focused project but is programmatic in nature, addressing a large (48,650 acres) forest with many natural resources, including listed species and TMDL-listed watersheds, and with a wide range of management purposes (research, demonstration, timber management, recreation, etc.). A DEIR in such a context must necessarily be lengthy in order to be complete.

Key issues and potential environmental impacts are clearly identified in each resource analysis section. The same pattern of organization was followed for each resource area.

The "*Discussion*" following the cited CEQA Guidelines section clearly identifies these page limits as being "recommended", not absolute. Given the history of this project – the public involvement, past litigation, controversy, etc. – the Board believes that the public and other agencies expected a level of disclosure, analysis and discussion which resulted in a document larger than what is recommended in the Guidelines.

See also General Response 5.

Response to Comment 3
Mitigation measures, specifically, are found at the end of each resource analysis section where the specific potential environmental impacts are discussed. A list of acronyms and abbreviations was provided in Appendix to assist the reader. The Board made a good faith effort to ensure that the DEIR, while lengthy, was complete, clear, and understandable.

Response to Comments 4-6
The mitigation necessary to reduce project impacts to a level of less than significant is summarized in the DEIR in Table I.2 and in the RDEIR Table I.1. Further, proposed mitigation measures are clearly identified at the end of each resource analysis section where the specific potential environmental impacts are discussed. Monitoring measures for the mitigations are found in the same place. Chapter 5 of the Draft Forest Management Plan (DFMP) or the Administrative Draft Final Forest Management Plan (ADFFMP) details the monitoring and adaptive management program for JDSF.

Since the DEIR and RDEIR are largely programmatic; thus, they provide programmatic mitigations and the direction for their application at the project level, such as timber harvesting plans (THPs). Because they are programmatic, the DEIR and RDEIR cannot provide site-specific mitigation details for the project level. However, they can and do direct that the need for further mitigation be assessed and that mitigations be applied where the need for them is identified at the project level. This project-level analysis and disclosure will occur under the functional equivalency of the THP process or in project specific documents prepared in compliance with CEQA. The public will have the opportunity to comment on the adequacy of the mitigation during the routine review of those project documents.

In addition to presenting mitigation measures identified as necessary to prevent significant adverse impacts, the DEIR and RDEIR also identify many of the environmental protection measures already included in the DFMP or Alternative G. In addition, the DEIR and RDEIR identify "additional management measures" that were developed as part of the EIR process to provide additional environmental protection or enhancement, but were not found to be specifically necessary to mitigate a potential significant adverse impact.

The complex JDSF setting provides the reason that some degree of project-level assessment and, as needed, mitigation must occur at the site-specific project level. A programmatic EIR cannot possibly anticipate every situation that will arise at the site-specific and project-specific level. The DEIR, DFMP, and ADFFMP require the further site-specific and project-specific CEQA analysis and mitigation to assure that significant adverse environmental impacts will be avoided.

Response to Comment 7
The DEIR was prepared by professionals with appropriate scientific and technical education, training, and experience. The DEIR contains adequate information and analysis to consider and mitigation the potential environmental impacts of the alternatives and to inform the public. A separate analysis and summary by independent scientific professionals would likely prove duplicative of the information provided in the DEIR and be unnecessary.

Response to Comments 8-10
Northern Bishop Pine Forest was not initially listed as a California Natural Diversity Database (CNDDB) Vegetation Type in the DEIR Analysis area because CNDDB had not listed any occurrences in Mendocino County as of the date the query was done, nor has it as of 6/07 The only "Northern Bishop Pine Forest" is listed in Monterey County. The information on the CNDDB ranking will be added to the EIR.

This information on the Bishop Pine Series will be added to the FEIR:

> **The Northern Bishop Pine Forest vegetation type is recognized by the State as a sensitive and limited vegetation type in California, State rank S2.2 (endangered with 6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres, and threatened). This vegetation type is currently listed in California Natural Diversity Database (CNDDB) RareFind Communities. The Northern Bishop Pine Forest is very limited in distribution, and is often poorly understood within its range.**

Response to Comment 11
A vegetation type of this name was not specifically listed as a Unique Habitat type in the DFMP nor were specific management requirements developed for it. Bishop Pine Forest at JDSF is a component of the vegetation between the Pygmy Forest and the Redwood Forest types. Much of this area has soil types that are not considered productive for commercial timber management. The DEIR recognized that "Stands dominated by pygmy cypress occurring on unproductive soils outside of true pygmy forests will not be harvested." The bulk of the cypress-Bishop Pine forests mapped at JDSF fall on low site soils (Class 8 or less) though a few are found in areas mapped as site class 4. The JDSF typing of these stands listed Bishop pine as the dominant overstory tree with cypress present in a mid or understory layer. In general, the only reason for management activities in Bishop pine forest would be for improving the transportation system or correcting a existing management problem. Site-specific analysis will be conducted before actions will take place in the Bishop Pine forest.

Response to Comments 12-14
The DEIR does recognize the rarity and loss of the pygmy cypress community (see Page VII.6.2-1 to -2). The DEIR notes that estimates of the extent of pygmy forest vary, and it quotes the DFMP statement that JDSF contains approximately 40% of the pygmy forest in the County, making it clear that this is a very important botanical resource that exists on the Forest.

The DEIR notes the variations in mapped extent of Pygmy Cypress. The CALVEG information used was dated 1991 to 1998 with a minimum mapping unit of 2.5 acres. The Gap Analysis data is dated 1998.

Under "data use" the Gap Analysis projects states:

"Appropriate Uses: The following is a general list of applications:

- .....
- Large area resource management planning
- Coarse-filter evaluation of potential impacts or benefits of major projects or plan initiatives on biodiversity, such as utility or transportation corridors, wilderness proposals, regional open space and recreation proposals, etc.
- .....
- Environmental impact assessment for large projects or military activities.

- ....

It is far easier to identify appropriate uses than inappropriate ones, however, there is a "fuzzy line" that is eventually crossed when the differences in resolution of the data, size of geographic area being analyzed, and precision of the answer required for the question are no longer compatible.

- Use of the data to map small areas (less than thousands of hectares) typically requiring mapping resolution at 1:24,000 scale and using aerial photographs or ground surveys.
- ....
- Determining abundance, health, or condition of any feature.
- Establishing a measure of accuracy of any other data by comparison with GAP data."

Based on the qualifiers included in the cautions section, using the Gap data to verify the CALVEG Data may not be appropriate. The Gap Analysis data show approximately 500 acres total in state ownership that would include both JDSF and State Parks. This number is smaller than the JDSF acreage alone (619 acres).

The DEIR discussion of the extent of pygmy forest on and outside JDSF appropriately notes the several estimates of its extent. This comment provides no new information that would identify a need to alter the DEIR or RDEIR.

Response to Comment 15
The Board finds the premise that the DEIR has "misrepresented basic background information" to not be valid. CAL FIRE has accepted DFG's statement that "Northern Bishop Pine Forest," though designated in Monterey County (CNDDB), is a valid designation in Mendocino County. The pygmy area reference cited by CNPS may not be valid for application at the scale it was cited.

Response to Comments 16-17
The paragraph (page VII.6.2-16) as a whole provides CNPS with recognition for its role in plant conservation and notes that coordination with CNDDB (DFG) occurs. Underlining has been added to the relevant text.

> CNPS listed rare plants have not been through the formal public review process to qualify as listed or candidate species under the federal or State ESA. The CNPS lists are developed through a formal review process involving a scientific advisory committee composed of noted academic, professional, and amateur botanists across the state. The scientific advisory committee reviews the best available data to aid in compilation of rare, endangered, threatened, and uncommon plant lists. <u>The review process includes close consultation with CNDDB.</u> CDFG currently accepts the premise that placement of plants on CNPS lists 1A, 1B and 2 provides a fair argument that they qualify as rare, endangered, or threatened under Section 15380(d) of CEQA.

Response to Comment 18
This section will be modified. Inclusion of this section without notes on the Weburg case represents an artifact of editing, not a decision by CAL FIRE to rely on this approach for protection of rare plants. Because NPPA Section 1913(c) may now be confusing; this section will be removed from the document. CAL FIRE will continue to follow relevant laws and regulations, recognizing legal judgments. The Board regrets any misunderstanding that resulted from this section.

Response to Comment 19
This section references terms used in the DFMP. The section lists among the "Goals and Objectives" some "Specific Management Actions" for pygmy forest. This language in the DEIR was used precisely to reflect language in the DFMP. The rarity of the forest is addressed in detail in the Regional Setting section. For brevity, the status of a resource is not always included every time there is a reference to that resource.

Response to Comments 20, 21
The adoption of a Management Plan by the Board is a "project" subject to CEQA; as such the Board is required to prepare a draft EIR and to certify a final EIR prior to the adoption of the Plan. The EIR is intended to identify the environmental impacts associated with implementing the Plan and providing measures to avoid or mitigate those impacts when they are found to be significant. The necessary mitigations identified by the Board have been incorporated into the Plan prior to adoption.

The Executive Summary (Section I) explains the relationship to the Draft Forest Management Plan (DFMP). The Draft Forest Management Plan dated May 2002, is one of the seven alternatives analyzed in the DEIR. The complete DFMP has been available on the Board of Forestry and Fire Protection's website throughout the entire CEQA process for the DEIR and was provided free of charge to the public on a CD that also contained the DEIR.

The most important elements of the DFMP for providing a full understanding of Alternative C1 and Alternative G—including anticipated management actions and included measures to protect and enhance the environment—are contained in the DEIR. Thus, while direct referral to the DFMP may help to improve the reader's ability to comprehend the DEIR or RDEIR, it is not essential.

The CEQA process and Board of Forestry decision-making process, including the DEIR and RDEIR, and including public comments such as those of CNPS, are the critical mechanisms through which the DFMP has been revised, resulting in the current ADFFMP. The ADFFMP has been made available to the public in advance of the Board's consideration of certifying the EIR and consideration of approving the ADFFMP as the Final Management Plan.

See also the above response to Comments 1 and 2.

Response to Comments 22-25
The section will be modified to state:

> **Habitat Management Practices: The concept of conducting control burns in the pygmy forest originated some years ago as an idea to benefit the Lotis blue butterfly and a host species coast hosackia (*Lotus formosissimus)*. Currently it is understood that other herbaceous members of the pea family may be hosts for the butterfly and that host plant habitat is not limited to pygmy forest. The concept of manipulating the rare pygmy forest for the possible benefit of the Lotis blue butterfly is not supported at this time. Local Botanists have supported the concept of carefully reintroducing fire into pygmy forest areas on JDSF. CAL FIRE recognizes that any proposal would be; research focused on improving understanding of the pygmy forest, limited in scope, based on sound ecological and botanical knowledge, supported by experts in the field, undergo appropriate CEQA analysis, and include appropriate survey, study, and monitoring.**

The following will be deleted:

> **Limited removal of species in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly. Prior to habitat development projects, rare plant surveys will be conducted according to accepted survey guidelines (see previous section) to address sensitive plant resources. A qualified botanist will assess the appropriateness of removal of any sensitive plant species in relationship to fostering habitat for the growth of the butterfly's host species, Harlequin lotus (*Lotus formosissimus)*. Effectiveness monitoring will be conducted for any habitat management practice involving removal of plant species in the pygmy forest to assess the response of the forest to habitat alteration.**

The FEIR Errata section will modify the wildlife section to incorporate changes that reflect the other potential hosts and habitat for Lotis blue butterfly.

Response to Comments 26, 27

The DEIR recognizes that invasive weeds are frequently found on JDSF. It has taken decades for some of the species to become widely established. Like most lands in this area, jubata grass, brooms and Himalayan berry are well established. Given the large scale on which they exist, management is challenging. Integrated Weed Management (IWM) focuses first on managing new small infestations to prevent their spread. IWM is JDSF's adoption of Integrated Pest Management principles, focused on invasive weed management for the forest. The next priority for JDSF IWM is "controlling existing infestations that to minimize conflicts with important management objectives and maintain natural ecosystem processes". This was made more explicit by including Additional Management Measure 1 in the DEIR**:** Protection of rare plants (candidate, sensitive, or special status species) from invasive plants will be a high priority for Integrated Weed Management activities (see DEIR p. VII.6.2-16**)**.

In the 1990s large-scale attempts to control the broadly distributed invasive weeds generated public controversy, which in turn precipitated a steep decline in herbicide use at JDSF. JDSF will need to use an adaptive management approach with IWM to address the wide spread invasive weeds like jubata grass, brooms and Himalayan berry. The IWM approach detailed in the DFMP includes:

> IWM emphasizes control of the environmental conditions that cause or promote weed infestations. IWM includes direct suppression of existing weeds as well as modifying environmental conditions to reduce their suitability for weeds by encouraging the weeds' natural enemies, or increasing competition for the scarce resources they require.

IWM's focus on managing for the environmental conditions that limit invasive weed's habitat is an principle that can be applied for wide spread invasive weeds. For example, the WLPZ protection measures for Class I streams call for 85% overstory canopy cover in the inner 75 feet and 70% in the next 125 feet will make these areas less suitable for Himalayan berry. Other adaptive management strategies can be used to avoid expanding invasive weed populations along roads and in recently disturbed areas such as harvest units. The DFMP includes continued support for biocontrol research, as this technique has utility for wide spread invasive weed species.

Response to Comment 28

The DEIR recognizes and addresses the need to carefully target herbicide applications to avoid impacts to desirable native plant species. In addition, the ADFFMP commits to survey and protection of sensitive species in relationship to management activity, including timber harvest planning. This protection would extend to the consideration, planning, and application of herbicides following completion of active timber operations, so that sensitive native species are protected. Given the limited and cautious use of herbicides proposed by JDSF, no significant negative effects to rare or listed plants are anticipated.

CAL FIRE's enforcement of the Forest Practice Act and the rules of the Board of Forestry and Fire Protection regarding THP review, approval and monitoring is a separate process from the development of the DEIR and subsequent development and implementation of THPs on Demonstration State Forest timberlands. However, both processes require compliance with CEQA and other applicable laws and regulations. In reviewing THPs prior to approval, CAL FIRE must consider the potential effects of the project as a whole. Where herbicide use is considered likely to facilitate implementation of a THP, regardless of whether the use is pre-harvest or post-harvest, the THP must address the likely application and the potential environmental effects of herbicide use, including the effects to listed plant species.

Response to Comment 29
Regarding cumulative effects, the Hazards section found no significant effect relating to herbicides (VII.8-21) and noted that effects of such use relating to THPs are generally not cumulative impacts because uses are separated in time and distance, thus effects rarely reinforce or interact with each other. The Cumulative effects section page VIII-61 includes cumulative effects within a regional context. Potential cumulative effects of herbicide use have been addressed in the DEIR and RDEIR.

Additionally, we note that Alternative G and the ADFFMP include additional restrictions on the use of herbicides as compared to the DFMP.

Also, see responses to Comments 3 and 4-6.

Response to Comments 30, 31
The DEIR has been modified to clarify the accepted protocol (see the FEIR Errata or the ADFFMP):

> **For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000). On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.**

The following text will be deleted:

> **Survey designs will be based on the concepts contained in the CG Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (CDFG, 2000). Surveys conducted as part of THP development will follow the practices commonly accepted by CAL FIRE and CDFG for THP review. Surveys for other types of projects will recognize the specific features of those projects. [For example, road surface maintenance and roadside brushing are ongoing activities that create repeated periodic disturbances, pre-commercial thinning typically occurs a few years following the more substantial disturbance of a commercial harvest, and shaded fuel break construction targets ground cover vegetation].**

This change clarifies that the protocol used is contained in the CDFG Guidelines. It is unclear what the commenter means by “possibly influenced by project timetables can provide sufficient data to inform project planning?”

The following is a response to a CDFG concern that surveys at JDSF could possibly be conducted after the THP review process resulting in DFG’s inability review, comment and consult on the potential to impact a sensitive species in this situation. CAL FIRE response was:

> For timber harvesting projects, CAL FIRE intends to conduct surveys and include resulting reports and material during the THP preparation process so that they can be reviewed by CDFG and other agencies. If for some reason surveys are delayed past the THP review period, CAL FIRE will provide the surveys to CDFG for review and comment. For non-THP projects for which surveys are conducted, CAL FIRE will comply with the consultation requirements per CEQA.

In addition to project-level surveys, the ADFFMP commits JDSF to conduct periodic floristic survey in some areas to gain a better understanding of the relationships between the local plants, their distribution, and their habitats.

Response to Comment 32
Pre-survey scoping is included to help make JDSF aware of most recent information on rare plants and habitat relationships. The CDFG Guidelines provide for surveys that are floristic in nature. This ensures there is "base line data" for plant occurrence in the areas affected by the proposed harvests or other actions. In the past CAL FIRE has conducted plant surveys in non-timber areas that are unique (example Bob Woods Meadow). These efforts can incrementally build the base line plant data for JDSF.

Response to Comment 33
Through the application of the CDFG Guidelines to project botanical surveys, the surveys will not be "low-intensity, non-floristic or off-season".

Response to Comment 34, 35
The DFMP states:

> Upon determination that a proposed action is likely to result in a significant adverse effect, mitigation measures proposed to substantially lessen or avoid the impact will be included in project-associated documentation.

This will occur at the project level during the THP or other CEQA process, and will include constitution with CDFG and opportunities for the CNPS and the public to evaluate the measures.

Both species-specific and site-specific mitigation measures should be based on state of the art knowledge of plant biology, the specific situation at a given occurrence, and the types of effects anticipated. Fixed measures may be found to be inadequate or even counter productive in specific situations. Project-specific mitigation measures for individual species can use the most recent information on rare plants to ensure mitigation and protection measures are effective.

Response to Comment 36
The protection of rare plants and their habitat, when found within THP areas, has been effective. This is due to the fact that the Department has conducted survey for sensitive plants, and when found, has protected the plants and their habitat through avoidance or maintenance of conditions favorable to the species. The level of survey and protection provided to rare plants and their habitats has increased substantially in recent years. The analysis and mitigation provided by the EIR and management planning process is expected to increase the protection level for sensitive plants and their habitats.

Response to Comment 37
The Department does not anticipate failure to protect sensitive plants and their habitats. However, through the use of survey, monitoring, and adaptive management, the risk of damage to sensitive plants will be reduced.

Response to Comment 38
Under Alternative C1 and C2 the DFMP provides for no timber harvest in the most significant "hot spot", the pygmy forest. These protections also are extended under Alternative G and the ADFFMP. Alternative G and the ADFFMP place one-third of the forest in designations for the development of late seral or older forest structure conditions. Additionally, the existing old growth groves (about 650 acres) would be protected from harvest.

These are protections that are being provided at the programmatic level. Specific research projects could result in similar or more stringent protections being applied to designated area as a part of the project. This is a typical research approach that includes both treated areas and untreated controls.

For example, research that would examine the relationship between stand age and plant associations or series and specific rare plants would certainly be of value for understanding rare plant distribution.

Research to improve understanding of rare plants associated with varying level of disturbance would be of value as well.

Response to Comment 39, 40
The DEIR, as modified, contains botanical inventory requirements, requires the CDFG survey protocols for THPs and other large projects, includes both general monitoring and the recognition that specific, targeted mitigation measures will be developed at a the project level. Regarding Impact 1 and 3 the logic behind the "less than significant" impacts is based on 17 paragraphs. The provision listed in the comment letter is only small part of the measures included and is not "a simple tally of plants"

The CDFG protocol does not require "scientists" per se, but does require the person conducting the survey, sometimes referred to as a Botanical Consultant, to have specific experience, knowledge and familiarities.

Monitoring is discussed in the DEIR, DFMP, and proposed ADFFMP. Monitoring rare plants for threats of invasive species is included as Additional Management Measure 1 in DEIR section 6.2.8 and carried forward to the ADFFMP. The proposed ADFFMP includes a Monitoring and Adaptive management section (Chapter 5). Plant resources are included. Additional monitoring can be developed for site-specific projects.

Response to Comment 41, 42
Under Impact 3, the statement about "subject to management activities" focuses on both on-site and on nearby locations where activities could impact rare plants or communities. The DFMP states "JDSF will maintain the current distribution and species composition of this plant community and protect it from harmful human disturbance, while continuing to allow recreational activities." Research or monitoring on pygmy forest may occur in the absence of "management" activities.

Response to Comments 43, 44
The DEIR notes some of the impacts and vulnerabilities described by the commenter under Impact 6, Functional Plant Groups, The Pygmy Forest and Closed Cone Forest/ Openings Functional Group. These impacts occur on other pygmy forest areas beyond JDSF as well. Incidental protection refers to the fact individual rare plants like Bolander's pine will be protected as a consequence of its occurrence in Pygmy forest.

JDSF does have ongoing protection activities for the pygmy forest area. These include:

- barricading or gating the access points from neighboring private lands or public roads;
- patrolling and enforcing the vehicle trespass laws;
- garbage removal;
- educating the adjacent landowners as to state forest ownership;
- and educating the public-at-large about the value, sensitivity and need to protect the pygmy forest.

Response to Comments 45, 46
The EIR is limited to considering the environmental impacts that have a potential to occur, directly or indirectly, as a result of implementing the project (the Plan). As such, a project which does not propose activities that could impact a particular resource (in this case the Pygmy) is going to be found to not have an impact and therefore no mitigation is required. Projects and their associated EIRs are under no obligation to mitigate existing impacts where the project does not contribute to that impact directly or cumulatively.

This section of the DEIR explains how the road management activities would benefit the pygmy forest and reduce impacts of erosion and altered hydrology. Exact actions will be dependent on the site-specific analysis and the road management plan. The CEQA framework here is tiering, not piecemealing. Project-level activities are tiered to the programmatic EIR.

Response to Comment 47
As indicated in the FEIR Errata section, this language has been modified to reflect the fact about the Coastal Zone.

Response to Comment 48
CAL FIRE recognizes that pygmy forest is impacted by illegal OHV use both on JDSF and beyond. CAL FIRE actively works to restrict illegal actions and protect the pygmy forest resources. The road management plan will help with some of this problem. The DEIR documents the problems with enforcement and protection. Transfer of the ownership of pygmy forest lands to another organization is beyond the scope of the DEIR.

Response to Comment 49
The California Code of Regulations has specific land protection rules already in place. Violation of State Forest regulations is a misdemeanor. JDSF law enforcement officers work with local District Attorney to prosecute offenders, and they maintain a comprehensive history of law enforcement actions taken against individuals. However, any money recovered is not returned to the unit of origin, but rather to the State of California General Fund. It would be a conflict of interest if an agency cited in order to provide a revenue source. The State Forest could advertise violations as a potential deterrent, and this will be considered.

Response to Comments 50, 51
Please see response to Comments 22-25.

Response to Comment 52
Please see response to Comments 30-31.

Response to Comment 53
This is an operational not an environmental question. CAL FIRE's commitment regarding DFG protocol surveys will entail extensive training for existing staff and or increased reliance on botanical consultants in the short term. JDSF management has expressed hope that future staff additions would include expertise in botany and wildlife biology. A wildlife biologist was recently added to the Forest's staff.

Response to Comment 54
The relationship between historic expenses and revenues is not an environmental issue. CAL FIRE has committed to operate in compliance with the provisions in the DFMP/ADFFMP. Allocation of revenues is not a function of the Management Plan, it is a function of Legislative authority and direction though the state budget process.

Legislative action taken in 2006 limited the uses of State Forest revenues, which are deposited into the Forest Resources Improvement Fund (FRIF). Revenues in FRIF may be allocated only for supporting the State Forests. Excess revenues beyond the needs of the State Forests will be transferred to the General Fund. As the State's largest Demonstration State Forest, JDSF harvesting revenues are critical to funding management at JDSF.

Response to Comment 55
JDSF has a long history of supporting high quality research that leads to publications in peer-reviewed journals. The long-standing research on the Caspar Creek watershed is recognized world-wide and well documented (including datasets) on the website of the USDA Forest Service Pacific Southwest Experiment Station: http://www.fs.fed.us/psw/topics/water/caspar/.

CAL FIRE has developed its own website compilation of JDSF publications and data sets. This resource will soon be integrated into the Department's main website.

The recently published Proceedings of the 2004 Redwood Region Forest Science Symposium provides an excellent example of the high volume and wide range of research that is conducted on JDSF (see http://www.treesearch.fs.fed.us/pubs/27742).

In developing Alternative G and the ADFFMP, the Board provided clear direction that its goal for the management of JDSF is to provide a world class forest research and demonstration program. The Department shares this commitment. The ADFFMP's number 1 goal for JDSF is:

> Goal #1 - RESEARCH & DEMONSTRATION: Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.

See also the response to Comments 56-63.

Response to Comment 56-63
Appendix IV of the DFMP or Appendix III of the ADFFMP describes proposed research and demonstration priorities for JDSF. Many of the CNPS research suggestions would have value and would fall under the identified priorities.

Response to Comment 57
JDSF staff has begun working with local academic and agency botanists to develop research projects in the harvested areas with *Astragalus agnicidus. Sidalcea malachroides* has yet to be found at JDSF, but information on that species would be of value as well.

Response to Comment 58
This topic would be of interest and is congruent with one of the ADFFMP's objectives under Goal #1:

> Increase the use of JDSF for research that tests and demonstrates the short-term and long-term costs and effectiveness of various forest resource protection measures.

Response to Comment 59
JDSF is cooperating with U.C. Berkeley researches looking at ecological effects of *Phytopthora ramorum*. Research on this pathogen has been ongoing for several years at Soquel Demonstration State Forest, where the pathogen is present. The research at JDSF will not introduce the pathogen, but will examine measures to increase forest resistance to the pathogen with other areas with active infections.

The assumption that tan-oak or other species will become endangered or listed as a result of this disease is speculative at this point. Rizzo and Garbeletto (2003) note that mortality in 2000-01 reached 22% for tan-oak . "The distribution of the pathogen across the landscape has not been well quantified but is clearly patchy. Even within the areas with the greatest amount of tree mortality, there are large areas with susceptible host plants that are apparently free of disease." No doubt if this pathogen becomes more established, many ecological changes will take place, however extirpation of tanoak does not appear likely based on current observations.

Response to Comment 60
Research on mechanical and "alternative" treatments to invasive weeds have been conducted on JDSF in the past. JDSF will continue to use knowledge gleaned from these and other sources as well as an adaptive management approach to IWM. JDSF remains interested in any "alternative" control research proposals for control methods at JDSF.

Response to Comment 63
Pease see response 22-25 for burning in the Pygmy.

Response to Comment 64
The specific list of research projects would be dynamic and dependent on Advisory Committees recommendations, interest of potential researchers, fund types available, and current issues.

Response to Comment 65, 66
Although the regeneration and growth of conifers is relatively well understood in even-age silviculture, other species or ecosystem components are not. Some questions would require a landscape or sub-watershed level approach such as mobile wildlife species or plants with a distribution limited to specific forest conditions. See also General Response 10.

Response to Comments 67, 68
In compliance with CEQA the DEIR and RDEIR focus their analysis on activities that have a potential to impact the environment. The target audience of the demonstration that occurs on the forest is not a factor likely to result in differences in the impacts that may occur. Also, the relevance of the demonstration that occurs at the forest for industrial or small landowners is unlikely to result in differing environmental impacts. As such the EIR does not address such questions.

Please see the following sections of the ADFFMP for information on JDSF management direction and priorities on these issues:

- Executive Summary
- Chapter I Introduction
- Chapter 4 Research and Demonstration
- Appendix III Research and Demonstration Program.

Response to Comment 69
The Board agrees with this recommendation.

Response to Comment 70
The cited previous EIR and management plan were prepared in good faith, involving a significant level of professional effort. Both of these documents were subjected to public and agency review, and the management plan was ultimately approved by the Board of Forestry. The adequacy of the EIR was eventually challenged, and the Superior Court found that some elements of the analysis were flawed.

In response to this earlier outcome, the Board made significant a effort to develop a new EIR and the proposed ADFFMP.

References

Rizzo, D. and & M. Garbelotto, 2003. Sudden oak death; endangering California and Oregon forest ecosystems. Front Ecol Environ 1(5) 197-204

P-200

RECEIVED Feb. 18, 2006

FEB 27 2006

BOARD OF FORESTRY

Dear Mr. Jameson,

Please convey to the Board of Forestry
1 our strong disapproval of any clearcutting in
the Jackson State Demonstration Forest.

Having hiked extensively in the Jackson
State Forest last May, we were captivated by
its lush grandeur. Many others were in
2 the forest at the time, judging from the number
of cars in the entrance parking lot. Obviously,
it is a major recreational destination.
Clearcutting would be incompatible with
this recreational use.

We urge the Board of Forestry to practice
good stewardship of the forest, eliminating
the possibility of clear cutting.

Thank you,
Bonnie Biddison
Johnny Guigneau

Mailed Letter P-200

Response to Comment 1
Opposition to clearcutting noted. Please see General Response 10. The Board will finalize a plan that includes reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, and an increase in the area dedicated to development of late-seral forest conditions.

Response to Comment 2
See General Response 14. At the time of purchase most of the land that is now JDSF was in a cut-over condition, with relatively low stocking. The “lush grandeur” is the result of 50 years management aimed primarily at demonstrating economic and sustainable timber practices. That management has included the use of clearcutting as a silvicultural tool. As stated in the General Response 10 referenced above, there are important reasons for retaining clearcutting and even-aged management as part of the management plan. The comment that JDSF is obviously a major recreation destination supports the Board’s contention that timber management and recreation are compatible uses of JDSF.

P210

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

February 24, 2006

Dear Board of Forestry & Fire Protection Members,

Re: Jackson State Demonstration Forest Management Plan Draft Environmental Impact Report (SCH #200422025):

As a neighbor of JSDF for over 30 years, I am aware of the need to balance forest productivity with sustainability. Besides board feet of timber and wood-based forest products, the public value of a wisely managed forest can be counted in its support of the essential cycles of water, carbon, and oxygen exchange. Shade, which protects understory flora and fauna of the understory and the waterways, is also a forest resource, as is the nutrient-exchanging mycorrhizal mass underground. JDSF in its wholeness also stands as a spiritual, recreational, and visitor-serving resource.

I urge you to prioritize these values, and to manage JSDF to preserve them. Please be guided by Alternative F, per State Senator Wesley Chesbro's 2005 legislation, which prohibits clearcutting and pesticide application, and supports sustainable harvesting, sparing of large, old seed trees, stream protection, and recreational use.

Sincerely,

Liz Helenchild

Liz Helenchild
Box 1276
Mendocino CA 95460
latenightliz@hotmail.com

Mailed Letter P-210

Response to Comment 1
The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. Implementation of the plan is not expected to negatively affect the water, carbon and oxygen exchange cycles.

Response to Comment 2
Over two thirds of the forest will be managed with either uneven-aged, no harvest, or late seral development prescriptions. Although small openings in the canopy will occur, this type of management will retain much of the overstory, thereby providing shade for the understory flora and fauna. The remaining even-aged management areas will also provide substantial canopy cover except early in stand regeneration. The DEIR Figure VII.6.2.2 shows canopy cover increasing in the JDSF Analysis Area. For information regarding canopy cover relating to watercourses please see General Response 11.

Response to Comment 3
The Board recognizes the importance of mycorrhizal organisms for a healthy forest system. The DEIR and REIR include analysis of the plants which mycorrhizal organisms are linked, finding no significant impacts of the alternatives incorporated in the plan. The DEIR VII.6.2-1 notes that because fungi have similar mobility and dispersal attributes much of the analysis will be pertinent to it. Also please see the Response to Department of Fish and Game Comments for a discussion of plants dependent on mycorrhizal fungi. While mycorrhizae were not subjects to specific analysis in the DEIR or REIR, implementation of the ADFFMP is not expected to negatively impact mycorrhizae.

Response to Comment 4
The Board recognizes that JDSF is utilized as a visitor resource for recreation and spiritual reasons. While managing for these resources will not be adopted as the primary goal for JDSF, the ADFFMP, with its increased levels of resource protection, is not expected to negatively impact these compatible uses of the Forest.

Response to Comment 5
Please see General Response 2. Support of Alternative F noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 6
See General Response 10.

Response to Comment 7
See General Response 7.

Response to Comment 8
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP calls for harvesting approximately 20 to 25 million board feet annually which is well below current growth. By setting harvest levels well below growth, the result will be an increasing inventory of larger, older trees on the Forest.

Response to Comment 9
See General Response 8 and 9.

Response to Comment 10
See General Response 11.

Response to Comment 11
See General Response 14.

P 211

Save-the-Redwoods League

114 Sansome Street, Room 1200, San Francisco, California 94104-3823
Telephone (415) 362-2352 • Facsimile (415) 362-7017
Email: redwoods@savetheredwoods.org • www.savetheredwoods.org

February 28, 2006

OFFICERS
Edwin E Claassen, *President*
Richard C. Otter
Chairman of the Board
Pete Dangermond, *Vice President*
Frank W. Wentworth, *Treasurer*
Katherine Anderton
Secretary & Executive Director
Meg Reilly, *General Counsel*

COUNCIL
Howard Wheatley Allen
Mrs. Guilford C. Babcock
George Brenser, Jr.
Stephen J. Butler
• Edwin E Claassen
Robert E. Connick
• Sarah Connick
William A. Croft
• Pete Dangermond
Todd Dawson
Sandra J. Denny
Dale Didion
• Sandra Donnell-Faggioli
Joseph H. Engbeck, Jr.
Peter Farquhar
Peter B. Frazier
Terry Garcia
Eric R. Gerstung
Richard N. Goldman
Cynthia M. Grubb
Robert Hambrecht
Jack E Harper
Jane Turner Hart
Michael Helms
Annette Boushey Holland
Charles A. Holloway
Barry C. Howard
Paul Hull
Sharon Kramer
• James L. Larson
• William J. Libby
Samuel M. Livermore
Claude A. Look
John D. Luckhardt
Peter Mattson
Stephen Mather McPherson
Robert E. Mellor
Wendy Millet
Tom Morrish
George Neavoll
Donal C. O'Brien, Jr.
• Richard C. Otter
George S. Peyton, Jr.
George P. Putnam
Kimberly Rodrigues
Paul Romero
Roger Samuelsen
Robert Sproul
James M. Stuart
John D. Taylor
Melinda M. Thomas
Donn Walklet
Ellen C. Weaver
• Frank W. Wentworth
Bruce Westphal
J. Roy Wittwer
• Mary Wright
• *Directors*

OBJECTIVES
1. *To rescue* from destruction representative areas of our primeval forests.
2. *To cooperate* with the California State Park Commission, the National Park Service, and other agencies, in establishing Redwood parks and other parks and reservations.
3. *To Purchase* Redwood groves by private subscription.
4. *To foster* and encourage a better and more general understanding of the value of the primeval Redwood or Sequoia and other forests of America as natural objects of extraordinary interest to present and future generations.
5. *To support* reforestation and conservation of our forest areas.

Mr. George Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460
Email: board.public.comments@fire.ca.gov

Dear Mr. Gentry:

Thank you for the opportunity to comment on the administrative draft Environmental Impact Report for the Jackson Demonstration State Forest ("ADEIR"). We appreciate the Board extending the comment period for what is a complex and lengthy document and set of analyses. Our comments build upon our scoping letter of March 18, 2004.

1. Regional Importance of Jackson Demonstration State Forest

While the plan and ADEIR describes in depth the regional setting for JDSF, we believe it understates its actual and potential future contribution to the redwood forests in the central region of the redwood (broadly Mendocino and Sonoma counties) particularly with respect to old-growth forest. In section V (page 11) the ADEIR compares the 459 acres of old-growth redwood forest at JDSF to the 39,000-acres in Redwood National and State Parks – more than 125 miles to the north in the northern redwood region. A central League objective is to protect "representative areas of our primeval forest," by protecting representative stands of redwood throughout its natural range: JDSF plays a critical role in the central region of the redwoods, just as RNSP does in the northern region.

1

In reviewing the ADEIR we encourage the Board to compare JDSF to other redwood parks in the central redwood region. By way of comparison, the League estimates there is less than 4,000 acres of protected old-growth redwood forest in Mendocino and Sonoma County – most in small groves of less than 100 acres in size, and all of these in groves of less than 500 acres in size. The importance of old-growth protection and restoration strategies at JDSF cannot be over-estimated.

2

[continued]

This is recycled paper

2. Protection of old-growth stands and individual legacy old-growth trees

We appreciate the Board setting clear guidelines for protecting remaining old-growth stands, and would appreciate additional clarity on identification and protection of individual legacy old-growth trees. **In making decisions on individual legacy trees, we urge the Board to adopt clear guidelines that afford primacy to their protection during all harvesting activities.** For instance, an old-growth tree should not be felled because it happens to be in the way of a transitory cable yarding corridor.

3

3. Protection of second-growth stands that buffer, connect, or have the potential to become future old forest stands

The proposed project (Alternative C1) designates 20% of the forest to late seral development. Of this, only 7% [2,224 acres in the Mendocino Woodlands STA, and 1,239 acres buffering three old-growth stands] falls outside watercourse and lake protection zones ("WLPZ") and will over time be allowed to develop into large contiguous blocks of old forest habitat. According to the silviculture allocation map [Figure Z], several of these contiguous stands will be further affected by even-aged management in the short to medium term. These actions will act to further reduce the effective size of the late seral development areas.

4

By way of comparison, we understand that the Garcia River Forest project (Mendocino County) and the Arcata Community Forest (Humboldt County) have targeted 35% of their land base as ecological reserves – areas of high ecological value that support large-scale ecological processes and where management will only be used in pursuit of ecological objectives.

5

We urge the Board to give careful consideration to alternatives that protect all existing old-growth stands while seeking to restore contiguous blocks of old forest as part of a network of ecological reserves designed to capture the biological diversity at JDSF. When considered in relationship to adjacent State Park units, there is a valuable opportunity to restore a contiguous block of old growth and old forest habitat at the heart of the central region of the redwoods. Given time, this could anchor the central region of the redwoods, much as the 39,000 acres of old-growth redwoods does in the area around Redwood National and State Parks. By building from a well-designed network of ecological reserves, the Board will ensure that timber management and public use at JDSF will be truly sustainable for the long-term.

6

In conclusion, we encourage the Board to select an alternative that protects all remaining old-growth groves, buffers and connects these groves as part of a network of protected reserves, and uses forest restoration to promote development of old-forest

7

characteristics. It appears that elements of Alternatives E (late seral emphasis) and Alternative F (SB 1648 and Sierra Club) do this most effectively.

8 By selecting such an alternative, the Board will ensure Jackson Demonstration State Forest plays a leadership role in redwood forest science by contributing to our understanding of both forest restoration, and timber production that works in harmony with the natural processes that sustain the forest. The League stands ready to answer any questions the Board may have as it considers the future management of JDSF.

Sincerely,

Katherine Anderton
Executive Director

KA/rkh
S:\Papers\STEWARDSHIP\JDSF\DEIR Oct 2005\SRL comments ADEIR feb 06 DRAFT.doc

Mailed Letter P-211

Response to Comment 1
The intent of the DEIR in comparing the amount of old growth redwood forest on Jackson Demonstration State Forest (JDSF) to Redwood National Park was not to discount the importance of JDSF's old growth, but to indicate its significance as a relatively small remnant. The importance of the remaining old growth on JDSF is recognized and addressed through the proposed Administrative Draft Final Forest Management Plan's (ADFFMP's) high level of protection provided to the remaining old growth groves, old growth aggregations, and individual trees with significant old growth characteristics (ADFFMP Chapter 3). The ADFFMP also provides for 694 acres of late seral buffers to be developed adjacent to several of the old growth groves. Further, most of the groves will be connected through the establishment of a 6,803-acre Older Forest Structure Zone (OFSZ) composed of old growth groves, late seral forest development areas, and older forest structure areas.

Response to Comment 2
The Recreation section (VII.14) of the DEIR provides detailed information on the redwood parks found throughout the species' range in California, from Del Norte County to Monterey County (see, e.g., Tables VII.14.1 and VII.14.2). As noted in the response to Comment 1, the proposed ADFFMP provides substantial protection to the remaining old growth on the Forest. Note that the ADFFMP establishes Forest Restoration as its number 2 goal (see ADFFMP Chapter 1), including the objective of increasing "the amount of older forest structure and late seral forest . . . ."

Response to Comment 3
The ADFFMP provides clear guidelines for protecting remaining old growth stands, aggregations, and individual trees (see ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure):

> Existing old growth groves will be retained, as will aggregations of old growth trees. Individual old growth trees found outside of stands or aggregations and exhibiting specified characteristics will be retained, with limited exceptions, such as where the tree presents a public safety issue or retention would result in the potential for greater long-term environmental damage . . . including but not limited to issues related to road and landing sites, soil instability, damage to aquatic resources, or cable yarding requirements.

Response to Comment 4
The ADFFMP differs substantially from Alternative C1 with respect to the amount of area designated for older forest. The ADFFMP provides for one-third of the Forest, or about 16,200 acres, to be managed for old growth, late seral development, and older forest structure. The majority of this area is outside of designated riparian late seral recruitment areas.

ADFFMP Map Figure 5 shows the layout of old growth groves, late seral development areas, older forest structure areas, areas designated for unevenaged management, and areas designated for either even or uneven aged management. The old growth groves, late seral development areas, and older forest structure areas are mostly surrounded by areas that will not receive evenaged management. Where adjacent areas are scheduled to receive evenaged management, the ADFFMP (Chapter 3) provides that a 200-foot un-evenaged buffer will be provided to protect the integrity of the three types of older forest areas.

Response to Comment 5
The Integrated Resource Management Plan for the Garcia River Forest (Conservation Foundation Fund 2006 at p. 41) confirms that 35 percent of the property will be managed as an "ecological reserve network." The JDSF ADFFMP calls for one third of the Forest to be managed for old growth, late seral development, and older forest structure. In the past year, the Conservation Fund acquired 11,600 acres in the Big River watershed adjacent to JDSF, to be managed similarly to their Garcia

River tract. Since JDSF has been harvested much less intensively than the Conservation Fund's Big River tract, JDSF lands are significantly further along the trajectory to the development of older forest characteristics.

We note also that the California Department of Parks and Recreation acquired 7,334 acres in the Big River a few years ago. Today, JDSF, the Conservation Fund's Big River tract, and the State Parklands adjacent to JDSF total approximately 70,000 contiguous acres, all being managed for conservation or restoration purposes. This large contiguous area provides a significant opportunity for the three major landowners to come together and discuss how their joint management can help to pursue conservation and restoration goals at a large landscape level. CAL FIRE is committed to holding such discussions.

Response to Comment 6
The Older Forest Structure Zone provided for in the ADFFMP, combined with the large, 3,700-acres of late seral development areas in the southwestern corner of JDSF and the 5,600 acres of late seral development areas in water course protection zones outside of these large areas will provide the large blocks and networks that the League is recommending here. As noted in the response to Comment 5, CAL FIRE is committed to discussing, with the Department of Parks and Recreation and the Conservation Fund, how our adjacent ownerships can be managed to pursue conservation and restoration goals at a large landscape level.

Response to Comment 7
The ADFFMP direction chosen by the Board protects all remaining old growth groves, buffers and connects most of these groves as a part of the Older Forest Structure Zone, and uses forest restoration processes to promote the development of old forest characteristics.

Response to Comment 8
The Board direction provided in the ADFFMP emphasizes the research and demonstration role of JDSF. The ADFFMP establishes its top four goals as:

1. Research & Demonstration
2. Forest Restoration
3. Watershed and Ecological Processes
4. Timber Management

P-212

SENT VIA EMAIL

March 1, 2006

Mr. George Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 94426,
Sacramento, CA 94344

Dear Mr. Gentry:

As Registered Professional Foresters practicing regularly in Mendocino County, we have a keen interest in the management of Jackson Demonstration State Forest.

1

We are writing in support of Alternative "D" in the Jackson State Demonstration Forest Management Plan Draft Environmental Report. Our support of this alternative is based on the following:

2

- Alternative D represents not only the recommendations of the JDSF Advisory Committee, which included a number of highly-qualified foresters; its emphasis on uneven-aged management is supported by the residents of Mendocino County. This support is evidenced by resolutions passed by the Mendocino County Board of Supervisors and the Ft. Bragg City Council in support of Alternative D.

3

- A substantial volume of timber (25 million board feet) can be harvested on an annual basis under this alternative, and we believe it represents the best prospect for avoiding law suits that will delay timber production at JDSF and result in continued serious economic impacts to Mendocino County and the State.

4

- The establishment of an Advisory Committee should substantially help the widely-held public perception that JDSF is managed without seriously considering the concerns of residents of Mendocino County. Both the Arcata City Forest and the Soquel State Forest have advisory committees, and JDSF needs one as well. We should note, however, that although the recommendations of the committee should be carefully considered, it should clearly be advisory and not have the authority to approve or disapprove forest management practices.

5

- Although clearcutting is prohibited under Alternative D, it is our recommendation that this silvicultural prescription be allowed to continue solely in the Caspar Creek Watershed and solely for the purpose of continuing the valuable scientific research that has been ongoing in this area.

6

- Alternative D calls for the 2,500-acre Special Treatment Area surrounding the Woodlands to be transferred to State Parks. We recommend against this action. This area can be managed for late seral structure, provide for wildlife, watershed, and aesthetic values and also demonstrate how these values can be balanced with timber production.

7

Lastly, the use of herbicides for vegetative management and site preparation is prohibited in Alternative D – something that is strongly supported by many citizens of the County and some of us writing this letter. However, on this particular issue, we must state that there is no consensus amongst ourselves. Some of us see herbicide use as a valuable tool for rehabilitating former conifer stands that are dominated by hardwoods. Some of us oppose the use of herbicides for this purpose and see their value primarily in removing invasive species.

Thank you for the opportunity to comment.

Sincerely,

Craig Blencowe, RPF #2003

Linwood Gil, RPF #2491

Tom Kisliuk, RPF #2676

Roger Sternberg, RPF #2620

Thembi Borras, RPF #2700

Nichols Kent, RPF #2418

Darcie Mahoney, RPF #2397

Mailed Letter P-212

Response to Comment 1
Support for Alternative D noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 2
While the Board has carefully considered Alternative D and the wishes of the Mendocino County Supervisors and the Fort Bragg City Council, the management of JDSF is not based solely on their support. The DEIR analysis determined that some elements of Alternative D may be inconsistent with the current Public Resources Code, regulations, and Board policy that guide the management of JDSF (see Table VI.1). It strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. Over two thirds of the forest will be allocated to uneven-aged management. Because even aged silviculture remains common in the redwood region, limited JDSF areas will be available for research and demonstration of this technique.

Response to Comment 3
The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. The Board recognizes the negative economic impacts that the “shut down of operations” has had on the State and Mendocino County. The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to certify the DEIR and approve a management plan.

Response to Comment 4
Please see General Response 18 regarding an advisory body.

Response to Comment 5
See General Response 10.

Response to Comment 6
Transferring the special treatment area surrounding the Woodlands to State Parks is beyond the scope of the plan. The existing legislation precludes the conversion of the any of the state forests into parks. The Plan designates the Woodlands Special Treatment Area and limits management to promoting late – successional forest conditions, maintaining aesthetic qualities and limiting impacts to the operations of Mendocino Woodlands.

Response to Comment 7
See General Response 7.

P-213

Peter F. Ribar
P.O. Box 322
Fort Bragg, CA 95437

February 29, 2006

George D. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94233-2460

Re: Draft Environmental Impact Report for the Jackson Demonstration State Forest Proposed Management Plan.

While I support Alternative B, which appears to most clearly achieve the legislative intent and Board Policy, I could support Alternative CI with the following change:

1 Eliminate the restrictions applied to the use of the clearcutting method within the even-aged allocation. As a long-practicing registered professional forester, I have always felt it is imperative to have the use of all silvicultural methods at my professional discretion. The clearcutting silvicultural method is currently being applied on a majority of industrial forest lands in the Redwood Region as a highly successful regeneration method. To artificially limit a Board of Forestry approved silvicultural system to purely "research purposes" or only to stands that are "very difficult to regenerate by other even-aged silvicultural systems" is unnecessarily restrictive. Past use of the clearcutting silvicultural method on Jackson Demonstration State Forest, in conjunction with prompt reforestation and appropriate use of other silvicultural treatments, has resulted in some of the best stocked conifer plantations in the region. The current even-aged stand structure and high stocking levels of the entire west end of the forest was essentially created by historic clearcutting. Implementation of clearcutting as a silvicultural method on JDSF in the past several decades has worked to produce equally well-stocked stands. Continuation of these successful practices seems intuitive. Contrast this outcome with the development and species composition of regeneration obtained by harvesting using individual tree selection (except stands with 75%+ redwood stocking) where the longer term growth appears problematic. It seems reasonable that 15% of the forest (approximately one-half of the even age allocation) should be used to maximize timber productivity through the application of clearcutting. Many other resource considerations are already being accommodated by 64% of the forest land base proposed for allocation to uneven-aged structure conditions (including late seral and late seral development). Current clearcut practices also generally incorporate some level of green-tree structural retention of value to wildlife within or adjacent to clearcut harvests. Also note that approximately one-half of the even-age acreage is allocated to medium to long rotations (90-150 years).

2 Therefore, commensurate with the above recommendation I suggest that the acreage allocated to other even-aged methods (primarily Shelterwood) and the Variable Retention Special Prescription should be not exceed 14% of the even-aged allocation. This would continue to allow an adequate area to demonstrate and/or flexibility to apply these methods based on site-specific conditions.

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the Jackson Demonstration State Forest Proposed Management Plan.

Sincerely,

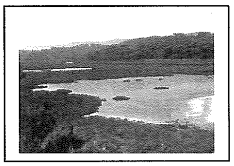
Peter F. Ribar

Peter F. Ribar
RPF #1766

Mailed Letter P-213

Response to Comment 1
Support for Alternative B is noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including B. The plan will emphasize the research and demonstration mission of the state forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products

Response to Comment 2
The allocation of various management strategies is based primarily on long term goals for desired stand structures on the forest (see General Response 2). Due in part to strong public opposition to the use of clearcutting as a management tool on this publicly owned forest, the allocation of this silvicultural method has been restricted to that needed to retain a viable research and demonstration program, as well as for those areas with specific regeneration concerns (see General Response 10).



Peter R. Baye, Ph.D.
Botanist, Coastal Plant Ecologist
33660 Annapolis Road
Annapolis, California 95412

(415) 310-5109

baye@earthlink.net

The California Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

February 28, 2006

SUBJECT: Comments on the Environmental Impact Report for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan, December 2005.

To the Board of Forestry:

Please accept the following comments on the 2005 Draft Environmental Impact Report (DEIR) on the Jackson Demonstration Forest Draft Management Plan. I reviewed the administrative draft EIR supplied by Vince Taylor of the Dharma Cloud Foundation, and supplemented the ADEIR review with modifications from the DEIR. These comments were prepared on behalf of the Dharma Cloud Foundation, but the content of my comments reflect my independent professional opinion as an environmental professional.

My qualifications to comment are based on my scientific, regulatory, and environmental background. I am a professional plant ecologist and botanist (Ph.D., University of Western Ontario, Canada), specializing in the study and conservation of terrestrial and wetland coastal plant species, communities, and their ecosystems, for over 27 years. My professional experience includes preparation, review, and management of joint NEPA/CEQA documents (EIR/S) for U.S. Army Corps of Engineers (San Francisco District, regulatory staff, 7 years), California Coastal Conservancy, and California Department of Water Resources; and preparation of Endangered Species Act recovery plans and Section 7 consultations and for the U.S. Fish and Wildlife Service (Sacramento Office, staff biologist, 5 years).

The primary focus of these comments concerns the EIR's treatment of (1) impact assessments for species, other biological resources, and ecological processes; (2) alternatives comparisons in terms of ecological merits and risks; and (3) adequacy of mitigation and monitoring actions linked to impacts. The standards of review applied here are for (1) CEQA compliance and (2) scientific soundness of data, methods, use and interpretation of cited or relevant scientific and technical literature, analyses and arguments, and conclusions. This scope of my review concerns the information presented in the EIR as well as potential omissions, inconsistencies, or fallacies. The scope of review is limited to the EIR as a stand-alone CEQA document (Ch. II, p. 10), and does not include the JDSF Management Plan itself. It does, however, consider the scope of the EIR in terms of public comments and response to comments of the 2002 EIR, which are properly considered part of scoping because the proposed action (JDSF Management Plan) itself has not been substantially modified. Page references are keyed to the Administrative Draft EIR.

GENERAL COMMENTS

Length, organization, and clarity of ecological information and impact assessments

1 Plain and technical language. EIRs must be organized and written in such a manner that they will be meaningful and useful to decisionmakers and to the public (Pub. Res. Code § 21003 subd. (b)), and they should "emphasize feasible mitigation measures, follow a clear format, be written in "plain language" (CEQA Guidelines §§ 15006, 15120, 15140), and be "analytic rather than encyclopedic (§§15006, 15141). This EIR fails all these criteria. In my professional experience with NEPA and CEQA documents, I have never encountered any that compares with this one in terms of the sheer volume of text laden with jargon, highly technical language, with highly inconsistent relevance to impacts, all placed in the body of the EIR. The EIR itself is written like a technical appendix, interspersed with short segments of a Negative Declaration. Much of the EIR text appears to employ the unmitigated technical language of the scientific literature and resource agency professionals, including profuse use of acronyms, scientific terms generally unknown to the general public (and often unavailable in most dictionaries).

2 Compilation of excessive background information. The EIR contains an extraordinary amount of encyclopedic background information in the body of the text, approaching 100 pages in sections on Aquatic Resources. The excessive amount of background technical information presented in the body of the EIR is entirely disproportionate with its application to the actual assessment of impacts. A very small proportion of background information is discussed in the assessment of impacts, and relatively little is indeed specifically relevant to Jackson State Forest. An outstanding example is the treatment of Aquatic Resources (Section 6.1). The discussion of

3 background information exceeds 90 pages in length, and is composed of an indiscriminate assemblage of general studies with unstated relevance to the discussion of logging impacts in Jackson State Forest. The actual 12 page discussion of aquatic resource impacts (6.1.7) does not

4 specifically refer to the massive compilation of background material. The problem of relevance of the background information is exacerbated by the erratic shifts in the geographic scope of background information, ambiguously varying from "the region", "study area" and "project area", depending on the scope of the various studies cited, and digression of the discussion.

5 The selection of technical background information in the EIR is largely indiscriminate. Long and highly technical sections lack even plain language summaries, and they generally lack an explanation of their relevance to the EIR's impact and alternatives issues. The EIR fails in its obligation to place appropriately selected technical background information in appendices. It is among the most extreme examples of this defect in EIRs that I have encountered in my professional career.

As an environmental professional with over 15 years of NEPA /CEQA and environmental regulatory experience, I found it exceptionally difficult to read and take notes on this document because of the excessive compilation (and poor editing) of technical appendix-quality background material in the body of the EIR, and the lack of relevance to the actual impact analysis. I must conclude that the general public reader of the EIR would be completely overwhelmed by this. The

6 voluminous, jargon-laden technical background information, therefore, obfuscates the subject and precludes the general public's understanding of the context of impact assessment.

Impact assessment

The encyclopedic approach to background scientific information abruptly ends in the very brief discussions of impacts. The actual assessments of impacts are reduced to short (one to two paragraphs) and highly generalized discussions, or mere assertions of conclusions without specific reference to information specific to Jackson State Forest. The discussions of impacts generally employ a formula:

7

> minimize or omit reference to proposed JDSF actions, past monitoring data, or surveys, assessments, or research specifically relevant to the impact and locations in question; instead emphasize proposed generalized impact prevention and avoidance measures of the JDSF Management Plan, and Forest Practice Rules; and
> assert (unsupported by evidence) expectations of their success in reducing impacts to less-than-significant levels.

Again, the 13 page Aquatic Resources impacts/mitigation (6.1.7) section illustrates this formula that recurs generally in other sections. The conclusions about impacts are largely creed-like assertions rather than assessments or reasoned arguments based on evidence from JDSF data (past THP surveys, monitoring, project area-specific research) or the voluminous background information sections. This defect of vague and generalized impact assessment is particularly significant because it was one of the principal criticisms of the California Department of Fish and Game in its comment letter on the 2002 EIR. The defect was not corrected.

8

The conclusions about impacts generally lack any prior general discussion about the *efficacy* (track record, monitoring data, or other empirical evidence) *of management actions or mitigation measures* proposed. The overall result is a marked asymmetry between excessively technical background information, and largely arbitrary, tendentious, and subjective assessments of impacts. It appears as though a cursory Initial Study/Negative Declaration (narrative expansion of checklist impact assessment) were simply cut and pasted within a larger technical appendix of background information.

Mitigation

9

The EIR is extraordinarily deficient in its CEQA-required "emphasis of mitigation measures". It lacks a comprehensive mitigation and monitoring plan, or even a summary of all proposed mitigation measures associated with potentially significant impacts, and the monitoring actions associated with them. Mitigation measures of varying degrees of generality are scattered throughout the document. Section 6.6.7, Mitigation and Monitoring, consists of 3 sentences and a single mitigation measure, following all discussion of biological resources. That places undue reliance on "functionally equivalent" JDSF Management Plan measures and Forest Practice Rules as mitigation, and precludes public review of their adequacy. This certainly does not comply with

10

the EIR's intention to function as a "stand alone" document (II, p. 10). It is a "trust us" approach to mitigation that fails to comply with CEQA's analytical requirements. Given that there is substantial legal, expert scientific and public controversy regarding the adequacy of Forest Practice Rules in mitigating impacts to aquatic resources (see Aquatic Resources, Specific Comments), and that these very same protections have failed to protect sensitive species from decline in the Forest (see discussion below on NOAA determination of "take" impacts to listed salmonid species), this results in a fatally flawed CEQA document.

Monitoring and resource management criteria for comparison of alternatives

The introduction (II) repeats many official Board of Forestry policies, goals, and objectives that are relevant to the comparison of alternatives in relation to adaptive management and monitoring of biological resources in a regulatory context. The EIR cites fundamental Board policies stating that the primary purpose of JDSF is "to conduct innovative demonstrations, experiments, and education in forest management", to "improve the amount and quality of information concerning economic forest management...", to "conduct monitoring of resource management activities to gauge their effectiveness in meeting project objectives", and "investigate methods to mitigate conflicts...in multiple use of forestland", while consulting and cooperating with "universities and colleges, the U.S. Forest Service, and other...researchers..." (II 3-4). The policies also include very specific, substantive resource and monitoring objectives pertaining to ecological processes, watershed integrity, and forest restoration. These are quite significant criteria for the basic "project" purpose, and comparison of alternatives. The comparison of alternatives in Table VI.1, however, does not include a substantive comparison of alternatives in the degree to which they meet or fail Board policies to provide innovative demonstrations, experiments, and education, and implement monitoring objectives of Board policies in JDSF. The EIR lacks a comprehensive discussion of alternatives that integrates basic purpose and policy, management, public interest values, and environmental impacts. Instead, comparison of alternatives is broken out among different chapters and resources.

11

12

Monitoring and survey data for mitigation and impact assessment

The EIR makes clear that JDSF is dedicated by Board policy to experimental, scientifically sound forestry demonstrations, aimed at generating useful data for forestry management with consideration for wildlife and watershed values. It is remarkable that the assessment of impacts do not make robust use of existing CDF data from past Timber Harvest Plans (THPs) conducted on JDSF pursuant to this mandate. The EIR does not explain and emphasize what JDSF's management has instructed about the key environmental impacts of forest practices (and in particular, Forest Practice Rules; FPRs) on stream sedimentation, stream temperatures, aquatic species, riparian wildlife habitats, and other key environmental impact issues of concern identified in scoping and in comments on the 2002 EIR. The discussions of impacts in the EIR again rely on highly generalized, speculative or arbitrary assertions about the alleged sufficiency of FPRs or JDSF Management Plan protections to mitigate impacts to less-than-significant levels, rather than on readily available data from the Forest.

13

The essence of adaptive management, a key policy and specific objective of the Board of Forestry for JDSF (Goal 1, objective 1-2, Goal 3, objective 3-6, and Board policies 0351.2, 0351.3) is to treat questions about natural resource management as hypotheses to be tested by data, and modify hypotheses based on data. The efficacy of mitigation measures (particularly the Forest Practice Rules on which the EIR substantially relies for determinations of "less than significant impacts"), consistent with Board Policy, should be viewed as a hypothesis in the EIR. The EIR fails to apply JDSF monitoring data or survey data to provide critical, empirical tests of its reliance on Forest Practice Rules or other mitigation measures.

14

The EIR generally does not cite data or analyses from past THPs on JDSF that test hypothesis with respect to assessment of specific impacts (see specific comments below). For example, there are no comparisons of pre-THP biological surveys and post-THP biological surveys to empirically demonstrate rates or patterns of post-disturbance recovery of specific plant, fish, or

15

wildlife species. Even when the EIR does use local data from JDSF and its adjacent watersheds on significant impacts such as logging sedimentation of streams, it misdirects study conclusions to comparisons of old and current Forest Practice Rules efficacy, rather than comparisons with current environmental baseline (existing conditions, as required by CEQA). The study design of Cafferata and Spittler (1998) on Caspar Creek (cited in the EIR in this context) does not address this deficiency: it compared sediment and water quality in watersheds affected by current logging conducted under current FPRs with watersheds subject to residual effects of logging under discontinued FPRs. It does not address comparisons of stream habitat and fish/amphibian impacts among reaches with equivalent background conditions, but differing in current silvicultural prescriptions or left as controls. The CEQA impact issue is not whether current FPR protections are significant improvements over pre-regulation logging; the CEQA issue is whether logging under current FPRs still has significant direct, indirect, and cumulative impacts that require mitigation in the context of the EIR. A comprehensive JDSF monitoring program for stream water and habitat quality with an experimental adaptive management design could, and should, yield such data in a state demonstration forest.

16

17

In the absence of systematic survey, monitoring, or research data from JDSF applied to impact assessments, the EIR assumes that FPRs and Management Plan are sufficient as mitigation, despite voluminous data to the contrary. Given the continuing decline of federal and state-listed fish and wildlife species and concerns over the adequacy of the Plan and THPs to protect the species expressed by experts tasked with the protection of these resources (note the comments from NOAA Fisheries, Regional Water Quality Control Board, on the 2002 EIR, still not addressed or rebutted in the 2005 EIR), this approach appears arbitrary and fails to mitigate the project's impacts. The EIR should be revised to apply substantive monitoring and survey data from past THPs and research in JDSF (or at least its watersheds) to explicitly inform assessments of specific environmental impacts and mitigation. Otherwise predictions of impacts and mitigation efficacy will remain arbitrary and speculative. This deficiency is *not* compensated by grossly inflating the length and technical level of background discussions about environmental setting.

18

The description of monitoring and adaptive management at 6.1.4 (p. 92), adapted from the JDSF management plan, is representative of scattered mitigation and monitoring discussions for specific resources in the EIR. It is reduced to statements of monitoring goals, priorities, and parameters. It does not provide any information on when and where or whether it would be applied in relation to management actions, and defers substantive decisions to "professional judgment of JDSF staff" with no reference to scientific peer review or agency reporting. Because the EIR relies on faith in the sufficiency of FPRs and management practices of JDSF to prevent significant impacts, it is essential that monitoring be conducted not "as opportunities arise" or "to the extent necessary" or "as budget allows" (frequent caveats included in JDSF monitoring provisions described in the EIR), but as an essential condition of timber harvest approval (potential impacts) in JDSF. In any case, monitoring does not substitute for, or serve as, mitigation for potentially significant impacts, so the impacts addressed by them must be considered potentially significant and unmitigated.

19

20

The EIR should synthesize its own mitigation monitoring requirements and the general JDSF Management Plan's monitoring provisions in a single, comprehensive chapter of the EIR, presented for public review and comment as part of the EIR. Currently, mitigation and monitoring provisions are diffused throughout the EIR in a way that precludes meaningful review. The mitigation and monitoring measures should be in substantive, clear, and enforceable language,

21

22

22 cont.

even if they are framed as programmatic. Some examples of this approach are given in Section 6.1.5, New Management Measures to Contribute to Recovery of Aquatic Resources: "The following apply to all THPs:....". The last EIR statement of mitigation monitoring (IX p. 2) consists of a single paragraph that merely identifies the incorporation of EIR mitigation and monitoring in the JDSF Management Plan, leaving the reader unaided in searching out the scattered, inaccessible component sections of mitigation monitoring discussions in the EIR. Missing in all these component discussions is a description of reporting and review requirements, responsible parties, schedule of submittal and review, duration and frequency of monitoring, and other standard features. Without these, reviewers of the EIR are unable to determine whether mitigation monitoring is a perfunctory paper exercise or an enforceable procedure.

Vague narrative description of alternatives

23

CEQA states that a firm, fixed project and alternative description is essential to assessing and disclosing project impacts. The descriptions of alternatives (which serves as the project description), even for programmatic alternatives, are vague and indefinite. Their component proposals are couched in indefinite qualifiers that do not indicate whether or not proposed components of alternatives are mere options, goals, exceptional or occasional actions, or typical or normal programmatic actions: "work towards...", "...as opportunities arise", "as needed", "only for research purposes", "limited to demonstration purposes" (in a demonstration forest, what is categorically not demonstration/research?) "conservation-oriented..." (what is categorically not "conservation oriented" in a demonstration forest with sustained yield as a mandatory principle?), "emphasis on....". These indefinite qualifiers should be standardized with explicit, definite statements of the criteria that trigger them, whether they are general (normal/prevalent), and the frequency and magnitude of exceptions. To the extent that alternatives can be represented graphically (labeled GIS map of JDSF for each alternative, with estimated acreages of each alternative management feature proposed), they should be illustrated to distinguish crisply the contrasts among them. Without firm, fixed descriptions of alternatives, it is impossible for the EIR to adequately assess and compare their impacts. This deficiency is apparent in the EIR's repeated failure to identify substantial differences in impact significance among the alternatives.

Need for scientific peer review or recirculation

24

The EIR relies on an extraordinary volume of technical and scientific background information and technical jargon for the majority of its most important arguments regarding potential significant impacts, mitigation, and alternatives. It also lacks plain-language summaries of its arguments and conclusions, leaving the general public reader no reasonably available means to assess the scientific soundness of its assertions. It places an undue burden on the public to read and comprehend the technically obscured and excessively long EIR. It is urgent, therefore, that the EIR be subjected to independent scientific peer review so the public has some reasonable means of evaluating and commenting on the EIR. The public cannot provide meaningful comments on this technically obscure EIR without a summary and assessment by qualified scientific professionals with authority and expertise in the disciplines covered in the document. I suggest that the Board of Forestry convene an independent scientific review panel, comparable to the scientific peer review teams that evaluate forestry Habitat Conservation Plans (HCPs), to provide a concise review of the information, evidence, analysis, and major conclusions of the EIR. The panel's written review should be available to the public prior to a public hearing with additional opportunity for public and expert comments, and prior to circulation of the final EIR,

and. In the alternative, a technically adequate revised draft EIR written in plain language should be recirculated.

SPECIFIC COMMENTS

Aquatic resources

25 Watershed analysis versus case-by-case THP proposal and review. The EIR defers analysis and mitigation of logging impacts to aquatic resources to individual THPs as governed by the Forest Practice Rules (FPRs) and the JDSF Management Plan protections that exceed them. This approach has systemic influence on impacts and mitigation to all aquatic resources. It contradicts the most basic recommendation of the Scientific Review Panel assessment of FPRs in relation to salmonid conservation (Ligon et al. 1999), which is to prepare a watershed-level analysis of hydrology and geomorphic processes to guide assessment and mitigation (including avoidance) of logging impacts to aquatic habitats in North Coast streams. The EIR instead defers analysis within the narrower, partial framework of future individual THP-proposals. The best scientific judgment available (Ligon et al. 1999) concludes that project-driven assessments of impacts and mitigation are unreliable and likely ineffective. CDF is well aware of this controversy, but the preparers of the EIR have chosen to disregard this framework without explicit justification. The

26 EIR persists in relying primarily on the assumptions that the joint protections of the FPRs and JDSF Plan will mitigate to insignificance sediment-related impacts to aquatic resources (e.g. 6.1.7 p. 100), contrary to strong evidence of continuing decline of federally listed salmonids. This approach is not reasonable in view of the weight of scientific opinion against it, and the lack of substantive empirical arguments to support it. The inflated compilation of general technical background discussion regarding the environmental setting of aquatic resources in the EIR (6.1) does not address this defect. Background information, no matter how long and technical, does not serve as an implied watershed analysis for JDSF.

27 Watershed baseline for salmonid impact assessment: The EIR does contain information that provides many of the elements of a potential watershed-level analysis of impacts. NOAA Fisheries (in its comment letter on the 2002 EIR) stressed the importance of "site-specific watershed analyses" in creating meaningful timber harvest strategies that protect salmonids. The EIR shows in Map Z a precise configuration of proposed silvicultural spatial allocation across planning watersheds; Map Y shows the distribution and location of stream habitat restoration projects. Map E shows a modeled stream class and fish distribution map, but Map E and all other maps lack stream habitat typing (habitat quality) data from current field assessments representing the "existing conditions" required by CEQA as an environmental baseline. Map F, which represents riparian canopy change (crude ranking, no habitat parameters), does not provide stream habitat quality information. These maps come fairly close to the minimal database requirements for a valuable watershed-based GIS analysis of potential timber harvest impacts. Integrating and re-analyzing data sets using other large-scale stream databases and studies, such as KRIS Noyo and Big River projects, updated and supplemented to meet JDSF Management planning requirements, could generate a more robust and adequate predictive model of impacts than the EIR currently provides. This would also address fundamental deficiencies of the 2002 EIR that were not corrected in the current one (viz. valid criticisms of Patrick Higgins' 2002 comment letter), and it would comply with the authoritative recommendations of the Scientific Review Panel report (Ligon et al. 1999). The same GIS-based watershed model could also become the template for a multi-species habitat conservation planning tool.

Salmonids (coho salmon, steelhead) population status and conservation significance.

28 Despite the excessive compilation of technical data regarding regional salmonid population status of coho salmon (6.1.7) the EIR fails to emphasize the most relevant information for decisionmakers and the public, which is the relative conservation importance of coho populations in JDSF watersheds to the North Coast as a whole. This "metapopulation" perspective is fundamental to conservation biology of any species, including salmonids. The survival and recovery of coho in segments of its range where it has been extirpated will depend on immigrants from source populations in remaining stable, high-quality habitats. The 2002 EIR comment letter by Patrick Higgins, a regional expert in North Coast fisheries biology, establishes this point clearly and authoritatively in the EIR record. Higgins (2002) cited data from The KRIS Big River and Noyo projects (neglected in the EIR), revealing that the some of the last local streams that are still dominated by coho salmon are on JDSF. This regional significance of JDSF as a refugium

29 for coho remains obscured in the indiscriminate technical coho study compilations at 6.1.7. The EIR cannot adequately assess impacts to the survival and recovery of federally listed coho without specifically addressing metapopulation structure of the species and the role of streams affected by logging in JDSF; therefore this information must be added to the EIR.

Equally relevant is the contrasting coho status in commercially logged privately owned watersheds. Higgins, citing 2001 National Marine Fisheries Service data, clarified that stocks of coho are also severely declining in adjacent watersheds in response to intensive land use: coho were absent from 80% of tributaries to the Ten Mile River that formerly harbored them. These Big River tributary populations have distinctive genetic significance for wild coho recovery because they were not subject to artificial genetic modification by fish hatchery operations. This relevant background about contrasts in coho population status within and outside JDSF, in conservation biology context, cannot be inferred from the encyclopedic technical information compiled in the EIR that obscures the decisive issues. Indeed, the EIR states in Section 6.1.8 (p.

30 74), "In the absence of evidence that conditions in assessment area streams differ greatly from other Mendocino County streams, it is reasonable to assume that salmonid populations have likely declined from pre-logging levels...". This statement gives a highly misleading impression of a general decline in salmonids, rather than retention of biologically significant population refugia in JDSF. It is more serious than an inaccuracy or "data dump" misdirection: it obscures of a regionally unique resource and suppresses public comments on potential impacts to it.

31 The EIR should adopt a Habitat Conservation Plan approach (consistent with the critical habitat designation of both coho and steelhead) and identify priority watershed areas within JDSF to minimize impacts of activities contributing to direct and indirect stream habitat degradation, and focus restoration efforts to benefit salmonid recovery. Indeed, the July 18, 2002 EIR comments provided by NOAA (National Marine Fisheries) state that JDSF cannot mitigate for unauthorized

32 "take" of Federally listed salmonids, and that the management plan lacks a strategy to avoid "take". This "unauthorized take" defect was not addressed in CDF's response to comments, nor was it addressed in the 2005 EIR. Therefore, consideration of a Habitat Conservation Plan is not an optional "possibility of undertaking the...incidental take permit process by CDF in the future" (CDF's dismissive response to NOAA comments on "take"), but a legal requirement, according the lead federal agency with jurisdiction and expertise in the matter. CEQA requires disclosure, analysis, and mitigation approaches for all harm to endangered species. Clearly, this has not been achieved by the 2002 or the 2005 EIR. This is a critical defect.

33 A conservation planning framework for salmonids would emphasize the locations of important salmonid refugia, high quality habitats with robust remnant populations, and adjacent stream reaches and slopes. Priority areas for recovery are those which are above prime habitat or refugia where erosion will inevitably be triggered by a major storm or catastrophic event. Higgins (2002) suggested that the highest priority restoration targets should be the South Fork Noyo River (including Parlin Creek), Caspar and Hare creeks and Russian Gulch, because these areas are known to be the healthiest remaining habitats for coho salmon, and function regionally as core populations. This would constitute an adequate, scientifically sound approach to mitigating the uncertainties and impacts of the primary water quality causes of observed salmonid decline within designated critical habitats.

34 Herbicides, surfactants, and potentially significant aquatic vertebrate impacts. The EIR fails to identify potentially significant impacts of herbicide runoff and groundwater contamination of stream baseflow on eggs and juvenile salmonids. The EIR fails to quantify and disclose total herbicide and surfactant (spray additive; detergent-like spread-stickers) loads to streams allowed under the JDSF Management Plan. It does not address restrictions on types, amounts or timing (in relation to salmonid or amphibian reproduction) of applied herbicides. Some herbicides and adjuvants (spreader-stickers) remain biologically active for weeks or months after application, and can be detected and physiologically active in aquatic habitats after application to adjacent terrestrial habitats. Some herbicide surfactants (e.g. POEA) are known to have weak estrogenic

35 effects on salmonid embryos and juveniles, and can significantly affect endocrine-mediated development, but this potentially significant impact is not assessed or mitigated. The EIR should include assessment of herbicide ecotoxicology on salmonids, focusing on specific herbicide formulations that have been used in JDSF, and may be used in the future. The assessment should not be speculative, but should be based on diligent review of the scientific literature.

36 Impacts and mitigation for amphibian species (treated in Wildlife section, 6.6.6). The EIR provides cursory and insufficient assessment of impacts to amphibian species. Most discussions merely disclose whether there are any known records (presence/absence) of amphibians species in JDSF, and add general habitat and life-history information, not specific habitat or population status in JDSF as baseline. All proposed mitigation for amphibians, based on implementation of

37 FPRs (WLPZs) and their presumed efficacy, assumes that all life-history stages occur in the primary aquatic habitat. This is unjustified: amphibians also forage in terrestrial habitats, and some like the red-legged frog, seek refuge in mammal burrows or under logs when their primary feeding and breeding habitats become seasonally dry. The WLPZ "mitigation" approach to protect viable populations of amphibians is focused on direct logging impacts only, and does not address indirect impacts to amphibians due to adverse modification of terrestrial moisture refugia. The WLPZ "mitigation" for amphibians is unsupported by local or other monitoring data on

38 amphibians collected before and after logging under contemporary FPRs. In addition, the EIR does not refer to any detection or survey procedures for recognizing and protecting isolated seasonal wetlands, seeps, and springs outside expected watercourse zones (see discussion of Wetlands, below). The EIR cannot reasonably conclude that impacts to amphibians in JDSF are "less than significant".

39 One of the primary purposes of a Programmatic EIR on a Plan is to address landscape-level impacts and identify Forest-wide mitigation strategies. However, the EIR's assessment of impacts to amphibians fails to consider larger landscape-level variables of THPs, such as geographic pattern of intact remnant habitats, distribution of high-quality refugia (aspects of metapopulation structure), and the recovery interval (rotation) between logging disturbances.

40 Therefore, all potentially significant large-scale indirect spatial impacts to amphibian populations are ignored. The impact assessments for amphibians focus narrowly on internal habitat impacts within THP boundaries. This deficiency precludes discussion of the basic landscape-level habitat conservation planning essential to ensure maximum likelihood of viable amphibian populations over long-term logging disturbance cycles. In the absence of geographic planning of habitat impacts and mitigation, sensitive species (such as tailed frog, which has less thermal tolerance than coho salmon) would be at greater risk of local long-term extinction. Interactions between local population declines, logging disturbances, and climate variations (droughts, hot summers) could cause significant cumulative impacts unless mitigated by landscape-level amphibian habitat planning within JDSF.

41 Please note that the geographic limits of the federally listed subspecies of red-legged frog, *Rana aurora draytonii* (*R. draytonii*) are now know to extent to Elk, Mendocino Co, based on molecular data (Shaffer et al. 2004).

Botanical Resources and plant communities

42 Incomplete scoping of rare species. The EIR states that ponds occur within JDSF (Lost Lake, McGuire's Pond). *Howellia aquatilis*, a rare aquatic plant of the Pacific Northwest, was recently rediscovered in Mendocino County at multiple locations after 1995; see CNDDB. The EIR ignored the expert advice to include this species, provided by Prof. Teresa Sholars in her 2002 EIR comment letter. This small, inconspicuous species is very difficult to detect without focused searches in appropriate seasons. It was erroneously omitted from the Jepson Manual. Although

43 accurate modern records of the federally endangered *Arenaria paludicola* are lacking in Mendocino county, its historic range included wetlands of the North Coast forest region, and like *Howellia*, it could be rediscovered there. It should be included in the scoping list as a low-probability endangered plant. The EIR fails to assess potentially significant direct and indirect impacts to this aquatic species that could result from logging activities, such as excessive sedimentation in wetlands and ponds originating from erosion above WLPZs. .

Scoping misuse of floristic databases as surrogates for surveys

44 The EIR commits the same misuse of the database searches for rare plants that is prevalent in poor quality THPs. The EIR relies on the California Native Diversity Database (CNDDB) and California Native Plant Society Inventory (CNPS Inventory) as "scoping tools" to determine likelihood of occurrence of sensitive plant species, but it does not commit to standard, routine CDFG or CNPS protocol-level surveys (with coverage and survey intensity sufficient to detect actual sensitive plant populations in THP areas) as mitigation/monitoring measures to prevent potentially significant impacts to sensitive plant species.

45 The EIR, following CDF practices, is using CNDDB and CNPS inventories in reverse: these databases are not original sources of survey data, but repositories dependent on field data generated by land managers and plant experts. The lack of reported occurrences in remote or inaccessible extensive timberlands is more a function of past survey intensity than actual probability of occurrence. Database searches are useful in well-botanized, publicly accessible areas near trails, parks, or other publicly accessible sites, but are an inherently weak tool in remote, extensive timberland tracts. Therefore these databases would not generate meaningful numbers of reported past occurrences from remote timber harvest plan areas in JDSF unless CDF itself performed such surveys. The emphasis on database searches in the absence of firm

commitment to site-specific, protocol-level plant surveys provides a false cosmetic appearance of diligence in mitigation and monitoring. The EIR should expressly identify pre-THP floristic surveys with CDFG protocols as the primary standard for scientifically adequate detection of sensitive plant species.

Instead, the EIR describes only (non-mandatory) goals for plant surveys: "A qualified botanist *or trained staff* will conduct seasonally appropriate rare plant surveys, *as necessary*, to assess plant occurrence...survey designs will be *based on the concepts* contained in the DFG guidelines....will follow the *practices commonly accepted* by DFG and CDFG *for THP review*". It is no exaggeration to state that this is a formula built on equivocation, aimed at allowing the same low standards for incomplete and erroneous botanical surveys by non-expert forestry technicians or RPFs that are routinely accepted in THPs. I have reviewed numerous THPs in the Mendocino-Sonoma coastal forest region, and found most to contain basic and obvious deficiencies: errors of identification and nomenclature, erratic seasonal timing for detection of sensitive species, and likely omissions of less familiar species (particularly graminoids).

46 | The EIR's misplaced reliance on database searches has significant potential consequences because it states that the "current population status and trend" for many sensitive plant species that may occur in JDSF "are unknown" (e.g. *Boschkiana hookeri, Carex livida, C. arcta, C. californica, Erythronium revolutum,* and others) or "location, rarity, and endangerment information are needed" (e.g. *Carex comosa*). The EIR states that multiple sensitive species "could be adversely affected by timber harvest and road construction", but with no determination of "significance", for example *Campanula californica*. The EIR makes a reasonable argument that potentially significant impacts to these species could occur precisely because species may occur in THP areas but remain undetected because crude CNDDB database searches and inadequate (or lacking) surveys are the standard protocol in JDSF. Yet the EIR arbitrarily concludes that there would be no significant impacts to botanical resources.

47 | The EIR should include requirements for plant surveys as part of a comprehensive and mandatory mitigation and monitoring program. The survey methodology should cover qualifications of surveyors, survey intensity, seasonal timing based on expected/known plant community composition, and coordination/review procedures by CDFG. Given that "inventory [of plants] is planned to occur on a project-by project basis through surveys ..." and "an extensive inventory of botanical resources at JDSF has not been conducted" (6.2 p. 24), this is an essential mitigation and monitoring element to include.

<u>Lack of paired pre- and post-THP surveys to verify impacts and mitigation efficacy</u>

As noted above, THP plant surveys, regardless of adequacy, generally are supposed to precede timber harvest. The EIR does not discuss or recommend post-THP surveys to determine whether plant species become extirpated within THP areas, or whether they recover over time. The EIR does not recommend specific population re-surveys to monitor whether sensitive plant species "protected" by avoidance measures in fact are protected successfully, or whether their demise occurs through indirect impacts of logging rather than direct impacts. No post-THP surveys or monitoring results are discussed in the assessment of impacts and mitigation to enable the public to review their efficacy and reliability. Post-THP plant surveys and monitoring should be

48 | recommended by the EIR, and included in the mandatory mitigation and monitoring program to ensure implementation.

The discussion of general biological surveys at 6.6.3 (p. 115-117, in context of wildlife, but applicable to plants) is largely editorial and apologetic in effect, reflecting current policy rather than programmatic proposals to evaluate. It provides a rationale for non-systematic, minimalist survey efforts. This discussion has no place in an EIR. The EIR should describe a comprehensive
49 | biological survey framework and protocol in the context of a comprehensive mitigation and monitoring plan pursuant to CEQA, clearly written for public review.

Cumulative impacts on declining, uncommon to rare plant species. The scientific literature, in addition to state and CNPS lists of state-rare plants, provides substantial evidence regarding range contractions, range collapse, and significant declines of some plant species over major portions of their ranges. Some of these species are clonal perennial forest forbs, mycotrophic ericads or orchids, or woody plants that regenerate poorly after major disturbances, or take long periods to recover populations. The flora of Mendocino County enumerates many plant taxa of extremely limited distribution, often disjunct populations or species occurring near their range limits. Such "non-listed" species have conservation significance because of their precarious population status and biogeographic patterns (Lomolino and Channel 1998). For example, Pacific yew (*Taxus brevifolia*) is in widespread decline because of slow growth and reproduction, and poor regeneration after timber harvest (Busing et al. 1995). The EIR arbitrarily assesses only impacts to taxonomically rare species, and ignores potentially significant impacts to plant biodiversity based on regionally declining, slow-growing, uncommon plant species that are not necessarily globally rare. The EIR should adopt an ecologically based rather than administrative, list-based
50 | plant conservation perspective on impacts to native species diversity. It should assess the Management Plan and alternatives' impacts to native species richness and diversity based on currently available scientific evidence, not just legally or administratively listed species. This is particularly important for impact assessment of even-age timber management that depletes soil seed banks and clonal bud banks of species with poor colonizing ability. The assessment should be based on evidence, not speculation and generalization.

Cumulative, long-term herbicide impacts on viability of small plant populations
51 | The EIR does not adequately address (and scarcely discloses) the potentially significant impacts of broadcast broad-spectrum herbicide applications on non-target plants, particularly uncommon or rare plants (either mature plants or seedlings recruited from seed banks following timber harvest disturbances). Many plant populations survive logging disturbances by vegetative regeneration or seedling recruitment. Broadcast application of herbicides can severely deplete seed banks after flushes of germination, and can cumulatively enhance mortality due to disturbance. The interaction of post-disturbance recovery of plant populations and herbicides (applied to control brush, weeds, or hardwoods) can result in significantly increased risk of population extinction. Rare or uncommon plants would be particularly at risk of such cumulative herbicide impacts. Because survey efficiency (detection probability) is low at the spatial scale of herbicide application, particularly in disturbed ground with seedlings and suppressed individuals, mitigation of herbicide impacts by detection and selective avoidance would be extremely difficult. The EIR also fails to disclose the potential off-target transport of active herbicides in
52 | runoff and groundwater. (See comments on aquatic resources regarding potential significant indirect impacts of herbicide/surfactant mixes on juvenile fish and amphibians.). The EIR's conclusion that there are no potentially significant impacts to plants is unreasonable and unsupported in the absence of an analysis of herbicide effects on sensitive plant populations. No such analysis would be possible without survey data (see preceding comments on plant surveys)

Impacts on epiphytic plant communities. The EIR focuses narrowly on individual special-status vascular plant species, and fails to consider impacts to highly diverse epiphytic plant communities associated with old tree canopies, composed of lichens, mosses, ferns, liverworts, and some forbs. These communities are not treated in classifications of terrestrial vegetation, but are nonetheless significant botanical resources.

53

Cumulative and indirect impacts of even-age management, invasive species, and herbicides

54 The EIR fails to disclose or analyze basic interactions between even-age management and invasive plants, and herbicide use. Most of the most noxious wildland weeds identified are most invasive in disturbed ground lacking forest canopy. Timber harvest activities can not only open forest to new invasions, equipment can readily spread seeds. Invasive plants that rapidly dominate post-harvest sites can suppress seedling growth of desirable conifer species as well as native flora. There is ample evidence in the scientific literature about facilitation of plant invasions in disturbed plant communities, including forests. The EIR should assess the potentially significant impacts of even-age management (compared with other silvicultural treatments) on plant invasions and demand for herbicide use.

55 The EIR's sweeping reference to Integrated Weed Management (IWM) as a philosophy or approach does not substantively address the nature of interactions between weed invasions and silvicultural treatment, nor does it substantively address issues of herbicide impacts. The EIR's reference to the IWM emphasis on weed prevention makes is disingenuous and misleading in the context even-age timber management and spread of significant wildland weeds such as *Rubus discolor, Genista monspessulana*, and *Cortaderia jubata*: the spread of these species is facilitated primarily by disturbance, and timber harvest provides more disturbance to the landscape than any other activity. The EIR fails to disclose potentially significant impacts of ground-disturbing timber harvest practices on the invasion of forestlands by these weeds.

56 The EIR does not distinguish herbicide loads that are specifically justified by wildland weed management objectives, and herbicide loads justified by hardwood management objectives. It would not be possible to evaluate minimization of herbicide use (impact reduction) without an account of what herbicides are used for, and in what quantities, in JDSF.

57 The EIR offers no examples (i.e. monitoring data) to support the broad assertion that "Project-specific THP and CEQA analyses can identify and mitigate potentially significant cumulative effects resulting from multiple effects" (6.2, p. 42) with respect to herbicides. The EIR's statement thThe EIR should specify programmatic actions to minimize cumulative and indirect impacts of herbicide use on native plants. Such measures should include pre-THP reduction of invasive plant propagules sources, and must include adequate pre-THP native plant surveys, restrictions on the timing and amounts of herbicides.

Potentially significant effects of fertilizer application

58 There is no mention in the botanical section (6.2) of the potential effects of fertilizer applications described in the timber resources section (6.3). Elevated levels of soil nitrogen from fertilizer application can have persistent and significant impacts on native plant diversity, mediated by competitive interactions. Many invasive plant species with high potential relative growth rates gain competitive advantage over slower-growing native plants in nutrient-enriched soils. Many rare, stress-tolerant native plants are also at a competitive disadvantage to dominant native

species in productive soils. Some rare plant communities are essentially oligotrophic (dependent on extreme nutrient-poor conditions), such as sphagnum bog and pygmy forest. Surface runoff or groundwater containing even a single pulse of high soil nutrient levels from fertilizer can have effectively irreversible significant effects on community dominance and persistence of rare plant populations in oligotrophic plant communities, particularly those with impeded drainage (nutrient sinks). The EIR should disclose the likely locations and application rates of fertilizers, and soil types to which they are likely to be applied. It should propose mitigation including minimization and avoidance of fertilizer near invasive plant populations and unique or rare native plant communities and populations.

59

60 | The cumulative effects of fertilizer applications and the nutrient flux (primarily nitrogen) that follows logging (Dahlgren 1998; cited in EIR) are not analyzed. The combined effects of these two silvicultural impacts on plant communities, invasive species, and also aquatic resources may be potentially significant, particularly for sensitive oligotrophic (naturally nutrient-poor) habitats.

Deferred, programmatic, essentially administrative "mitigation" of invasive exotic species.

The bulleted items of 6.2 p. 20 are mostly administrative actions, not substantive programmatic protection measures. Stating that impacts of weeds and re-establishment of native vegetation "will be considered" is not meaningful or enforceable. Training staff in weed identification has no substantive value unless weed management programs are implemented; similarly, cooperation (vague) with other agencies has no meaning unless it is linked to specific categories of substantive actions to implement. Updating staff on weed information and supporting (actions?) weed control initiatives outside the jurisdiction of JDSF are similarly attenuated from connection to substantive actions that affect weed invasions. The EIR should identify substantive programmatic actions that reliably contribute to reduction of forestland weed spread. These purely procedural and vague, unenforceable "mitigation" measures are unacceptable for CEQA, and are ineffective. Note that invasive exotic species control programs should not include native post-logging invasive species in their objectives.

61

Narrow and insufficient mitigation for direct impacts to sensitive plants

The only substantive mitigation identified for impacts to sensitive plant populations is survey detection followed by unspecified avoidance measures. There are no quantitiative buffer specifications assigned to different slopes, soils, population structures, or community types. There are no buffer provisions that address retention of pollinators or seed dispersal vectors (biotic or abiotic). There are no measures that specify consultation procedures or scientific peer review of protection measures, or monitoring and reporting requirements for protection measures. The mitigation measures do not even commit to criteria for enforcing implementation of protection measures, and for what species. The mitigation does not address compensation for potential failure of protection/avoidance measures, nor does it assess efficacy of protection/avoidance measures from past THPs. All this can and should be treated at a programmatic level, but the EIR improperly defers all mitigation to project-specific THPs. This is invalid under CEQA.

62

63 | The EIR lacks any mitigation provisions to cover contingencies of under-performance or failure of proposed plant protection/avoidance measures. It is reasonable to assume that there would be at least some failure rate (local population extinction) of avoidance/protection measures, especially given that there are no scientifically based criteria for detection of populations or buffer guidelines, and given the large scale of timber harvest activities (especially even-age

prescriptions). The most reliable scientifically accepted approach for conservation of rare plant populations is establishment of designated refugia (blocks of self-sufficient habitat containing all ecosystem support for life-history needs) within managed, working timberlands. Currently, all consolidated set-aside areas within JDSF are based on old-growth, late-seral forest stands, "owl circles" (programmatic buffer areas to avoid legal exposure to risk of unauthorized "take" of federally listed species), pygmy forest, and selected wetlands. Smaller reserves based on "hot spots" of rare plant species locations, or large "core" populations of rare plants, should be included as EIR mitigation for potential significant unavoidable impacts to sensitive plant species, following the same principles as a Habitat Conservation Plan and basic tenets of modern conservation biology. The selection of priorities for species and designated refugia should be developed in consultation with CDFG botanists.

64

"No significant impacts" to botanical resources. The EIR's conclusion that there are no significant impacts to botanical resources is not supported by the information and proposals of the EIR. As described above, the critical omissions of adequate scientific survey protocols, botanical inventory or reconnaissance-level original contemporary baseline data on the flora of the JDSF, and substantive, effective mitigation (including contingency and preventive measures for rare plant protection) make the "no significant impact" conclusion unreasonable and arbitrary.

Wetlands

As described below, the information the EIR provides on the distribution, extent, and types of wetlands within JDSF, and potential impacts, is flatly inadequate inadequate for meaningful public review or review by resource agency professionals. Wetlands are described in cursory text (2 paragraphs) under Wildlife (6.6 p. 20), and list in one sentence "...sphagnum bogs, a few isolated ponds, stream margins, and several springs and seeps" to describe the wetlands occurring in the nearly 50,000 acres of JDSF. The subsequent paragraph discusses only sphagnum bogs in general, not the local features. P. 21 erroneously states that "coastal salt marsh, coastal brackish marsh" occur in JDSF. Coastal salt and brackish marsh are limited to the immediate coast where daily ocean tidal flows occur. P. 21 also states that "coastal and valley freshwater marsh" occurs in JDSF, but provides no information about their composition, distribution, or abundance. Given that this chapter is about wildlife, it is a gross deficiency of the discussion that no wetland-dependent wildlife (waterfowl, amphibians, etc, including sensitive species such as red-legged frogs, salamander species) are identified in relation to these habitats.

65

The EIR fails to disclose in this discussion of wetlands (p. 20) the widespread but localized occurrence of wetland sedge and rush communities, riparian backwater marsh patches, marine terrace hardpan wetlands (pygmy forest and raised bog), hillslopes seeps and springs with wetland shrub thickets, and other widely distributed small wetland features. These are in fact the types of wetlands most likely to occur within timber operations, and are most likely to be directly impacted. These wetland types are partially listed in the botanical resources section (6.2; see table VII 6.2.3.), but are not described (or mapped) to emphasize their wetland habitat status or explain their distribution, abundance, species composition, hydrology, and wildlife habitat functions. A laundry list of wetlands that includes some that do not occur within JDSF is not an impact assessment.

66

The EIR describes no mitigation survey protocols for advance identification of wetlands. Many wetlands, particularly sedge/rush meadows and seeps, are seasonal wetlands, and are recognizable as wetlands by non-experts only in the winter-spring months. Many riparian wetlands are difficult

67

to identify in the dry season (summer-fall) unless they support dense stands of perennial marsh plants. Rare plants difficult to recognize in low-intensity surveys, such as *Campanula californica, Calamagrostis bolanderi*, *Carex* spp., *Glyceria grandis*, *Lilium maritimum* (especially non-flowering), *Lycopodium clavatum*, *Pleuropogon hooverianus*, *Rhynchospora alba*, Sidalcea calycosa ssp. *rhizomata* and others, are most likely to occur in seasonal wetlands within forests and forest gaps. Therefore, impacts to under-identified seasonal wetlands are likely to be the coarse controls for significant impacts to many rare plants. Seep and spring wetlands are the most likely types to be associated with rare plants such as *Cypripedium montanum*. The EIR should include at minimum reconnaissance-level surveys of wetlands to reflect at least typical wetland conditions (distribution, abundance, composition, hydrology) within each soil series wherever timber management operations may occur.

The EIR should be revised to accurately and fully identify the potential impacts of all Plan timber management activities to wetlands. Minor alteration of topography and drainage by ground-based equipment (tractor logging) can cause major hydrologic changes in wetlands, and their functions in supporting wildlife and flora. Protecting wetlands through avoidance requires (a) accurate detection of wetlands; (b) accurate understanding of local wetland hydrology and soil characteristics, geomorphic processes, especially controls of drainage, transport of sediment and organic matter, and water sources; (c) expert judgment on setting effective wetland buffers. The EIR should include programmatic wetland identification (not formal delineation of federal jurisdictional wetlands) and planning protocols to ensure that there are no significant cumulative impacts to wetlands in JDSF.

68

"Significant impact" determination for wetlands. Without adequate assessment and programmatic mitigation for wetland resources in JDSF as described above, the EIR must conclude that there is unmitigated potential for significant impacts to wetlands. The EIR preparers should consult with wetland experts from CDFG and USFWS or USFS, or other qualified experts to re-assess wetland resources and mitigation planning.

Terrestrial Wildlife

Habitat modification impacts assessment (6.6.6, p. 121). This single paragraph discussion of habitat modification impacts includes no impact assessment at all. It simply states that a short list of categorical impacts (direct mortality, permanent habitat loss or modification, reduced reproductive success) "are considered significant", and are more significant for habitats of rare species. It states only that rare habitats are not proposed for removal, and some habitats, depending on their location, "could be at risk". This is merely a declaration, not an analysis of habitat modification. Habitat modification impact assessment is the cornerstone for predicting viability of wildlife populations, so this deficiency is not trivial or local. This section does not cross-reference to the comparison of alternatives (6.6.8) that generates a series of coarse numeric index habitat capability (potential habitat quality; California Wildlife Habitat Relationships System) predictions for all alternatives. These model predictions are non-spatial, lacking in any biological dimensions dependent on habitat patch size, configuration, life-history, and population distributions. The results are presented essentially as scorecards, without interpretation; it contributes minimally to the EIRs assessment of long-term habitat modification impacts in JDSF. The numeric WHRS results, as the EIR notes, are not particularly accurate or ecologically meaningful predictions. The discussion includes no information in a spatial context (Map Z) about the timing or rate of timber harvests, block size, and their dispersion over vegetation and

69

70

71

soil types (Maps J, U) and landslide risk zones (Map W). It is therefore impossible to evaluate mitigation for this significant impact on wildlife habitat.

72 Only internal small-scale habitat mitigations, such as snag retention, exclusion or buffer zones, etc. are discussed. These mitigation measures are important, but they are subordinate to the larger-scale habitat modification impacts. Despite over 50 years of timber harvest and inventory analysis in JDSF, the habitat assessment does not even provide a local conceptual model for

73 forest habitat successional development to inform assessment of impacts. With widely available GIS capabilities, at least a crude spatially explicit model of dynamic (successional) habitat modification over time would be feasible and appropriate for impact assessment; and in the absence of any adequate assessment at all, it would be necessary. Again, it should be noted that the primary biological focus of a programmatic EIR is the larger—scale habitat issues. Additionally, because many of the mitigations for these large-scale impacts can only successfully be identified and implemented at a program level.

Rare, threatened or endangered terrestrial wildlife species

Marbled murrelet impacts and mitigation

The discussion of marbled murrelets in JDSF includes excessive and extraneous information that obscures the salient facts that (a) JDSF was designated *critical habitat* for this federally listed

74 species; (b) the recovery plan for the marbled murrelet identifies the Mendocino Zone (in which JDSF occurs) as at high risk of local extinction, but "highly recommended" for conservation measures to benefit the species (p. 116, USFWS 1997); (c) Russian Gulch is considered to be occupied habitat by CDFG (S. Martinelli). This last point is somewhat confused by the contradictory statement on p. 127 that the species "has not been determined to use stands on JDSF". The EIR defers mitigation to individual projects in the impacts discussion. It does not

75 cross-reference to the earlier discussion at 6.6.8, "New Management Measures" including an assessment of what areas offer the greatest potential for marbled murrelet habitat. This generalized programmatic mitigation is a raw concept, and does put mitigation ahead of impacts, but at least it (potentially) offers a substantive and significant contribution to the recovery of the species within JDSF. The EIR needs to reformulate this proposal as an enforceable (mandatory)

76 proposal or mitigation measure for implementation, and link it to a valid assessment of JDSF Management Plan impacts to the species. Otherwise, it would be merely a sketch draft of paper mitigation. The proposal should specify scientifically sound spatially explicit conservation planning methods and principles, agency and expert coordination and review, and a time-line for implementation.

77 The EIR lacks basic ground-truthed (field-verified) habitat suitability classification for the marbled murrelet in JDSF, and relies on surrogate vegetation and timber data to assess marbled murrelet habitat distribution and abundance. Like the lack of habitat typing in the assessment of JDSF aquatic resources (stream habitat quality), the absence of accurate empirical habitat assessments and adequate surveys for the species precludes a meaningful analysis of impacts for a federally listed endangered species in a designated recovery area. This deficiency is likely to cause inaccurate assessments of impacts.

Northern spotted owl

The EIR does identify competition with invasive barred owls and predation by great horned owls as potential threats to the viability of habitat occupied by the federally listed northern spotted owl (NSO) in the lengthy species account. Great horned owls are known to significantly constrain the occupancy by NSO in otherwise suitable habitat (Zabel 1995). Predictive models of NSO habitat must consider spatial distribution of habitat structure that influences NSO foraging and breeding, refuge from predators, as well as habitat that favors predators (Zabel et al. 2003). The EIR does not, however, identify interactive (cumulative) effects of habitat modification from logging and the spread of these competitor and predator owl species in the cursory 2 paragraph impacts section (6.6.6. p. 128). Unlike the EIR's approach to marbled murrelet impacts and mitigation, the treatment of NSO is essentially the same as a 50,000 acre THP: following the FPR requirements that establish minimum, isolated "owl circle" buffers around known occupied habitat in THP areas, while landscape-level habitat structure suffers long-term degradation by logging. The EIR does offer snag protections, retention of some late-seral and old-growth stands over some portions of JDSF, but the larger matrix of forest will be managed according to standard silvicultural prescriptions, with no additional spatially distributed refugia or reserves for NSO. This is a formula for the same decline in NSO in privately managed commercial timber land, and is less protective than voluntary interim guidelines for NSO protection by some private timber companies. The impact analysis and mitigation for NSO is grossly deficient, and falls far below the current scientific standards of analysis for NSO conservation (Zabel et al. 2003).

78

Strong, substantial, indirect adverse impacts or injury to NSO may occur through interference with essential foraging, and elevated risk of predation. Recent evaluations of NSO foraging ecology, prey use, and home-range characteristics in California have suggested that NSOs use a wider variety of forest habitats (including younger forests) for foraging in relatively drier conditions in California compared with the Pacific Northwest, especially where woodrats are the principal prey species. The high affinity for old growth may be due to refuges from predators such as great horned owls (Solis et al. 1990, Blakesley et al. 1992, Hunter et al. 1995, Zabel *et al.* 1995, Ward *et al.* 1998, Thome *et al.* 1999). Structural habitat restriction of great horned owls in late-seral coniferous forests is one of the principal factors affecting the functional characteristics (quality) of NSO habitat. Franklin *et al.* (2000) found nonlinear relationships between traditional "suitable" (mature forest) habitat and NSOs, indicating that a range of forest habitats, not just old growth forest, are needed for all life-history stages and needs in California. The EIR's assessment of impacts to NSO is incomplete and unreliable without consideration of indirect impacts of habitat modification on predation and competition.

79

Therefore, the DEIR must be revised to include a well-tested, calibrated NSO habitat models to JDSF (comparable to Zabel et al. 2003) to assess long-term impacts of the management plan, with due attention to indirect and cumulative impacts related to habitat modification, prey availability, competition with barred owls, and great horned owl populations. It should then develop a system of managed reserves (analogous with the 'new management measures' for marbled murrelet conservation and old-growth/late-seral reserves) within JDSF. In essence, this effort would be equivalent to a Habitat Conservation Plan (HCP) for JDSF. Indeed, it would be both consistent with Board policy and prudent to develop an HCP for both the murrelet and NSO, as a "demonstration" for private forest landowners and the general public in California. A system of reserves within a working timber landscape would probably be the only viable long-term mitigation approach to conserve the NSO under the JDSF Management plan.

80 Like the management plan's effects on listed salmonids, its actions would cause reduction of population, habitat, and unauthorized "take" (prohibited by the Endangered Species Act) of endangered NSO. This would be significant and unmitigated, in the absence of an approved HCP. Unauthorized take of an endangered species amplifies the CEQA threshold for mandatory findings of significance based on "reduction in numbers or range". The management plan and its derivative THPs evaluate impacts to endangered NSO as though only direct, lethal impacts mattered. Even the narrowest legal definitions of "takings" of federally endangered or threatened species ("harass, *harm*, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct") address injury or death due to indirect causes, under the interpretation of "harm" in case law, which includes any "act which actually kills or injures wildlife" – not restricted to direct death or injury. In the preamble to the final regulatory definition of "harm", the U.S. Fish and Wildlife Service expressly rejected the limitation of "harm" to direct physical injury. "Harm"..."may include significant habitat modification or degradation, where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" (Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon). Proximate indirect causes of injury or death, such as complete removal of habitat around an "activity center", plainly meet the criteria for "take", as long as it is "sufficiently imminent or certain" that take (harm) will occur. (North Slope Borough v. Andrus). In the absence of a final HCP, there is no mechanism for authorization of "takings" of NSO.

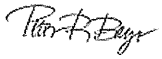
81 Because long-term impacts of a management plan are forest-wide issues, this program-level EIR is the CEQA-mandated vehicle for providing adequate impact assessment and mitigations. Deferral of this to the THP-stage would be both inappropriate under CEQA, and ineffective.

Conclusions

82 The EIR is basically inadequate as a CEQA document, and as a scientific assessment of forestry impacts and mitigation in Jackson Demonstration State Forest. As a CEQA document, it fails because it is unintelligible to most intelligent public citizens, burdened by extraordinary length of extraneous and highly technical background information in the body of the EIR. Even as an environmental professional, I found it unusually difficult to review this cluttered and discursive EIR. It also fails because despite its excessive technical length, it does not apply relevant information and arguments to its relatively cursory assessment of impacts and mitigation. There are widespread cases of unsupported conclusions of "less than significant impact", often in contradiction to information in the EIR. The environmental baseline information in the EIR specific to JDSF (empirical habitat typing, assessment, species surveys) is woefully deficient, and the lack of even minimally adequate baseline survey information about aquatic and terrestrial biota precludes meaningful assessment of significant impacts. The EIR makes substantial errors in its conclusions about potentially significant impacts to botanical resources, wetlands, federally and state listed salmonid species, and federally listed wildlife species. The EIR should be revised and recirculated, and a preliminary or administrative draft should be subject to independent scientific peer review before public circulation to ensure that scientifically sound methods and reasonable interpretations support its conclusions.

I look forward to reading a substantially improved recirculated draft EIR for Jackson Demonstration State Forest, and without prejudice to the selection of the Board of Forestry's preferred alternative. I would encourage the EIR preparers to develop alternatives that adequately reflect the Board's admirable policies for "innovative demonstrations, experiments, and education in forest management", to "improve the amount and quality of information concerning economic forest management...", to "conduct monitoring of resource management activities to gauge their effectiveness in meeting project objectives", and "investigate methods to mitigate conflicts...in multiple use of forestland". If these principles are faithfully followed in the JDSF management plan, there should be no difficulty in preparing an adequate CEQA document.

Respectfully submitted,



Peter R. Baye, Ph.D.

Literature Cited

Blakesely, J.A., A.B. Franklin, and R.J. Gutierrez. 1992. Spotted owl roost and nest site selection in northwestern California. Journal of Wildlife Management 56: 388-392.

Busing, R.T. C.B. Halpern, and T.A. Spies. 1995. Ecology of Pacific Yew (*Taxus brevifolia*) in western Oregon and Washington. Conservation Biology 9: 1199-1207

Bradbury, W., W. Nehlsen, T.E. Nickelson, K. Moore, R.M. Hughes, D. Heller, J. Nicholas, D. L. Bottom, W.E. Weaver and R. L. Beschta. 1995. Handbook for Prioritizing Watershed Protection and Restoration to Aid Recovery of Pacific Salmon. Published by Pacific Rivers Council, Eugene, OR. 56 p.

Dunne, T., J. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. The University of California Committee on Cumulative Watershed Effects. University of California Wildland Resource Center Report No. 46. June 2001. 107 pp.

Dahlgren, R.A. 1998. Effects of Forest Harvest on Stream Water Quality and Nitrogen Cycling in the Caspar Creek Watershed. Pacific Conference on Coastal Watersheds: the Caspar Creek Story. General Technical Report PSW-GTR 168, pp. 45-53. U.S. Forest Service.

Franklin, A.B., D.R. Anderson, R.J. Gutierrez, and K.P. Burnham. 2000. Climate, habitat quality and fitness in Northern Spotted Owl populations in northwestern California. Ecological Monographs 70: 539-590.

Higgins, Patrick. Comment letter on the Jackson Demonstration Forest Management Plan and 2002 Draft EIR. July 18, 2002. SCH # 2000032002.

Hunter, J.E. R.J. Gutierrez, and A.B. Franklin. 1995. Habitat configuration around spotted owl nest sites in northwestern California. Condor 97:684-693.

Hunter, M.L., Jr. and A. Hutchinson. 1994. The virtues and shortcomings of parochialism: conserving species that are locally rare, but globally common. Conservation Biology 8: 1163-1165.

Ligon, A. Rich, G. Rynearson, D. Thornburgh, W. Trush. 1999. Report of the Scientific Review Panel on Forest Practice Rules and Salmonid Habitat. Prepared for the Resources Agency of California and the National Marine Fisheries Service, Sacramento, California.

Lomolino, M.V. and R. Channel. 1998. Range collapse, reintroductions, and biogeographic guidelines for conservation. Conservation Biology 12: 481-484.

McKinney, M.L. 1999. High rates of extinction and threat in poorly studied taxa. Conservation Biology 13: 1273-1281.

Schaffer, B., G. Fellers, S. Voss, & J. Oliver, & G. Pauly. 2004. Species boundaries, phylogeography, and conservation genetics of the red legged frog (Rana aurora/draytonii complex). Molecular Ecology 13: 2667-2677.

Solis, D.M., Jr. and R.J. Gutierrez. 1990. Summer habitat ecology of northern spotted owls in northwestern California. Condor 92: 739-748.

Thome, D.M, C.J. Zabel, and L.V. Diller. 1999. Forest stand characteristics and reproduction of Northern Spotted Owls in managed north-coastal California forests. Journal of Wildlife Management 63:44-59.

Ward, J.P. Jr. R.J. Gutierrez, and B.R. Noon. 1998. Habitat selection by Northern Spotted Owls: the consequences of prey selection and distribution. Condor 100: 79-92

Welsh, H.H. Jr, and A. Lind. 1991. The structure of the herpetofauna assemblage in the Douglas-fir/hardwood forests of northwestern California and southwestern Oregon. Pp. 394-413 in: L.F. Ruggerio, K.B. Aubrey, A.B. Carey, and M.H. Huff, Wildlife and Vegetation of Unmanaged Douglas-fir Forests. USDA Forest Service General Technical Report PNW-GTR-285. Portland, Oregon. U.S. Forest Service.

U.S. Fish and Wildlife Service. 1997. Recovery Plan for the Marbled Murrelet (Washington, Oregon, and California populations). Region 1, U.S. Fish and Wildlife Service, Portland, Oregon (www.fws.gov)

Zabel, C.J., K. McKelvey, and J. P. Ward, Jr. 1995. Influence of primary prey on home range size and habitat use patterns of spotted owls (*Strix occidentalis*). Canadian Journal of Zoology 73:433-439.

Zabel, Cynthia J, J.R. Dunk, H.B. Stauffer, L.M. Roberts, B.S. Mulder, and A. Wright. 2003. Northern spotted owl habitat models for research and management application in California (USA). Ecological Applications 13: 1027-1040

Mailed Letter P-214

Response to Comment 1
The Board of Forestry has attempted to strike a balance between providing extensive data and technical analysis requested by previous DEIR commenters and providing a document whose conclusions are stated clearly and simply for public understanding. The complexity of the project, consisting of a complex set of management activities over a large landscape, necessarily results in some complexity in describing the project and its potential effects. Some portions of the DEIR are more technical than others. The impact summary tables at the end of each resource analysis section provide one example of a relatively non-technical presentation of the potential impacts of the alternatives considered in the DEIR and RDEIR. The DEIR provides a list of acronyms and abbreviations and a glossary to assist the reader (see DEIR Appendices 1 and 2). The Board has responded to specific questions or concerns about specific aspects of the DEIR that are raised in this and other comment letter.

Response to Comment 2
The amount of background information presented was what was judged as relevant to support analyses and conclusions specified in the DEIR. Much of this information was acquired and presented in specific response to public comments made on the previously circulated DEIR. Judicial action on the previous EIR found that it provided an inadequate discussion of project setting, necessitating the inclusion of a substantial amount of setting-related information. Setting information often examined JDSF management related issues at multiple levels: the Redwood Region, the North Coast, Mendocino County, the cumulative effects assessment area, and JDSF itself.

Response to Comment 3
The information presented is not “indiscriminant,” in that all of it is relevant to the species, management actions and measures, and impacts as analyzed at various scales. Much of the information depicts resource conditions at a regional and species level, in response to requests from numerous commenters on the previously-circulated DEIR. Further, the information is not intended simply to support an evaluation of the impacts of logging, but rather to address the comprehensive resource management program outlined in the plan. The DEIR provided the relevant elements of a watershed analysis to provide regional context and setting as well as JDSF ownership.

Response to Comment 4
While the discussion of resource conditions is presented at difference geographic scales, each of these scales (project area, study area, and region) are defined in the DEIR (Paragraph 1, P. V11.6.1-2 and in Figure V.3 on P. V-14) and treated consistently throughout the document. See also response to comment 3, regarding the need for analysis at these different scales.

Response to Comment 5
See response to comment 3.

Response to Comment 6
Although readers may vary about appropriateness of the information presented and the form of presentation, the receipt of nearly several thousand comments from the general public on the DEIR, many of which were substantive, supports the conclusion that the public was able to understand the document and form meaningful responses. One purpose of the FEIR is to clarify information and conclusions where the need has been identified by public commenter. See also the response to comment 1.

Response to Comment 7
The level of detail of the impact assessment is appropriate for a program level document. As individual projects are proposed, site-specific analysis will be conducted and mitigation developed and applied, as required. More detailed assessment and documentation of effects will be presented in individual THPs or other CEQA compliance for other project types.

Response to Comment 8
The EIR preparers have summarized substantial information from previous monitoring studies on a variety of species, including salmonids, aquatic amphibians, marbled murrelet, and northern spotted owl. Responses to habitat changes and effectiveness of management and mitigation measures are based upon a variety of information sources that are available, including onsite monitoring results, extensive watershed studies conducted on JDSF's Caspar Creek experimental watershed, assessment of population changes in response to habitat changes, habitat modeling, evaluation of research and management studies conducted in similar environments, and professional experience of preparers. This approach incorporates the best mix of available scientific and managerial information into the impact assessment. The EIR analysis did not ignore any available data sets on mitigation effectiveness. The plan proposes enhanced forest-wide monitoring to generate better information over time by which to evaluate the efficacy of management and mitigation measures.

Response to Comment 9
See response to comment 1. Board policy for the JDSF management plan is to incorporate a full array of management measures into the plan to actively manage for all natural resources, rather than emphasizing development of mitigation measures as after-the-fact additions to the plan through the EIR process. The impact analysis therefore considers most management measures as a part of the plan. The result is that the impact assessment evaluates a more integrated management plan. The DEIR and REIR explicitly offer the opportunity for the public to review adopted management measures, just as they could review them as mitigation measures. The proposed mitigation measures are found in the same part of each resource analysis section. Impact areas for which mitigations were identified to be necessary are summarized in two adjacent tables in the executive summaries of both the DEIR and RDEIR (DEIR Tables I.2 and I.3; RDEIR Tables I.1 and I.2). Each proposed mitigation measure identifies specific associated monitoring actions, including timing, scope, implementation responsibility, and monitoring responsibility. Monitoring and adaptive management are further supported by the monitoring and adaptive management program provided as a part of the management plan (see ADFFMP Chapter 5).

Response to Comment 10
Section VII.6.6.7 does not apply to "all discussion of biological resources," as the comment indicates, but only to wildlife and wildlife habitat.

Management measures in the JDSF management plan are not "functionally equivalent" under CEQA, except to the extent that individual programs, such as Timber Harvesting Plans, have been explicitly recognized by the legislature as functional equivalents to and EIR. The referenced page to the term "stand alone" document on page II-10 clearly referred only to a stated desire to present adequate information in the DEIR so that interested readers would not have to refer to review both the plan and EIR to make comments.

A substantial number of "management measures" which are equivalent to mitigation measures, have been adopted since the previous DEIR, in response to public and agency comments. These measures include substantial management to recover marbled murrelet habitat, manage and enhance large woody debris, and implementation of an accelerated road management plan (See DEIR Section 6.6.4; Pp VII.6.6-118-120), as well as snag management measures (V.6.6-131). The RDEIR included additional direction and measures resulting from Alternative G, such as Department of Fish and Game protocol botanical surveys for THPs and other large projects, designation of an additional 1,549-acre area for late seral forest development to support potential marbled murrelet habitat, designation of a 6,803-acre older forest structure zone, and significant restrictions on the use of clearcutting and other forms of even-aged management.

The public is encouraged to comment to comment on whether the THP practices and standards identified in the plan are adequate to achieve resource protection and management goals, or to comment on the many additional management and mitigation measures that have been included, or any desired additional measures that the public recommends.

Response to Comment 11
The commenter is mixing the Board's responsibilities for setting State Forest Policy, the goals and objectives of the proposed project and the Board's responsibilities under CEQA. The Board's policies related to managing State Forests are described in DEIR section II.2. The project goals and objectives are described in section III.2. The Board's CEQA responsibilities for certifying this EIR and approving the DFMP are found in section IV. CEQA requires alternatives be considered in an EIR that mitigate one or more of the proposed project's potentially significant effects and meet most of the proposed project's objectives (CCR §15126.6). The Board selected for consideration in the DEIR (and RDEIR) seven alternatives that met these requirements. It also identified eight alternatives which were dismissed from further consideration because they did not meet those requirements. The Board had already made the determination that the alternatives met the basic Board policy requirements in selecting the alternatives for analysis. The intent of an EIR is to disclose the potentially significant effects of a proposed project and provide mitigations and alternatives that reduce those impacts. The Board has the discretion, independent of their decision on this EIR, to approve or disapprove the DFMP (or ADFFMP) based on its ability to meet their policy intent or the goals and objective of the Plan.

Response to Comment 12
The extent to which each alternative meets plan goals and objectives is summarized at the end of the analysis of each resource topic. These tables provide a detailed basis for comparison of alternatives. The rationale and elements of each alternative are presented in the DEIR at pages VI-1 to VI-13 and in Table I.2, a 14-page table that summarizes significant effects of alternatives and associated mitigation measures, provides an accessible basis for comparing alternatives. Also, see response to Comment 11. A similar scope of information about Alternative G is provided in the RDEIR (see RDEIR pages II-1 to II-17 and Table II.4.)

Response to Comment 13
To the extent that data collected within the Forest exists, it has been utilized to help quantify and characterize the effects of forest management, and inform the analysis performed for the DEIR. These data sets include, but are not limited to vegetation typing, forest stand inventory, stream water temperature, and plant and animal survey and species/habitat relationships, where known. Because of its longstanding role as a research and demonstration state forest, and ongoing cooperation in data collection with partners such as the Department of Fish and Game and the National Council for Air and Stream Improvement, there is likely more detailed environmental data available for JDSF than any other comparable area in the Redwood Region. Detailed data sets at the level of single THPs do not exist.

The comment ignores the very substantial amount of research on watersheds and watershed cumulative effects that has been conducted at the Caspar Creek experimental watershed at JDSF. See DEIR sections VII.6.1 (Aquatic Resources), VII.7 (Geology and Soils), VII.10 (Hydrology and Water Quality), and section VIII (Cumulative Effects). The Board believes that the Caspar Creek studies summarized in the DEIR provide a firm basis for many of the watershed and aquatic resource impact conclusions in the DEIR and RDEIR. Results from the Caspar Creek study have been reported on in over 150 scientific papers that are available on the internet (http://www.fs.fed.us/psw/topics/water/caspar/caspubs.shtml). These papers include study results on changes in peak flows, sediment yield, hillslope erosion, fisheries, and macroinvertebrate communities. New study results are posted as they are available, with entries for papers completed in 2007 available.

Response to Comment 14
The DEIR/RDEIR does not rely exclusively on the Forest Practice Rules (FPR) in determining that no significant impacts will occur from implementation of the plan. Numerous mitigations and management measures that exceed the minimum standards in the FPRs have been included in the DEIR/RDEIR and ADFFMP as well as incorporating adaptive management and monitoring requirements. The DEIR/RDEIR relies upon JDSF data throughout the documents. The comment ignores the adaptive management and monitoring program that is included as part of the DFMP and

ADFFMP (Chapter 5 of both documents). This program provides exactly the kind of empirical testing that the commenter calls for. Additionally, the ADFFMP calls for the establishment of three Riparian Restoration Demonstration Areas to test various approaches to protecting and enhancing riparian and aquatic habitats.

Response to Comment 15
The lack of comparison data regarding pre- and post-harvest populations for wildlife, fish, and plants mostly reflects the lack of such data. The plan specifies a monitoring program that will provide additional information in the future that will help to validate the conclusions in the DEIR and RDEIR. Also, the comment seems to suggest that a scientific testing of hypotheses is a requirement and standard practice in CEQA documents. In fact, this is not a typical approach; rather, more typical approaches to predicting impacts are to model management actions and their effects, as was performed in this EIR.

Response to Comment 16
Comparisons of the effectiveness of current practices to past practices is a valid approach for evaluating whether application of these practices will be effective in the future. Comparative evaluations of practices have to be based on current conditions resulting from past actions. There is no way to redesign past actions to achieve the perfect experimental design conditions that appear to be advocated by the commenter.

Response to Comment 17
The suggestion that management under the plan will be conducted so as to only meet the minimum requirements of the FPRs is erroneous. Instead, the plan has incorporated a large number of management goals and additional management measures that maintain, enhance, and protect key environmental resources. Examples include protection of old growth forest stands, key habitat elements in other stands, application of riparian management prescriptions, and many others. This approach balances the desire to evaluate proposed management practices, protect resource values, and maintain options for future research and demonstration. The DEIR and RDEIR evaluate the potential environmental impacts of implementing all plan measures as a whole and do not rely solely on an assumption that the Forest Practice Rules adequately mitigate all impacts. Further, the commenter's line of reasoning ignores that fact the timber management is only one of the management activities encompassed in the management plan. Potential impacts of other program elements--such as recreation and improvement of the road system to reduce sediment inputs—also are addressed in the DEIR and RDEIR. Finally, the plan will evaluate the effectiveness of practices through monitoring and adaptive management, as recommended in this comment.

Response to Comment 18
Available inventory, monitoring, and research data were used in designing the plan alternatives. For example, the commenter overlooks the substantial Caspar Creek watershed research that was utilized in the DEIR (see also response to comment 13). The DEIR does not "assume" adequacy, but rather makes a determination based on available information, modeling results, public input and professional judgment. Where the evaluation determined that additional measures were needed or beneficial, they were identified as mitigation measures.

Response to Comment 19
The discussion of monitoring and adaptive management does provide information on the circumstance under which monitoring will be performed. Specific schedules and locations for monitoring cannot be specified now, as the program needs to respond adaptively to management actions. Such a level of specificity also is not appropriate for a program-level document, and an attempt to provide a specific monitoring program would increase the size of a document that has been criticized for being too lengthy.

Substantive decisions regarding monitoring and mitigation are explicitly the responsibility of the department professionals that are charged with managing JDSF. Other agency professionals have substantive roles in the THP process and in ensuring compliance with other laws and regulations, and

such involvement may lead to agency reporting or agency review of monitoring reports. Similar to other resource management agencies, the department and the Board have not established a scientific review panel to oversee all monitoring and adaptive management efforts on the JDSF.

Response to Comment 20
See response to comment 17. Also, the cited phrases do not appear in the referenced section of the mitigation and monitoring plan for aquatic resources. Rather, the description uses terms such as “will be monitored…every two years as part of a formal monitoring program”, and “completed THPs that have over-wintered for 1 to 4 years will be monitored”. Detailed monitoring plans will be developed for specific sites, areas, and management programs as required to meet the monitoring commitments in the EIR. These will be available for public review upon request.

Response to Comment 21
Grouping of all mitigation and monitoring requirements (MMRs) in a single section may have been preferable for those people desiring to review all provisions. The approach taken in the DEIR, of placing MMRs in the same area of each resource section, was done to allow those with specific interests to readily access this information. While this placement approach may be inconvenient for some readers, it hardly “precludes meaningful review” as this letter demonstrates. See also the response to comment 9.

The ADFFMP includes a compilation of most mitigation requirements and management measures (Appendix IX).

Response to Comment 22
See response to comments 9, 20 and 21. To narrowly define monitoring parameters in a program-level document is inherently contrary to the philosophy of adaptive management, which seeks to adapt management (in this case monitoring requirements) to fit the needs of specific situations and to respond to ongoing monitoring efforts to improve their performance over time. In addition, mitigation monitoring must evaluate the effectiveness of mitigation measures.

Response to Comment 23
Program EIR project descriptions describe a future series of activities or actions that are proposed. Individual projects proposed at a later date will provide the specificity necessary to ensure that project-specific potential impacts are addressed in accordance with the guidance provided in the Program EIR or at the project level. CEQA case law establishes that the alternatives need only relate to the proposed project as a whole and are not required to address all phases or project parts [Big Rock Mesa Property Owners Association v. Board of Supervisors (2d Dist. 1977) 73 Cal.App.3d 218 [139Cal.Rptr.445]]; and alternatives analysis for a plan level EIR do not need to contain the level of detail and specificity found in the project level EIRs [Larson Boat Shop, Inc. v. Board of Harbor Commissioners (2d Dist. 1993) 18 Cal.App. 4th 729, 741-746[22 Cal.Rpt.2d 618]].

Section VI of the DEIR presents a brief description of each alternative and provides a 38-page detailed comparison of the alternatives in Table VI.1 (matrix approach suggested in CCR 15126.6(d)). Analogous information is provided in the RDEIR (pages II-1 to II-17 and Table II.4). Within each resource area analyzed in sections VII and VIII (for cumulative impacts), the EIR also presents tables that provide an impact comparison and impact significance call for each alternative. The alternatives comparison table for wildlife resources is 29 pages in length. In addition to the check boxes to provide a general indication of impact levels, the brief text provides more fine-grained information. It is the Board's opinion that the specificity and detail provided is appropriate for a program EIR.

The commenters conclusion that the "failure to identify substantial differences in impact significance among the alternatives” is due to the alternative descriptions being "vague and indefinite" is incorrect. The impacts are often (not always) similar because the activities undertaken in each alternative are similar; restricted by the limitations imposed by the Board Policy and Public Resources Code intent. JDSF use is limited to research and demonstration resulting in a limited number of ways

to accomplish that mandate. The Board did not have the flexibility to propose alternatives that radically diverged from the management proposed under the DFMP. Alternatives that described establishing a state park or developing home sites might have revealed significant differences in terms of potential impacts, but would have been wholly infeasible and therefore not appropriate for consideration in this EIR. Instead the DEIR and RDEIR present 7 similar means for managing a demonstration and research forest, with minor adjustments in harvest levels, allocations of silvicultural prescriptions and protection measures. Consequently, it is difficult to detect significant differences in the resultant environmental impacts.

Response to Comment 24
See response to comment 1. The claim that the public is unable to evaluate and comment on the EIR is belied by the fact that the BOF received several thousand comments, many of which were substantive. Many comments were submitted by qualified professionals from other agencies. As a Lead Agency, the Board of Forestry as preparer of the EIR, assembled a team consisting of professionals with expertise in the disciplines covered by the documents. Convening scientific peer review panels to review EIRs has not been a standard or even infrequent practice in implementing CEQA.

Response to Comment 25
The plan did incorporate extensive watershed analyses conducted by both the department and Stillwater Sciences (CDF, 1999). Contrary to the comment, much of the DEIR incorporates substantial elements that are based on a watershed level of analysis and incorporate many of the elements for a watershed analysis as discussed in the Scientific Review Panel report (pp. 29 – 30) cited by commenter. This includes a watershed wide assessment of: peak flow impacts (Appendix 10), road related sediment impacts (Appendix 11), summary of timber harvesting activities by watershed unit (section VIII and Appendix 14), and management impacts to water quality (Appendix 12). The plan also has identified a large number of management measures (including both FPRs and substantial additional protection measures) and additional mitigation measures based on a Forest-wide analysis of resource conditions and requirements to achieve resource goals. These measures (including analysis of local resource conditions and appropriate management measures) will be implemented on a site-specific basis, as any sound management program would do.

California Department of Forestry and Fire Protection (CDF). 1999. Draft Habitat Conservation Plan/Sustained Yield Plan for Jackson Demonstration State Forest. Administrative Review Draft prepared by Stillwater Sciences, Berkeley, California, dated June 1999. Sacramento, CA.

Response to Comment 26
The decline of federally-listed salmonids has resulted at least partly as a result of past forest management actions that occurred under various sets of previous FPRs. Sediment related impacts related from past management activities are acknowledged in the DEIR to pose substantial and long lasting impacts. Sediment budgets conducted by JDSF and in support of the Noyo and Big River TMDL both clearly highlight road issues as a primary sediment source. The road management plan follows a widely accepted watershed-wide approach to inventory and prioritize roads repairs and road decommissioning. In addition to implementation of the current FPRs (which have been refined in response to recent aquatic habitat concerns), the proposed JDSF management plan alternative adopts a number of protection measures, including protection of all existing stands of old growth forest, recruitment of substantial amounts of late successional forest, protection of riparian areas through designation of late successional prescriptions for Watercourse and Lake Protection Zones; a management measure for large woody debris survey, recruitment, and placement; requiring maintenance of stream canopies at levels above the FPRs, and a commitment to address roads that are contributing to aquatic habitat degradation. Finally, extensive watershed analysis was incorporated in the management program in the proposed plan and its environmental analysis In short, past consequences created under very different management conditions does not serve as strong evidence of likely future conditions of aquatic habitat.

Response to Comment 27
The fine level of detail for the field based stream habitat data makes it somewhat impractical to present on forest wide maps. However, the stream habitat data, representing current conditions, is presented and discussed under section 6.1.3 Aquatic Habitat Conditions (DEIR pages VII.6.1-18 to VII.6.1-25). Further, two GIS-based watershed analyses similar to that which is discussed by the commenter are presented in the Cumulative Effects section (DEIR pages VIII-66 to VIII-75).

Response to Comment 28
The importance of JDSF and surrounding watershed lands to coho salmon is identified on page DEIR VII.6.1-37 and VII.6.1-54 to VII.6.1-56.

Response to Comment 29
The Board, the department, and JDSF all recognize and acknowledge the importance of coho stocks that use stream habitats on the Forest as a significant part of the regional metapopulation and recognize the importance of the population component to species conservation and recovery (See summary in DEIR Section 6.1.6, on pages VII.6.1-53 to VII.6.1-71). The extensive management practices proposed in the plan to protect and enhance aquatic habitats demonstrate this awareness and commitment to contribute to species recovery. It also seems appropriate to acknowledge that important stocks remain on JDSF because suitable habitat conditions have been maintained as a result of past and recent management practices, which have been more protective than on many surrounding lands.

The management goals for JDSF expressed in the ADFFMP make clear the concern of the Board and the department for protecting and restoring watersheds and fisheries. The Forest Restoration Goal has an objective to “Focus on restoring the more productive river and stream systems from the low gradient floodplains to intermittent streams in the upper reaches to improve the habitat conditions and populations of salmonids, other fish species, amphibians, and other plants and animals dependent upon riparian ecosystems.” The Plan’s Watershed and Ecological Processes Goal is to “Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities.”

Response to Comment 30
The DIEIR text was not intended to suggest that JDSF was no more important to coho than other surrounding lands. Rather, the statement simply intended to convey for purposes of cumulative evaluation that the populations are likely to have declined within the assessment area (which includes JDSF and adjacent lands within the same watersheds), and to acknowledge that populations within JDSF also have likely declined. It also does not intend to convey that JDSF lands are not important to recovery. In fact, they are recognized as among the highest value habitat for coho and other species, due to past management practices, and are treated to protect and enhance habitat value. One could just as easily argue that presentation of this information would generate public concern rather than “suppressing” public comment.

Response to Comment 31
The proposed management plan seeks to “minimize impacts of activities contributing to direct and indirect stream habitat degradation, and focus restoration efforts to benefit salmonid recovery” throughout the Forest. DEIR analyses, such as the GIS-based model (DEIR pages VIII-66 to VIII-72) that was developed to evaluate the recovery potential for planning watersheds that include JDSF and the larger assessment area, will provide an important source of information to further guide future management and restoration actions. For example, prioritizing road segments to be treated under the ADFFMP’s Road Management Program. The approach of the management plan is to avoid take of listed species, thus a Habitat Conservation Plan (HCP) approach is not directly relevant. However, the watershed assessment approach utilized in the DEIR and RDEIR and the ADFFMP’s designation of management measures to contribute to recovery are similar to typical HCPs.

Response to Comment 32
The commenter assumes incorrectly that comments provided by NOAA Fisheries on the 2002 DEIR were not addressed in the plan and DEIR. The Board agrees with the commenter and NOAA Fisheries that if take would occur under the plan, it would require authorization under Section 10 of the federal ESA.

Previously, the Department initiated preparation of an HCP to address potential for take on JDSF, but during its preparation, the Department recognized that it had the obligation and the opportunity to implement actions that would avoid take of coho salmon and encourage recovery of aquatic habitats. Therefore, it initiated preparation of the revised JDSF Management Plan that would incorporate these recovery-focused management measures.

During preparation of the 2005 DEIR, the Board incorporated a number of management and mitigation measures that respond specifically to comments received from the public and agencies (including NOAA Fisheries) on the previous versions of the DEIR. The following measures were included: The plan outlines an aggressive road management program intended to protect and enhance riparian and aquatic habitats over time. Riparian zones are either not harvested or are lightly harvested, primarily by cable skyline systems, using prescriptions designed to encourage development of late successional habitat conditions. Stream channels are protected, and shade canopy is retained at or near pre-harvest levels. An additional management measure for large woody debris (LWD) survey, recruitment, and placement, provides a process and standards for increasing the quantity of LWD in streams or available for recruitment. Additionally, instream and hillslope monitoring, as described in Chapter 5 of the DFMP, will provide further evidence of stream condition and attainment of water quality objectives.

In summary, the Board did not propose to mitigate for take that would occur under the plan as suggested by the commenter. Instead, it identified management and mitigation measures that would avoid take and would benefit coho salmon habitat, including habitat protection, enhancement, and restoration. Therefore, the Board does not consider it necessary to request authorization for incidental take of coho salmon under the ESA.

Although NOAA fisheries referenced it's 2002 letter based on the previous plan formulation and DEIR management and mitigation measures, which stated that the plan and EIR "do not support the assertion that JDSF timber harvest will avoid take of Federally listed salmonids", it did not include a similar comment in its 2006 letter.

Response to Comment 33
See response to above comments. As discussed in the Cumulative Effects and Aquatics section of the DEIR, a conservation planning framework was developed to evaluate the restoration potential of planning watersheds within JDSF and throughout the larger assessment area. A conservation and planning framework that guides management actions is a process that will evolve over time, and as the methodologies mature it will become integrated into future planning documents that guide management actions.

Response to Comment 34
The DEIR provides programmatic direction for vegetation management. Appendix 13 lists the aquatic toxicity of the herbicides proposed for use. Water monitoring of forestry use has constantly shown little water contamination by the herbicides proposed for use. The issue of listed salmonids and herbicides has received substantial attention as a result of the lawsuit regarding endangered salmonids - Washington Toxics Coalition v. EPA. The following findings resulted; Four of the five herbicides proposed for use by JDSF were reviewed. Imazapyr and Sulfometuron methyl were found to have "not-likely-to-adversely-affect the salmon and steelhead or their habitat". Tryclopyr TEA (amine form) was fond to have "no direct or indirect adverse effects" on ESUs (Evolutionary Significant Units) relevant to JDSF. For Glyphosate: "the use of glyphosate at label limits may affect the species of concern, but is unlikely to adversely affect" for the Coho ESU relevant to JDSF. Note that uses that would approach the label limit of 5 lbs. of active ingredient per acre are not anticipated

at JDSF. Forestry use Triclopyr BBE (ester form) was found to “May Affect, not likely to adversely affect” for some ESUs relevant to JDSF. There are additional buffering measures in effect for Triclopyr BBE near salmon supporting waters.

The DEIR does not establish a total herbicide or surfactant stream load. The RDEIR adds further restrictions on herbicide use. Individual projects will vary in the potential to deliver herbicides to water; requiring site-specific measures such as increasing buffer width or changing surfactants to reduce this risk. This document does not preclude site-specific projects from future CEQA analysis. Projects must comply not only with the management plan, but also with other regulatory requirements, the product label, county rules, and the site specific pesticide use recommendation. Protection of aquatic resources is recognized at many points.

The future quantity or timing of herbicide use is speculative at this point in time. Site-specific mitigation is developed to prevent significant impacts.

See also the responses to DEIR comment letter E-28 from Californians Against Toxic Substances.

Response to Comment 35
The DEIR and Appendix 13 included review of both scientific literature and relevant synthesis of literature such as risk assessments. Given the range of objectives, conditions, and options for treatment, the DEIR provides general level of analysis, recognizing that specific projects will require detailed analysis. From the programmatic perspective, impacts to salmonids will be prevented by using herbicides in a manner consistent with the project-level analysis and with legal requirements, utilizing relevant approaches including the appropriate concentration, formulation, application technique, and set-back from water sources. Until a specific project is proposed, mitigation for future herbicide use is speculative. Once a project proposes herbicide use, the use will be analyzed and mitigation will be required to address potential impacts.

When specific information on herbicide effects was presented to the Board, including information related to salmonids, it was reviewed in detail (see the response to DEIR comment letter E-28, received from Californians for Alternatives to Toxics) and no significant new information was identified.

Response to Comment 36
Detailed information on the distribution and abundance of aquatic amphibians is not available. Therefore, the impact assessment is based on known on-site information from nonsystematic surveys, known habitat relationships information, and predicted effects of actions on habitats. This is a widely-used approach for programmatic impact evaluation for many management plans (including many regional HCPs) and other projects, as the cost of acquiring comprehensive site-specific information is prohibitive.

Response to Comment 37
The discussion of impacts to the red-legged frog clearly states that that the species is found “in the vicinity” of aquatic habitats, and that they “can be found away from permanent water”. The terrestrial habitats used by the red-legged frog, western pond turtle, and foothill yellow legged frog, however, are well-documented to be located primarily in close association with aquatic habitats. Proposed protection of WLPZs will protect aquatic habitat as well as the primary upland habitat used by sensitive amphibian species. For example, the Management Plan contains specific standards for the retention of snags and downed logs that are operative on both riparian and upland areas.

Response to Comment 38
The JDSF plan specifies that springs and seeps that provide habitat for non-fish aquatic species will receive the same protections as are provided to Class II streams. In addition, the FPRs (Title 14 CCR 916.5) specifically require the identification and protection of springs, seeps and other isolated wetland features during timber harvest planning. These measures include provisions for buffer

zones, canopy retention, equipment exclusion, and protection of the soil surface, among others. The JDSF plan also specifies protection of wetland areas by restricting activities.

Response to Comment 39
The need for landscape-level analysis of amphibian impacts depends on the likelihood of impacts that would result from multiple actions in different locations. The EIR evaluated the adequacy of site-specific management measures applied throughout the Forest, including WLPZ protection, maintenance and recruitment of late-successional habitats in WLPZs, implementation of a 25-foot no-harvest inner protection zone adjacent to all Class I and Class II watercourses, protection of old growth forests, recruitment of late successional forest in upland areas, and protection of isolated wetland areas and concluded that little or no impact would occur to amphibians. The cumulative analysis also looked at water temperature and other habitat conditions on surrounding lands and their effects on aquatic resources within JDSF, with the actions proposed in the plan, and concluded that habitats would be maintained and enhanced for amphibian species. There is no reason to believe that a more intensive analysis of landscape conditions under the plan would detect a different effect on amphibian species.

Response to Comment 40
This comment assumes that “potentially significant large-scale indirect spatial impacts” would occur to amphibian species. No evidence is provided, however, to support this contention. The EIR preparers documented in detail a rationale for why amphibian habitats would improve through implementation of the proposed plan and many of the plan alternatives. See response to comment 39.

Response to Comment 41
Comment noted.

Response to Comment 42
Lost Lake occurs within JDSF. McGuire’s Pond is located within private lands adjacent to and upstream of JDSF. The assessment reflected in the DEIR focuses on plants exhibiting the highest potential for impact, which are those that would be found within project areas. The DEIR notes that the lists do not include minor vegetation communities (page VII.6.2-13). Project-specific plant survey would include survey for species of concern associated with aquatic ecosystems. Many of the plants that favor aquatic environments were evaluated in Appendix 7B-3, but not included in the list found at VII.6.2-14.

JDSF has benefited immensely in working with Department of Fish and Game botanist Clare Golec in developing relevant plant lists used in the DEIR. The lists are intended to be dynamic, as knowledge of rare plant biology improves.

Response to Comment 43
The analysis considers the factors with potential to impact aquatic plants. The evaluation process (DEIR Appendix 7B-3) found that aquatic plants were “unlikely” to be found in areas disturbed by timber management. The document provides planning and programmatic analysis and direction for plant survey. Salmonid protection measures will reduce the risk of direct or indirect impacts to rare aquatic plants. The watercourse protection zone will minimize direct disturbance and indirect effects such as sediment delivery or canopy reduction. The DEIR does not eliminate the need to conduct site-specific analysis for unique aquatic resources such as Lost Lake, or other projects near habitat for aquatic plants. The cumulative effects analysis (VII-88) includes a definition and discussion of potential impacts to rare and endangered aquatic plants.

Response to Comment 44
The commenter assumes that survey for rare plants will not be conducted. In fact, scoping and survey are proposed (DEIR VII.6.2.23). For Alternative G, the provision for survey will be clarified as follows; “For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000)." This will result in

floristic surveys for the effected areas. On smaller scale projects, the survey effort will be appropriate for the level of analysis and the risk of impact to rare plants. This provision is included in the ADFFMP.

Response to Comment 45
In discussing "CDF practices," the commenter seems to be referring to the Department's role in review of THPs. The DEIR is not a Timber Harvesting Plan but a planning document that provides programmatic focus for vegetation management. Please see DEIR II8-15 for a discussion of the role of the Forest Practice Rules relative to the Management Plan for JDSF.

JDSF staff have found the CNDDB and CNPS databases useful for initial scoping, but not as a substitute for survey. Reporting by local timber management firms, consultants, and DFG personnel provide useful information on habitat attributes that is not available in the literature. Since 2002, JDSF has submitted all new CNPS list 1 and 2 rare plant occurrences to CNDDB to help support this resource. See the response to comment 44 above for the language regarding conduct of DFG 2000 protocol surveys.

Response to Comment 46
The commenter is apparently referring to Appendix 7B-2. The species descriptions were based primarily on the references cited. The characterization of the state of knowledge and of potential threats is based on the cited references, primary the CNDDB and CNPS databases. Where local knowledge was used to supplement the reference material, the risk to unprotected occurrences was described. The DEIR incorporates appropriate protection measures.

Environmental analysis typically includes multiple steps, including the identification of resources that could be affected, an assessment of potential effects, and implementation of measures or mitigation to reduce the level of impact. This process is generally followed by monitoring and adaptive management, in consideration of the effectiveness of the mitigation. The descriptions of threats to species listed in appendix 7B-2 are one aspect the first step. The DIER includes provision for survey and the establishment of protection measures. These are listed in the Specific Management Actions section. The ADFFMP specifies the use of DFG survey protocol as the standard for THPs and other large projects with the potential for negative effects on rare plants. Significant impacts are not expected to occur.

Response to Comment 47
See response 44 for clarification of the plant survey protocol. The guidelines include items listed in the comment letter, with the exception of DFG review and consultation. The THP review process includes participation by DFG. Surveys will be conducted and the resulting reports provided to DFG. JDSF staff intend to consult with DFG on appropriate protection measures, and DFG, as a member of the review team, may make recommendations for the protection of plant species.

Response to Comment 48
The finalized plan specifies pre-harvest but not routine post harvest surveys. The commenter states the objectives for post harvest surveys should be to determine if the protection measures failed either directly or indirectly. The Board generally agrees with this statement. Harvest areas are generally inspected by reviewing agencies following completion of logging activity. One of the purposes of the inspections is to evaluate the protection that was provided to resources of concern within the area. JDSF staff has conducted informal monitoring and problems associated with shade tolerant species have not been noted. The most common form of mitigation applied in project areas is complete avoidance of rare plant occurrences. As an example, JDSF staff work directly with DFG botanical staff to develop protection measures for *Astragalus agnicidus* (a shade intolerant species) that occurs within the Forest. The DFMP includes direction regarding plant monitoring. The DEIR (Section 6.2.7, Additional Management Measure 1) states ".... planning continued monitoring for rare plant occurrences in areas at risk for invasive plant infestations."

Response to Comment 49
The DFMP includes provision for monitoring and adaptive management. Please see response to comment 48 above. The finalized plan includes for Periodic Monitoring and Adaptive Management (Chapter 5), "Floristic surveys in some area to gain a better understanding of the relationships between local plants their distribution and their habitats."

Response to Comment 50
The State CNDDB and CNPS plant lists include many species at the edge of their range that are more abundant elsewhere (example *Lycopodium clavatum*). This phenomenon is well recognized by the CNDDB – NatureServe system that includes a state and global rating for species. Conversely there are species recognized as locally common but globally limited. CNPS rating "2" refers to plants that are rare in California but more common elsewhere. The CNPS also includes ratings of "3" and "4" for plants with more uncertainty or of limited distribution. The concerns the commenter listed have been recognized and included in plant conservation efforts. The DEIR recognizes these efforts and utilizes their evaluation of specific species status. Regarding the concern for monotrophic plants, please see the lengthy response to California Department of Fish and Game comment 30 (DEIR agency comment letter A-5) for proposed special concern area for mature Douglas-fir/hardwood stands on gentle slopes.

Lomolino and Channell's 1998 paper cited by the comment was a commentary responding to an earlier review of their work on range collapse of endangered mammals. It does not provide specific information on plant species in the JDSF region.

Pacific yew was harvested elsewhere within its range when the species was the sole known source of taxol, a cancer treatment substance. At JDSF, this species is uncommon, and found primarily near watercourses and within the protection zone for those watercourses. The species is not considered to have commercial value, and is not listed. Potential impacts to the species would be minor and incidental in nature.

The DIER recognizes both listed plants and the habitats where they are found. The change in habitat based on functional plants group analysis (DEIR VII.6.2-30 to -36) uses special concern species as a basis. It is flexible enough to incorporate plants without a specific listing status. There is considerable scientific literature review on pages VII.6.2-37 to -40.

The legal status and listing of plants is based on known science concerning the species. The commenter provides no new information to support the stated premise. The DIER states that the special concern list is dynamic, and species will be added and removed as knowledge rare plants improves. The DFG survey protocol will be utilized for botanical surveys conducted for THPs and certain other projects on JDSF (see response to comment 44). This approach will help contribute to knowledge of rare plants over time.

We also note that the ADFFMP proposes very low levels of even-aged management, particularly clearcutting. The ADFFMP limits even-aged management of all forms to a maximum of 2,700 acres (or 5.5 percent of the Forest area) per decade. Within this total, clearcutting is limited to 100 acres (0.2 percent of the Forest area) per decade where strictly necessary for purposes of research, demonstration, forest health, difficult regeneration situations. Up to an additional 400 acres may be clearcut per decade, but only for specific research purposes that cannot reasonably be met through any other method. The comments regarding even-aged management will be further discussed in context in the following response.

Response to Comment 51
The commenter speculates that several impacts may occur, based upon the following eroneous assumptions: herbicide operations conducted after even-age harvest would be broadcast in nature; all plants with the exception of conifer crop trees would be killed; and that existing rare plant occurrences would not be protected and new occurrences of disturbance-following rare plants not be detected or protected.

The DEIR provides a brief list of situations were herbicides may be used. One of these is to enable successful reforestation, when the control of hardwoods may be desirable to improve the level of conifer site occupancy. This section also describes how broadcast burning of harvest units has declined. Broadcast burning commonly results in a dense growth of ceanothus, manzanita and hardwood sprouts. This brushy growth can be reduced by selected treatment of competing vegetation, which reduces the necessity of broadcast burning, and the subsequent potential need for wide-spread herbicide use. Regionally, broadcast burning has declined, retaining more woody material on site for resource concerns, and reducing the amount of vegetation that would impede successful conifer regeneration. No broadcast burning has been conducted in JDSF for over a decade. In the eastern, drier parts of the forest, hardwoods are present at higher than normal densities as a result of past management practices and the historic occurrence of repeated fires.

Alternative G (see RDEIR pages II-10 to -11) and the ADFFMP (see Chapter 3) place additional restrictions on herbicide use. The ADFFMP includes the following in Chapter 3: "Adjusting imbalance in conifer/hardwood stocking levels by utilizing herbicides will be limited to specific reforestation situations on the east side of the Forest. In specific areas toward the east end of the forest, high tanoak stocking levels are capable of preventing native conifer establishment and growth. Herbicides may be used to decrease native hardwood stocking levels only when other options: are prohibitively expensive, dramatically increase fuel loading, are overly damaging to conifer regeneration, or are not likely to be successful." This direction makes it clear that selective treatment of hardwoods by herbicides would be limited in scope and highly unlikely to result in the effects postulated by the commenter.

Rare plant occurrences will be identified by botanical surveys conducted during project planning, and will be protected during conduct of harvesting and reforestation efforts. Selective treatment of one or two hardwood species would not result in the equivalent of a broadcast application of herbicides. Rare plants would not be treated with herbicides or otherwise removed.

Response to Comment 52
The commenter's premise that there would be off-target effects of herbicides in water is speculative. Please see the response to comment 34 for more detail. The DEIR discussion of impacts to rare plants (VII.6.2-26 to -29) focuses on the measures needed to prevent significant effects. This section recognizes that surveys are key to protecting rare plants. The RDEIR Alternative G and the ADFFMP include this direction: "For timber harvesting plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (California Department of Fish and Game 2000)." The Board recognizes that surveys are key to detection and finds the determinations of significance for plants to be well supported.

Response to Comment 53
The list of species of special concern does not ignore epiphytic plants. An epiphytic lichen, *Usnea longissima*, is included on the special concern list (VII.6.2-14). With regard to old tree canopies, the management plan measures to protect old growth trees, aggregations, and stands will benefit the epiphytic plants found in this habitat. In addition, the 6,803-acre Older Forest Structure Zone described in the ADFFMP, in addition to the late seral forest development in Class I and II WLPZs, will provide spatial continuity for these and other species.

Response to Comment 54
Plants become reestablished rapidly following harvest. The DEIR and RDEIR recognize the role that disturbance plays in invasive weed management. Most local occurrences of invasive plants are associated with temporary soil disturbance and coincident shade canopy reduction. These can occur in relation to both even-aged and uneven-aged management, though canopy reduction tends to be more accentuated with even-aged management techniques. As the canopy becomes re-established invasives tend to decline.

The Integrate Weed Management (IWM) Program that is included in the ADFFMP provides measures for addressing invasive species issues. Many measures are available on a site-specific basis to reduce the level of introduction and to prevent the spread of invasives. These measures include the retention of shade canopy in areas where soil is disturbed, rapid re-establishment of native species, cable yarding to reduce or prevent the occurrence of bare soil surfaces, and target removal of invasive plants by pulling or through the use of other treatment measures.

See also the response to comment 50 regarding the low level of even-aged management that will be allowed on JDSF.

Response to Comment 55
IWM is an ecologically-based approach capable of addressing the interactions between weeds and harvest-related disturbance. For example, two of the three species listed by the commenter have propagules spread by animals or wind. Managing to prevent the spread of those species cannot be accomplished by simply cleaning equipment. A superior method of control is to alter conditions favorable to establishment and spread, so that infestations are less likely to occur and are more easily controlled.

Timber harvests will vary in their potential to increase invasive weeds based on existing conditions and proposed actions. The measures developed must be project specific. The ADFFMP Planned Actions for invasive weeds Chapter 3 include the following “Staff will consider the impacts of exotic weeds to native vegetation during the normal course of project development. If there is a high likelihood of weed spread due to a nearby infestation, mitigations will be considered where appropriate and consentient with IWM to minimize the spread of invasive weeds.”

A focus upon managing for environmental conditions that limit invasive weed habitat is a principle that can be applied to harvest proposals. For example, WLPZ protection measures for Class I streams call for 85% overstory canopy cover in the inner 75 feet and 70% in the next 125 feet, making these areas less conducive to Himalayan berry infestation. Other adaptive management strategies can be used to avoid expanding invasive weed populations along roads and in recently disturbed areas, such as harvest units.

The DEIR and REIR recognized that rare plants can be affected by invasives, primarily due to competition for growing space and needed resources. DEIR Additional Management Measure 1 recognizes that protection of rare plants (candidate, sensitive, or special concern species) from invasive plants is a high priority for Integrated Weed Management activities.

See also the response to comment 50 regarding the amount of even-aged management that will be allowed on JDSF.

Response to Comment 56
The DEIR is programmatic with respect to vegetation management. The exact scope of future projects cannot be estimated in detail, so precise quantities of herbicide utilized cannot be predicted or specified. The DEIR identifies the specific herbicides most likely to be used on the Forest (see Appendix 13). By implementing IWM principles, the Department will manage more efficiently and with less potential for negative effects by invasive plants or control measures as time passes. The comment speculates with respect to the utility of minimization of herbicide use. The use of fire or heavy equipment for vegetation management can result in negative effects that exceed those of herbicide use. The consideration of site-specific projects with varying environmental conditions and treatment options are speculative and beyond the scope of this document. The potential for impacts associated with these projects will be considered in detail as the projects are planned and assessed.

Response to Comment 57
The comment provides no basis for the supposition that herbicide use could result in a potential significant effect. In evaluating herbicides for potential use, the Department considered both product labels and physical characteristics to understand which herbicides would be appropriate to use at

JDSF. The ADFFMP includes limitations and requires planning prior to any use. Herbicide use is a management technique with inherent advantages and disadvantages, as are other techniques like burning or mechanical treatments. Vegetation management must consider the variations in site conditions, species, and management actions

With regard to the suggested programmatic measures, see response 44 above. Early treatment of invasives may be beneficial in some situations.

Response to Comment 58
The DEIR (Section VII.6.3.-16) includes this information on fertilizer use: "Soil fertilization may be used to increase the growth of desired forest tree species. Fertilization generally involves aerial or ground-based dispersal of granular fertilizers. Fertilization will not be used as a stand improvement practice on JDSF except in conjunction with a specific research project. One fertilization trial was completed in the 1970s with inconclusive results. No fertilization research projects are currently under consideration." This section states that fertilization would only be used as part of a research project. The document does not provide for wide-spread fertilization. If fertilization were to be proposed as part of a research study, project-specific analysis would be needed to determine the potential for impacts to sensitive areas or rare plants. The ADFFMP includes guidance to maintain the current distribution and species composition for the pygmy plant community and protect it from human disturbance. Given this direction, projects that could affect the Pygmy community would be restricted. If a research project were to be undertaken, careful study of invasive and native species response would be of value.

Response to Comment 59
See response to comment 58. Currently, fertilization studies are not under consideration. The text discloses past use and does not prohibit research in the future. Restricting research options on a public forest may not only limit knowledge of the main effect of fertilization, changes in crop tree growth, but also indirect effects such as changes in flora. Actual fertilization rates and locations would be dependent upon future research proposals, if any. The DEIR is intended to provide programmatic direction, and analysis of fertilization studies would be most appropriate at a project level.

Response to Comment 60
The comment letter speculates that future fertilization would follow logging related nutrient fluxes with results that may be potentially significant. In general nutrients are considered to be a possible limiting factor when trees fully occupy the site, not immediately after harvest. Any future harvests that are associated with fertilizer study would consider the timing and mitigate appropriately to prevent cumulative effects. As stated in response 58 above, the DEIR recognizes the importance of protecting the pygmy community.

Response to Comment 61
The level of detail that the comment requests is beyond the scope of the EIR. The DEIR provides programmatic direction with respect to vegetation management. The IWM goals and actions are broad-scale measures that emphasize management with a sound ecological basis and prevention orientation. Given the scope of conditions, projects, and species, analysis must be site-specific. The DEIR does not relieve the department from conducting the appropriate site-specific analysis before undertaking any weed management activities. The ADFFMP includes the Monitoring and Adaptive Management Goal to protect and restore the diversity of plant species across the forest. The Plan includes as a planned action, the consideration of project development and mitigation to minimize the spread of invasive weeds. If the project has a potential for resource impacts from invasive weeds, management requirements and mitigations can be developed. The measures will vary with the project and could range from establishment of undisturbed buffers, to retention of shade, or treatment of newly-established invasive plants. The various types of measures available for application are identified in the DEIR and ADFFMP.

Response to Comment 62
Regarding impacts to plants of special concern, the DFMP states; “Upon determination that a proposed action is likely to result in a significant adverse effect, mitigation measures proposed to substantially lessen or avoid the impact will be included in project-associated documentation.”

The DIER recognizes the threat of invasive plants. Additional Supplemental Mitigation 1 (Section VII.6.2.7) provides for “...planning continued monitoring for rare plant occurrences in areas at risk for invasive plant infestations.” The document provides appropriate protection measures for plants of special concern .

Both species specific and site-specific mitigation measures should be based on state of the art knowledge of plant biology, the specific situation at a given occurrence, and the types of effects anticipated. The comment letter lists four variables that would be relevant when determining buffer size; slope, soil, population structure, community type. Add to that list; the nature of the surrounding disturbance, the expected post project conditions, the shade tolerance of the plant species, the individual species requirements (for example, pendant lichen, a monotrophic plant). Fixed buffer requirements may be found to be inadequate or even counter productive in specific situations. Project-specific mitigation measures for individual species can use the most recent information on rare plants to ensure mitigation and protection measures are effective. Given the range of plants involved, the most effective protection measures will be site-specific.

The commenter speculates that buffer provisions should address retention of pollinators or seed dispersal vectors. This is a complex and little understood area, subject to speculation. The cumulative effects assessment (DEIR Section VII.6.2-37 to -40) includes a discussion of these issues. Significant effects are not expected, based upon protection measures and the range of forest conditions, patch sizes, and the level of connectivity.

Consultation with DFG is part of the scoping process, and will occur during the planning phase of individual projects, including THPs. Consulting with DFG and others will provide JDSF with an opportunity to improve knowledge of effective plant protection measures from beyond JDSF.

The commenter's supposition that there would be no enforcement of protection measures is without basis. Protection measures and other forms of mitigation become part of the THP for which they are designed. A supposition that there will be a failure of protection measures is speculative. Site-specific problems cannot be anticipated, so creation of specific programmatic remedies beyond those addressed in the DEIR and management plan would not be appropriate.

JDSF staff has conducted informal monitoring subsequent to timber operations associated with THPs. Problems associated with site-specific protection measures have not been noted, regardless of shade tolerance. JDSF staff is actively working with DFG botanists to develop measures to protect the *Astragalus agnicidus* (shade intolerant species) that occurs within potential operating areas and along roads.

Response to Comment 63
The assumption that any failures of protection measures would result in local extinction is poorly supported. To date, CNPS 1 & 2 rare plants found within JDSF are known to more than one location, and the intent of protection measures is to avoid or limit the extent of potential damage to individual plants or local populations. The conduct of botanical surveys using the DFG protocol before timber harvests and other large projects with the potential for negative effects on rare plants, will help to ensure that rare plants are identified and addressed before ground-disturbing activities commence.

The comment assumes that even-age management will take place at a large scale. Alternative G provides for even-aged management on no more than 26% of the forest. Planned rotation ages range from 60 to 150 years, which tends to disperse even-aged cutting in terms of both space and time. Even-aged management is further restricted in terms of the area that may be treated each decade, as detailed in the response to comment 50.

The letter notes the value of large forest patches as refugia for rare plants. Other areas will provide that function as well, including the watercourse protection zones, old growth groves, late seral development areas, older forest structure zone, retained patches of trees in areas managed on an even-aged basis, and areas managed on an uneven-aged basis. One-third of the Forest will be managed for late seral habitat development, older forest structure, and old growth. Many rare plants are associated with disturbance and fire as well. The reference to "hot spots" is not specific. Pygmy forest is fully protected. Please see response to California Department of Fish and Game comment 30 (DEIR agency comment letter A-5) for a discussion of the plans spatial and temporal attributes that will provide habitat for a range of plants.

Response to Comment 64
The comment makes reference to a "critical omission" of "botanical inventory or reconnaissance-level original contemporary baseline data on the flora of JDSF." The analysis conducted for the EIR makes use of the best data that is readily available. Future surveys will build upon the level of species-specific data available to the department and other agencies. Areas of the Forest have been surveyed for rare plant occurrences over the past several years. In the future, the level of survey would increase as the ADFFMP is implemented.

Significant impacts are not expected to occur, based upon the proposal to conduct plant surveys and apply management measures and mitigations to protect plant species.

Response to Comment 65
Consideration of issues closely related to wetlands can be found in the section specifically dealing with wetlands (DEIR section VII.6.5), and in other areas of the DEIR, including; Aquatic Resources, Botanical Resources, Wildlife and Wildlife Habitat, Geology and Soils, Hydrology and Water Quality. Wetlands generally lie at the interface between aquatic and terrestrial environments.

The wildlife section includes descriptions of habitat for wildlife analysis purposes. An exhaustive discussion of wetlands in this context is not necessary.

Regarding the citation from the wildlife analysis section of the DEIR (page VII.6.6-21), this section refers to regional conditions. The discussion makes no claim that the four habitat types are found on JDSF.

The regional setting subsection of the wildlife section lists habitats, not wildlife species. The remaining subsections include habitat information for specific amphibians, including the red-legged frog. Given the fact that wetland issues overlap several resource areas, the information provided is adequate.

Response to Comment 66
The commenter appears to be referring to the wildlife regional setting section. Wetland sedge and rush areas, and riparian backwater marsh patches, are frequently included in riparian lands. This fact is noted in the DEIR Aquatic Resources section (page VII.6.1-5). The DEIR Botanical section notes that pygmy forest can meet wetland criteria (VII6.6.2-7), and includes recognition of Sphagnum Bogs. The DEIR Botanical section also includes species that can inhabit wetlands in both the special concern species section and in the cumulative effects analysis of wet areas.

The commenter notes that small-scale features, such as springs and seeps and sedge-juncus wetland patches are likely to be found in potential timber harvest areas. The premise that these areas will be directly impacted is not valid. Hillslope springs and seeps are recognized as wetland areas and afforded the same protection as Class II watercourses under the Forest Practice Rules. Watercourse protection zones are typically extended to include adjacent sedge-juncus wetlands. Sedge or juncus occurrence is not limited to wetlands. A complete, mapped inventory of small wetland features has not been produced, and is not be feasible at the present time. Seeps and springs are noted and mapped during THP preparation, a well as the development of other projects. Sedge-juncus wetland would be appropriately and separately mapped when independent of watercourse protection zones.

Regarding Table VII6.2.3, the purpose of the table is to aid in the evaluation of potential cumulative effects to plant functional groups. The botanical section contains a list of communities, some of which are not found at JDSF, but which are appropriately listed under the Regional Setting section. As noted in the response to comment 65, this is the same situation in the wildlife section.

Response to Comment 67
The comment postulates that adverse effects will occur, based on several assumptions. The first is that the DEIR contains no "mitigation survey protocols for advance identification of wetlands", so wetland areas will not be recognized. No forest-wide survey of wetlands currently exists, but a thorough examination of project areas will occur during the planning phase. Wetlands will be identified and properly located and protected as the result of the planning effort. The identification and mapping of aquatic features is a key THP preparation process. The second premise is that surveys would not recognize rare plants in wet areas. Given the fact that DFG protocol surveys will be conducted by individuals familiar with the identification of rare plans, this is unlikely.

Response to Comment 68
The ADFFMP includes recognition that rare plant protection includes consideration of altered hydrologic conditions as a result of project implementation. In the previous response, the quality of mapping is addressed. During THP review, the evaluation of aquatic protection is subject to review and mitigation by CAL FIRE, DFG, and the Regional Water Quality Control Board. The potential to alter hydrologic conditions is a consideration addressed by the Forest Practice Rules (Title 14CCR 912 and 916). Complex hydrology that presents a potential instability risk is evaluated by a Certified Engineering Geologist. Watercourse protection zones are established for watercourses, springs, and seeps. Other wetland areas would be evaluated for aquatic species and the need for buffer zones. These measures will ensure that impacts to wetlands and associated vegetation are less than significant.

Response to Comment 69
The intent and presentation of this section could have been clearer. The paragraph referred to by the commenter is an introduction to the impacts section. It is not intended as a declarative statement of the impacts of the plan. Rather, it was intended to identify effects that would be considered significant impacts, if they were to occur. The habitat and species impacts analysis continues on DEIR Pp. pagesVII.6.6-121 to VII.6.6-130.

In reviewing this section, the Board also recognizes that it does not convey the different standards that were used in determining significance for the two groups: (1) rare or endangered species and (2) candidate, sensitive, or special-status species. To clarify this section, the first sentence of the paragraph under "Habitat Modification Impacts" (DEIR page VII.6.6-121) is deleted and replaced with the following:

> **For determination of impact significance to listed threatened, endangered, and rare wildlife species, impacts would be considered significant if they were to result in direct mortality, permanent habitat loss, habitat modification that reduces its suitability, reduced reproductive success, or a "take" as defined under FESA or CESA. Populations of candidate, sensitive, or special-status species generally are more secure than for listed species, and therefore can tolerate somewhat greater impacts. Therefore, impacts to candidate, sensitive and special-status species are considered significant if they would result in population or habitat loss, detrimental habitat modification, or impairment of reproduction that would apply to a substantial portion of the population on JDSF lands or in the surrounding region.**

Response to Comment 70
The lack of reference in this section to the comparison of alternatives is intentional. As noted in response to comment 69, the commenter understandably misunderstood the intent of this section. The evaluations for individual listed and other sensitive species in the subsequent section "Species Specific Impacts" (pages VII.6.6-122 to -130) and in the 24-page analysis of alternatives ("Spatial Pattern Analysis for Species of Concern" (pages VII.6.6-216 through -240) explicitly includes information on habitat abundance and suitability, habitat distribution, species life history, special-habitat element requirements, and other biological dimensions in the effects evaluation.

A non-spatial analysis of changes in habitat suitability was performed for general non-sensitive species, using the Department of Fish and Game's CWHR system which is considered an appropriate coarse-grain assessment tool for this purpose in a programmatic EIR. Contrary to comment, the CWHR system, although non-spatial, incorporates life history and expected population levels into model predictions. The limitations, benefits, and assumptions inherent in a variety of wildlife habitat relationship modeling tools were considered prior to application to alternative analysis. The CWHR was judged to be the best modeling system available to examine trend in habitat capability for as many terrestrial vertebrates as were likely to occur within the project area. CWHR is the most comprehensive wildlife information system for vertebrates in California today -- containing life history, geographic range, habitat relationships, and management information on 692 species of amphibians, reptiles, birds, and mammals known to occur in the state. There are currently approximately 900 professional users of the CWHR System, representing biologists, environmental scientists, researchers, and land managers from public and private organizations throughout California. The System represents nearly 30 years of work by wildlife biologists, vegetation ecologists, geographers, land managers and planners, computer programmers, Geographic Information Systems (GIS) analysts, statisticians, modelers, database managers, research writers, and wildlife artists working in a wide array of public and private organizations devoted to resource protection.

Response to Comment 71
Contrary to the commenter's assertion, a spatial analysis was conducted for listed and other sensitive wildlife species and incorporated information on habitat area, area of suitable habitat, number of patches of habitat, mean patch area, edge, and distance to other suitable patches. This analysis also incorporated specific information on future timber harvest locations and harvest treatments. See "Spatial Pattern Analysis for Species of Concern" (DEIR pages VII.6.6-216 through -240) which explicitly includes information on habitat area and suitability, habitat distribution, species life history, special-habitat element requirements, and other biological measures.

Two GIS analytical tools were used to produce the DEIR spatial habitat assessment. Bioview3 is a modeling tool added to the California Wildlife Habitat Relationships (CWHR) System4 Version 8.0 software in 2002 and was originally produced by the United States Forest Service Pacific Southwest Research Station, Redding, California. In Bioview, vegetation maps of potential future landscapes were created based on expected land use change under each of the alternatives. Reproduction, cover and feeding values for each polygon of habitat and stage of forest development were used to develop each habitat suitability map for each of the selected species by alternative.

In order to evaluate and report the relative magnitude of differences between DEIR alternatives over time, several common landscape measures available from the FRAGSTATS® software program were applied to the BioView mapping products. These measures included total class area, number of patches, mean patch area, mean nearest neighbor, and total edge index. The models are validated in each case with a GIS data set of occurrences of the species. Each of these spatial landscape measures, considered separately, has limitations relative to assessing the biological needs of a species and are described in the DEIR. However, when considered together they provide one means of DEIR alternative evaluation and spatial quantification of habitat heterogeneity and trajectory over time.

The modeling approach was presented as a poster at the annual meeting of the Western Section of The Wildlife Society in February of 2007 and was well received (Demonstration of a Wildlife Modeling Tool for Predicting Species Presence and Viewing Habitat Suitability across a Landscape (Monica D. Parisi, Marcia D. Scavone-Tansey, Chris Keithley, Robert Motroni, Ronald D. Rogers).

Response to Comment 72
Relatively few mitigation measures were identified because most large-scale measures to maintain, protect, and recruit desirable wildlife habitat were incorporated up–front as management measures in the plan. These measures include the late seral development area in the Russian Gulch/Lower Big River area and the Woodlands Special Treatment area, the late seral development areas along Class I and II WLPZs, the Older Forest Structure Zone, protection of all old growth groves and aggregations, limitations on the areas of the Forest available for even-aged management, and the rate at which even-aged management may be applied. The Board believes that this approach is superior in fully addressing all resources. A conceptual model of late seral forest succession following the selective harvest of an even aged stand on JDSF is provided in DEIR Section 6.3.5. Specifically, expected changes in forest stand structure in the near term (15 years) (Table VII.6.3.5) and the longer term (100 years) (Table VII.6.3.6) (DEIR pages VII.6.3-34 through -38) are described. Similarly, silvicultural methods that may occur in special concern areas are addressed on DEIR pages VII.6.3-7 through -9. The DEIR and RDEIR do not support the commenter's apparent position that large-scale habitat impacts are expected.

Response to Comment 73
See responses to comments 70 through 72.

Response to Comment 74
All of this information is prominently presented in the setting section on the marbled murrelet (see DEIR pages VII.6.6-88 through VII.6.6-90).

Response to Comment 75
In addition to the referenced project-level mitigations, several programmatic measures are provided for the Murrelet, including designation of the Russian Gulch/Lower Big River area for development of late seral forest specifically to support potential Murrelet habitat, the late seral habitat development designation for the Woodlands Special Treatment Area, designation of Class I and II WLPZs for the development of late seral habitat, and the Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat. The finalized plan's addition of the older forest structure zone will provide additional buffering and linkages to these areas.
The BOF agrees that the proposed management for the marbled murrelet offers a substantial and significant contribution to the species recovery. The Board considers its commitment to the management program and the specified area of management in the management plan and its incorporation into the EIR as enforceable commitments.

Response to Comment 76
The proposal for murrelet conservation is spelled out in specific detail in the plan and DEIR (pages VII.6.6-78 to -82 and VII.6.6-118 to -119). The CEQA process has encouraged extensive coordination among agency personal (from the Department of Fish and Game and the Department of Parks and Recreation, for example) and the Board and the department. The contributions to recovery of marbled murrelet habitat specifically requires coordination with other wildlife agencies and interests (DEIR page VII.6.6-119). Additional coordination will be achieved during plan implementation during the individual THP process.

Response to Comment 77
The Board considers the habitat suitability classification process used for murrelet habitat designation as adequate for the programmatic, management-plan-level context. The DEIR explicitly acknowledges that some areas of suitable murrelet habitat (primarily isolated residual old growth trees within younger stands) have not been mapped on a site specific basis (page VII.6.6-79), because such an effort would be highly expensive and unnecessary on a forest-wide basis. The plan

and DEIR commit to specific protection measures that include project-level surveys to identify suitable nesting habitat during plan implementation. Such identified habitat would be protected. Therefore, it is highly unlikely that the JDSF management plan would result in any unanticipated significant impacts, considering that the program emphasizes substantial efforts to protect existing habitat and to create significant amounts of late-successional habitat that may reach suitable conditions over the long term for the murrelet.

Response to Comment 78
NSO habitat requirements were spatially analyzed in the Spatial Pattern Analysis for Species of Concern (DEIR pages VII.6.6-216 to -240) and summarized in the DEIR on page VII.6.6-239. Non-spatial analysis of net change in great-horned owl habitat capability (Tables VII.6.6-19, 21, 23, 25, 27, 29, and 31) showed no marked increase in habitat capability under any alternative (range of -15 to +4%) within JDSF or for the analysis area outside JDSF. Barred owls do not occur with sufficient frequency to allow measurement of habitat selection effects on NSO, but such effects appear to be limited at this location.

Response to Comment 79
JDSF is actively working with the National Council for Air and Stream Improvement to examine NSO habitat requirements on JDSF and relationships to the managed landscape. The Board considers the level of habitat suitability modeling and spatial analysis adequate to characterize effects of management on the NSO, particularly since the management measures are expected to maintain and enhance habitat. Protection of old growth habitat, recruitment of additional late-seral and older forest structure habitat, protection and enhancement of late-seral conditions in WLPZs, the use of even-aged management to create a viable prey base, and project-level protection of owl habitats, all support the conclusion that NSO habitat and populations would be protected and enhanced as a result of implementation of the proposed action and that the analysis of other alternatives depicts a reasonable expectation of effects. JDSF will not take NSO or the Murrelet during implementation of its plan; therefore, an HCP and issuance of an incidental take permit under FESA is not currently considered necessary.

Response to Comment 80
The comment provides no meaningful evidence that the proposed management plan would reduce NSO habitat or populations, or that take would occur. Contrary to the commenter's assertion, timber harvest activities that occur under the FPRs have not been determined by the U.S. Fish and Wildlife Service's project survey and planning protocol to result in take of the NSO. Given that JDSF management will adhere to these regulations and implement additional measures that will protect and enhance NSO habitat (see response to comment 79), there is no reasonable basis to conclude that the plan will lead to unauthorized take of the NSO. In addition, spatial modeling of habitat capability showed that net changes were stable or positive for all alternatives over the 2000-2060 timeframe.

Response to Comment 81
The EIR adequately analyzes the long-term effects of management alternatives on NSO habitat suitability. It identifies a number of management measures that go beyond the requirements of the FPRs to protect and enhance NSO habitat. Thus, the analysis is not deferred to the THP stage. However, the management strategy and impact evaluation appropriately incorporates the required FPRs and the THP process into its management program and the assessment of effects.

Response to Comment 82
The BOF does not agree with the commenter's broad characterization of the analysis of biological values in the DEIR and RDEIR. As noted in responses to specific comments, the commenter has not supported these generalizations. Most importantly, the commenter has not presented a convincing and supportable demonstration of specific impacts that differ with those presented in the DEIR and RDEIR.

P-220

Delivered @ BOF hearing 2/9/2002
Letter read into record by Kathy Bailey

Statement to the California Board of Forestry Regarding Jackson Demonstration State Forest
By Kathy Bailey, Sierra Club
PO Box 256, Philo, CA 95466
707-895-3716 kb@pacific.net

February 9, 2002

Good morning. My name is Kathy Bailey and for around a decade more or less I was Forest Conservation Chair for Sierra Club California. I retired from my volunteer position a few years ago, but I just can't quite let go of Jackson Forest, so here I am. Previous to my work with Sierra Club I had been engaged in issues regarding state-regulated forests off and on since 1976. I've lived in Anderson Valley, in Mendocino County, since 1971. The Valley is virtually surrounded by state-regulated forestland, including tens of thousands of acres now held by the Mendocino Redwood Company, which previously was owned by Louisiana-Pacific, and prior to that, at the time I moved to the area, by the Masonite Corporation. I'm going to try to provide some background information from the public perspective on the issues surrounding management of Jackson Demonstration State Forest.

The key to why Jackson is so controversial is the old real estate maxim: Location, Location, Location.

Jackson is, by far, the largest public redwood forest in the region. Jackson is in the middle section of the Coast Redwood region, a relatively narrow strip of land that runs barely into Oregon and down into Monterey County in Big Sur. The bulk of the region is within about 30 miles of the coast. As one moves toward the east, Douglas fir begins to become a larger proportion of the forest.

Except for a few hundred acres up in Humboldt County, there is no coast redwood in the National Forest system. Of course there are some state and federal parks. But these are not evenly distributed. According to a study published by the Save-the-Redwoods League in 2000, in the central redwood region around Jackson, including Mendocino, Sonoma, and Marin Counties, redwoods are preserved at the lowest rate of their entire range. In that area, only 1.36 percent of redwoods are protected in parks and reserves. If this were not the case, the discussion about Jackson would be completely different. From both the public use and the ecological perspective Jackson is a unique and irreplaceable publicly-owned resource. It is our area's only large public redwood forest. 1

The ecological importance of Jackson in the region is greatly magnified by the diminished condition of the region's forestland. Going back to the European settlement of California, the redwood stands north of San Francisco, were the first to be harvested for timber because they were close and there were coves on the coast that allowed for boat transport. Later in the 20th Century, taxes on standing timber provided a tremendous disincentive to maintain valuable old growth redwoods. This taxation situation did not change until the 1970s. The result is a region that not only doesn't have much old redwood in parks, the region has very little old redwood anywhere. In my community we have two of the largest old growth stands in Mendocino County at Hendy Woods State Park. One grove is 20 acres, the other is somewhat less than 40 acres. As far as I can tell, Jackson's 11 groves of old growth, totaling 459 acres, is probably the largest concentration of old growth redwood groves in the County. 2

Directly around Jackson, both north and south, are broad swaths of land formerly owned by Georgia Pacific and Louisiana-Pacific. On the east are more commercial timber holdings. Combined, these properties total around half a million acres of Mendocino County's redwood region. The old growth has long been gone, so the primary timber base for a commercial company in the County would have to be second-growth forest. It probably won't come as a surprise when I say that overwhelmingly, the older, larger second growth trees on those industrial timberlands have been virtually logged out already. 3

What are some of the ecological consequences of this history?

Older redwood forests have unique characteristics that develop over time. They are moist and cool and support mosses, lichens, banana slugs, incredible mushrooms, and brilliantly colored frogs and salamanders. Along with the loss of the big, old trees themselves, some of the more obvious losses have been:

Marbled murrelets: - Experts believe that today the population of this highly old-growth dependent small seabird is, at most, 300 individual birds in the region from the north Mendocino County line to San Francisco Bay. Some of those few murrelets nest directly adjacent to Jackson.

Pacific fisher – This low-to-the-ground dark brown fur bearer that can range up to 13 pounds once roamed the region eating everything from porcupines to truffles. Except fish, which they don't eat. The elimination of the wide swaths of old growth they need eliminated the fisher. They struggle to survive in a few isolated populations in other parts of the state.

Humboldt marten – This small furry mammal has not been seen in Mendocino County since the 1950s. It too needs large swaths of older forest.

Salmon – Coho and King salmon once were plentiful but now are in dire straits for a number of reasons including loss of the old forest habitat that keeps streams cool and clear.

Steelhead trout – Not quite so fussy about water temperature and water speed, their populations have nevertheless plummeted to the point where the limited fishing allowed in Mendocino County is catch-and-release.

Water quality – Most of the streams in coastal Mendocino County are listed as impaired under Section 303d of the Clean Water Act because of sediment, temperature or both, with logging being a significant factor identified by the listing.

These are just a few specifics to remind us once again that the rich natural resources associated with forested areas of the region have suffered dramatic people-induced declines.

It is in this environment that you have to make decisions about management at Jackson Demonstration State Forest. Particularly you must decide how to interpret the legislative mandate for "maximum sustained production of high quality forest products while giving consideration to values related to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment." You, the Board, have the authority, in fact, the duty to interpret how you want to apply this mandate. 4

S

There has been so much controversy, particularly in the last ten years, about Jackson's management that we occasionally forget to acknowledge that the reason people worry about Jackson is there is still something there to care about. We recognize that. But because of the historical diminishment of forest resources in the region, and the lack of access to other public redwood forests, the non-regulated public has become adamant over time that Jackson should be maintained as a place that looks like and functions as much like a natural system as possible given the understanding that a significant level of timber harvest will happen because of the legislative mandate.

I want to give you just the briefest of reminders about some of the ways the Jackson controversy has manifested in the last ten years:

1996: Long-simmering concerns regarding management at Jackson erupted. Flash points included: 1. A Timber Harvest Plan in the Mushroom Corners area, an often-used recreation site near Mendocino Village and rural residential parcels; 2. A plan to spray 70 miles of Jackson's roadsides with herbicides; and 3. The cutting of some isolated and relatively smaller diameter old growth trees. There were several large demonstrations, and a few people were arrested.

1997: CDF Director Richard Wilson appointed a Citizen's Advisory Committee (CAC) that included broad representation of community interests, including a lumber mill owner, two foresters, several small timberland owners, representatives from several communities, and environmentally oriented participants. This CAC met regularly for around 18 months.

1998: In December, the CAC issued a Report and made recommendations to Director Wilson that were approved by near-unanimous vote but most of the recommendations were not implemented.

1999: Three Timber Harvest Plans (THPs) were submitted for Jackson Forest that were not consistent with the recommendations of the CAC. Although the CAC had recommended increased consideration for the recreation potential at Jackson, the new THPs included two selection harvests in an area of old second growth immediately adjacent to the principle campgrounds. A third THP was a plan for clearcutting, a technique the CAC specifically recommended be eliminated at Jackson.

2000: The 1999 THPs were approved, and Vince Taylor's group sought and received a preliminary injunction to halt their implementation until a current Management Plan was in place. The forest had been operating under a Management Plan approved in 1983 prior to the endangered species and water quality listings. The injunction halted logging at Jackson.

2001: A new draft Management Plan was published that was virtually identical to a 1999 draft Habitat Conservation Plan that had never been released for public review. Neither the old draft HCP nor the new draft Management Plan was consistent with the CAC recommendations in spite of the fact that the CAC made its recommendations at the same time the HCP was being put together.

2002: The Management Plan was released for public comment, along with a draft Environmental Impact Report (EIR). CDF received approximately 100 comments against adoption of the Plan for every comment received in favor of it. Nevertheless, in November 2002, CDF Director Andrea Tuttle certified the EIR and the Board of Forestry adopted the new

3

Management Plan. The 2002 Management Plan, which is virtually the same as the current EIR Preferred Alternative C1, did not include most of the provisions recommended by the CAC.

2003: In July, the Court ruled that the EIR was deficient and further, that the lead agency regarding the EIR should properly be the Board of Forestry (congratulations) rather than CDF. Except for a very brief period, logging continues to have been enjoined since 2000.

2004: The Board of Forestry rescinded the approval of the 2002 Management Plan and contracted with CDF to prepare a new EIR, pursuant to the Board's authority as lead agency.

2005: In December 2005, the Board of Forestry published a Notice of Availability of the new EIR and set the comment period to close on February 14, 2006 at 5 PM, since extended to March 1 (Thank you very much). The EIR established seven alternatives: A, B, C1, C2, D, E, and F. Alternative C1 is the 2002 draft Management Plan and is characterized by the EIR as the "preferred alternative." Alternative C2 is the 2002 Management Plan plus mitigations that the previous EIR identified as necessary to reduce any impacts of the plan to insignificance. Alternative A is "No Project – Minimal Management Activity" which is used as the "baseline" against which the other alternatives are analyzed. Alternative B is "Management Consistent with the 1983 Management Plan." Alternative D is "Citizen Advisory Committee," the recommendations of former CDF Director Wilson's CAC. Alternative E is "Late Seral Emphasis." Finally, Alternative F is "Older Forest Emphasis." Sierra Club has been deeply involved in the development of Alternative F.

2006: On February 7, in a 3-2 vote, the Mendocino County Board of Supervisors passed a motion to support Alternative D, the recommendations of the CAC, first proposed in December 1998, roughly seven years ago. The three *yes* votes are the three Supervisors who have Jackson Forest in their Districts.

And here we are two days later.

There are three key points I hope to convey about the EIR:

6 1. **The EIR has still not acknowledged or mapped the 10,000-12,000 acres of old second growth forest at Jackson that has not been logged since 1925 or earlier.** As I have mentioned, this is a regionally scarce resource. In spite of incessant lip-service about the ecological importance of older forest and a supposed commitment to having 20-29% of the forest in so-called late-seral development areas, (for you new people, "late-seral" is forestry-wonk speak for "older forests") the key piece of knowledge about the location and extent of these forest stands at Jackson remains un-mapped and unacknowledged. I care about how much of the forest will eventually be allowed to grow into older age classes over some hypothetical 100-year planning horizon. But given the context of Mendocino County, people care more about maintaining as many of the few remaining stands of 100-year-old second-growth as possible, and doing so in a way that maximizes contiguous old forest habitat to help recover some of what we have so thoroughly lost.

7 2. The EIR states that the Jackson Management Plan, Alternative C1, proposes to put the non-timber considerations outlined in the legislative mandate on an equal footing with sustained production of timber. This is a terrific goal, one that we support. However, if you look at the spatial allocation of the CDF-designated "late-seral" that is, "older forest" development areas

and then also look at the 10 year timber harvest schedule, you will see that logging in the first decade is going to make those old forest development areas into islands. This contradicts the basic tenets of conservation biology and seems to contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest.

8 Additionally, in spite of the fact that it is a no-brainer to identify key areas of public interest in recreation on the forest, the EIR defers identifying these places or making significant accommodation for them beyond the barest of buffer zones—generally speaking, a couple hundred feet. The injunctions on the THPs that have brought us here today occurred because Mr. Taylor, along with a lot of other people, had a deep love for the peaceful and beautiful forested area around the main campgrounds, and the lovely walks along the river there. These were not the worst THPs in the world, but they would have greatly compromised people's enjoyment of the area. These THPs were simply located in an area that should have been set aside for recreation use if the plan truly did consider recreation on an equal footing with timber production. That this area is part of that existing old forest not logged since 1925 or earlier is also an issue. And one of the enjoined THPs in the campground area is also adjacent to a designated "old forest" development area to its east. Operating the THP will cut into the existing contiguous older forest. Forest planners could get a two-fer out of this area if they acknowledged the existence of the older forest stands, and then tried to design a management plan that maintained old forest stands for both recreation and habitat purposes. It would not be that difficult, if one just decided to do it. In fact, that is what we have attempted to do with Alternative F.

9 3. We talk a lot about the coming crisis in forest ownership where more and more people move into the forested countryside and have conflicts with forest managers. That is exactly the situation you have on your hands right now at Jackson. Big chunks of Jackson are adjacent to a whole bunch of people, by country standards, at Mendocino Village, Caspar, and Ft. Bragg, in addition to the tens of thousands of visitors we see each year. If you are truly dedicated to avoiding the continued fragmentation of forestland ownerships, it is important to figure out how to do logging in a way that does not diminish public trust resources like wildlife and water quality, and does not make people gasp when they see it. Jackson is the perfect laboratory to figure out how to do this. You have a pre-existing skeptical neighbor-base, the best forest inventory in the County, and a current opportunity to think this through forced on you.

I urge you to take this opportunity and run with it. You're not there yet, but you have the elements of a solution laid out in the various EIR alternatives. While we have always supported Alternative D, the CAC recommendations, we have applied the information we have learned about the forest subsequent to the era of the CAC to create Alternative F. We view the portions
10 of Alternative F that were encompassed in our EIR scoping comments as consistent with current law, and believe that Alternative F is a creative way to meld the habitat, recreation, and timber harvest needs of the Forest. Remember: Location, Location, Location. From the timber production point of view, Alternative D, the CAC recommendations yield 80% of the C1 preferred alternative, and Alternative F yields about 60% according to your EIR. These reductions in yield do not seem like an unreasonable price to pay for taking Jackson off the hot-potato list and making it what it ought to be: the beloved crown jewel asset of the state forest system. Thank you very much.

5

BOF Hearing Written Testimony P-220

See also Kathy Bailey Oral Testimony 2/9/2006 in section VI.

Response to Comment 1
The Board agrees that JDSF has both ecological and public use values that are substantial. In addition, given the forest resources, size, and location of JDSF, it is a unique resource. Within the redwood region, there are approximately 300,000 acres in parks and reserves. JDSF is the largest area of public forest available for research and demonstration.

Response to Comment 2
The old growth forest within JDSF will be preserved, and many of the groves will be augmented by late seral development areas. The Board is aware of the regional availability of old forest, and has provided a detailed description of the assessment area within the DEIR (Sections III and V).

Response to Comment 3
The Board agrees that there has been a substantial level of timber harvest in much of the area surrounding JDSF within the past several decades (DEIR Map Figure G). Please see DEIR Section VII.6 and Map Figures J and K for the estimated vegetative habitat distribution, which serves as an estimate of habitat values and is used in the wildlife analysis. No regional or assessment area inventory of young trees exists, especially one that would include detail as to the age of second-growth trees. The DEIR assesses the potential for impacts to wildlife primarily by examining current and future habitat quality and availability. The age of trees is but one of many factors that contribute to habitat.

While JSDF can and will contribute to the continued survival or recovery of species, it is incapable of providing for full recovery in and of itself. Species populations rely upon a vast area in most instances, and JDSF comprises a relatively small portion of the range of most listed species or species of concern.

Response to Comment 4
The Board agrees that historic timber management has contributed to the decline in population levels of some species within the region.

The Board is aware of a responsibility to interpret legislative, regulatory, and policy direction for the state forest management planning process.

Response to Comment 5
The ADFMP provides for sustainable forest management while maintaining or producing a forest that also maintains proper ecological function.

Response to Comment 6
While the general logging history of JDSF is known, there is no complete historic cutting record for the Forest, since harvesting began decades before detailed records were kept. Staff have made unofficial estimates in the past, but these have not been used for habitat assessment purposes.

While the commenter has stated that "older second-growth" is a regionally scarce resource, there is no such resource that is either quantified or officially recognized.

The Board has approved the plan to manage a significant area of JDSF toward a late seral or older forest structure. Habitat value and ecological function depend upon a host of factors, including tree size distribution, crown density and crown characteristics, mortality rates, canopy diversity, species diversity, unique structural elements, understory vegetation, and others. Stands have been identified

for late seral or older forest management based largely upon proximity and connectivity to existing old growth groves, watercourse zones, and occupied murrelet habitat, recognizing that it may require many decades or even centuries for late seral forest to develop.

Response to Comment 7
The Short-term Harvest Schedule has been amended for Alternative G. Neither the harvest outlined in Alternative C1 nor Alternative G would create islands of the late seral or older forest development areas. In fact, most of the proposed harvest in the short-term in these areas would be selective in nature, producing a thinned, yet continuous forest canopy contiguous to late seral development areas. Ms. Bailey does not explain the assertion that the islands will be created, nor how the proposed harvest contradicts the basic tenets of conservation biology, not how it may contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest. Please see DEIR Section VII.6 for the assessment of potential impacts to wildlife and fishery resources.

Response to Comment 8
The Board's policy for JDSF establishes recreation as an important, but secondary use. The DEIR includes an assessment of potential impacts upon recreational values (DEIR Section VII.2, 12, and 14). The management plan involves a much greater level of mitigation to protect recreational resources than Ms. Bailey suggests. Included in this consideration is the location of recreational resources, surrounding forms of forest management, adjacent buffer zones, noise production, aesthetics, and other factors. It is the intent of the Board to prevent significant impacts to recreational resources. The Board believes that timber harvesting can be compatible with recreation in the Forest, and should not be precluded in order to produce zero effect. In fact, the demonstration of the compatibility between timber harvesting and recreational use is encouraged by the Board.

Response to Comment 9
Comments noted.

Response to Comment 10
Support for Alternative F noted.

P-221

P-221

RECEIVED BY
FEB - 6 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

PAUL V. CARROLL
Attorney at Law
5 Manor Place
Menlo Park, California 94025
telephone (650) 322-5652
facsimile (same)

February 4, 2006

Via facsimile and mail

George Gentry, Executive Director
California Board of Forestry
1416 9th Street
Sacramento, CA 95814

Dear Mr. Gentry:

Re: Draft EIR for Jackson Demonstration State Forest Draft Management Plan

Dear Mr. Gentry:

I write on behalf of Dharma Cloud Charitable Trust Foundation, The Campaign to Restore Jackson Redwood State Forest, and the public they represent in regard to the draft EIR for the Jackson Demonstration State Forest Management Plan. We ask that you extend the period for public comment by 30 days. It has come to our attention that the print shops responsible for providing copies to the public have not been able to fulfill their orders in a timely fashion.

The public comment period commenced on December 16, 2005. The notice informed the public that it could purchase copies from three printing shops in Mendocino County. We are aware that at least two of the shops were not able to make copies available until late January 2006.

For example, according to Grace Sharples of Mendo Litho in Fort Bragg, the disc from which copies were made did not arrive until the last week of December during the store's holiday break. She returned to work on January 3, 2006. The store could not look at the EIR until January 9, because of follow-up work from the holidays. Once it turned its attention to the disc, it ran into problems. It took most of the week to get the first copy prepared because it had to assemble the chapters on the computer. Then it compared what it produced with the sample hard copy that it had been provided. There were differences that had to be ironed

out with Sacramento. Mendo Litho was unable to send out the first copy until January 23, 2006.

This was not just a theoretical problem. For example, on January 5, 2006, the Campaign placed an order with Mendo Litho for a copy of the draft EIR for Dr. James Strittholt. It could not be prepared for several weeks.

We are informed that the print shop in Ukiah has experienced similar problems.

The fact that the EIR was available at libraries or on line does not lessen the problem. Many members of the public, experts in particular, need to possess a hard copy so that they can conduct a thorough review in an expeditious manner.

In light of the foregoing, we respectfully request that you extend the public comment period for 30 days. This is the approximate amount of time that passed before the public could as a practical matter obtain a purchased copy of the draft EIR.

Your immediate response would be greatly appreciated.

Very truly yours,

Paul V. Carroll

cc: Bruce Reeves, Deputy Attorney General

2

Mailed Letter P-221

Response to Comment

The comment period was extended. Detailed comments were received from Dr. James Strittholt.

P-222

P-222

Campaign to Restore Jackson State Redwood Forest
43151 Little Lake Road
Mendocino, CA 95460

Remarks to the Board of Forestry

Vince Taylor, October 4, 2006

Dear Chairman Dixon and Member of the Board,

Thank you for the opportunity to address you on the issue of Jackson State Forest.

Those of you who have been on the board for a while know that Jackson Forest has been a source of controversy for over ten years. For the last five, all harvesting in the forest has been stopped by order of the court.

1 I believe that all parties of interest in this forest have now come to a point where there is far more agreement than disagreement about the appropriate mission for the forest.

There seems to be a consensus that the forest should become a world class research and demonstration forest devoted to increasing our understanding of the biological processes and habitat values of redwood forests, and improving our knowledge of how timber harvesting operations can be done compatibly with maintaining and restoring the health of the forest. Additionally, there appears to be agreement that because Jackson Forest is the sole large public redwood forest in a county where 90 percent of the forests have been heavily logged, it 2 should play and important role as a sanctuary for species dependent on mature redwood forest. All parties also agree that it should also be an important provider 3 of redwood-forest recreation opportunities.

This degree of agreement provides a remarkable opportunity to resolve the longstanding controversy that has tied up this forest for so long. The issue now seems not so much what to do, but how to do it. It would be a shame if we missed this opportunity by trying to acting hastily rather than deliberatively. There is a saying "Take the last step as carefully as the first." I urge us to heed this advice.

For several years, I have been recommending a two-step process to get Jackson Forest back into full operation:

> **Phase One.** Allow temporary timber harvesting in areas and in ways that all agree will not harm long-term values that would likely be preserved under a long-term management plan for the forest. The level of these temporary harvests would be sufficient to provide for operation of the forest, for development of a long-range plan for the forest and an operational management plan, and for beginning to build the infrastructure needed for a world class research forest. This phase might last for 3 to 4 years.

Tel: 707 937-3001 restore@jacksonforest.com www.jacksonforest.com

Phase Two. Resumption of full operation under the management plan developed in Phase One.

I want to, first, address why a two-step process is essential. Then I want to discuss how this might be done in the context of the legalities of the EIR process and the court order.

Why Two Steps?

We are all agreeing that there will be a **major** revision in the objectives of management in Jackson Forest. To incorporate these changes into a long-term landscape plan and management plan is a complex and politically difficult process. A hasty effort will give a defective result both objectively and politically.

A key question at this point in time is how and for what purposes the multitude of different sub-watersheds of the forest will be managed. This question cannot be answered in a responsible way quickly.

4 First, we do not now have a current timber inventory that is adequate for the type of landscape planning we are envisioning. There is no comprehensive inventory of botanicals or stream conditions. In short, the data required for to develop an adequate management plan does not exist.

5 Second, the Board needs to face squarely the legal prescriptions that govern management of the 5,000 acres of the Woodlands Transfer Area. To date, the department has maintained the legal fiction that timber harvesting is legally permissible. A continuation of this position risks further litigation. This issue should be resolved as part of the development of the new management plan. I would be happy to cooperate in this effort.

6 Third, the actual management prescriptions for areas of the forest, and the balance between habitat/restoration and timber management, are contentious issues. Resolving these issues in ways the that gain widespread support will require substantial outside input and time.

Are Two Steps Feasible?

My investigations indicate that it would be possible to conduct temporary timber harvesting in the context of the proposed EIR, given that <u>there is general agreement on the principles and process to be followed in developing the management plan.</u>

7 The Mendocino working group shows that there is now enough agreement that widely diverse interests are able to agree on management principles and objectives. The next step is for Board representatives and CDF staff to work with the Mendocino group to reach a broad consensus on management principles an process. Ultimately, this is going to be necessary to get the forest back in operation. Better to do this now, while the spirit of cooperation is high, than to wait and risk fatal disagreements later.

My investigations suggest that it temporary timber operations could be done legally. If the Board feels that it needs legal sanction for the temporary harvesting, there would be time to obtain enabling legislation. Senator Chesbro's office indicated that a request for new legislation, given that all parties supported it, could be introduced in December and signed by March, 2007 – well before harvesting activities could occur.

Legislation would also provide the opportunity to bring the legislative purpose for state forests into agreement with the revised mission for Jackson Forest. This would avoid future legal and operational problems.

Conclusion

We appear to have close agreement on the goals for Jackson State Forest. Transforming this agreement into resumed operation of the forest can best be done in two phases. While this may appear to some as more circuitous than a hasty effort to wrap up the process, it is the shortest route to a lasting resolution of the controversy over Jackson Forest.

I pledge to continue to cooperate wholeheartedly in reaching the goal of making Jackson Forest into a source of pride and satisfaction for all.

Thank you for your time.

Sincerely,

Vince Taylor

Vince Taylor

BOF Hearing Written Testimony P-222

Response to Comment 1
The Board shares the goal of JDSF becoming a world class research and demonstration forest. The Board developed Alternative G and the Administrative Draft Final Forest Management Plan (ADFFMP) with this goal in mind.

Response to Comment 2
The Board is aware of the harvest history within the assessment area, and ample information on this topic is provided in the DEIR.

The Board concurs that JDSF should play a role in support of the continued survival and recovery of wildlife species. However, it is unlikely that JDSF alone will not serve as an adequate sanctuary, due to the geographic scale at which most species populations occur. JDSF will provide a benefit for wildlife, and contribute to the recovery of species, but cannot alone provide for full recovery of listed species.

Response to Comment 3
Comments regarding recreational opportunities and management plan phasing process noted. The ADFFMP provides for a similar phasing process through an initial implementation period.

Response to Comment 4
The current level of information related to timber, botanical, and stream resources provides an adequate foundation for the management plan and its programmatic EIR. This information constitutes the best information readily available. In the future, an increase in the level of inventory information concerning a host of forest attributes is anticipated. A greater level of detailed information will be developed during the planning for individual projects.

Response to Comment 5
The Board believes that the Mendocino Woodlands area is being managed appropriately, and in compliance with provisions established with the transfer of the land from the Federal government and state statutes.

Response to Comment 6
The Board agrees that there are potentially contentious issues.

Response to Comment 7
Comments noted. The Board appreciates and has considered the suggestions made by the Mendocino Working Group and other members of the public. Some of the suggestions have been incorporated into the ADFFMP.

P-223

November 30, 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan

Dear Members of the Board,

As you know our group has been meeting in Mendocino County for the past few months exploring ways to move the JDSF Management Plan process forward. Over the years our members have been involved in numerous forestry issues from the Grand Accord to County Rules to SB 1648. Historically we have been on opposing sides. This process has been unique in that we have reached consensus on an approach we believe has the potential to get JDSF back under management.

While we have reached consensus on numerous issues, the enjoined timber harvest plans were not among them. These plans were sold and operated, then stopped as a result of the lawsuit. An equitable resolution to this problem is still needed. In spite of their involvement in this process, the purchasers have not given up any of their legal rights to the two sales.

Our approach to moving the management plan process forward is comprised of two phases. Phase one incorporates the guiding principles we have been developing with the Research and Demonstration focus that Bill Stewart has been designing as the new Preferred Alternative 8. With the adoption of this first phase and the finalization and certification of the EIR, timber harvesting can resume on an interim basis. This interim resumption of harvesting will be guided by the principles in the management plan and the specific criteria developed by this group.

1 Phase two will be a concurrent and parallel process. This phase will be highlighted by the re-staffing of JDSF including personnel with a broad range of expertise in addition to silviculture, the appointment of a Jackson Advisory Group, the commencement of landscape-level planning on a broad array of issues and the establishment of a credible and verifiable inventory. Our group anticipates this process will result in a detailed and sustainable long term plan for JDSF. This second phase will develop a plan based on detailed specific information that provides for a consensus-based balancing of ecological values, education, research, recreation, timber production and regional economic stability.

1

This group realizes it has no authority to develop a management plan for JDSF and the Board has no mandate to follow the template provided. Logic however would suggest when a group as diverse as ours can come to consensus on this topic, it deserves some serious consideration.

Sincerely,

Bruce Burton	Art Harwood
Vince Taylor	Kathy Bailey
Mike Jani	Mike Anderson

Attachments:

1.) The guiding principles this group developed for management of JDSF.
2.) Interim harvesting criteria.
3.) A flow chart of the implementation process.

P-223 ATTACHMENT

P-223 Attachment

Principles for the Management of Jackson Demonstration State Forest

November 30, 2006

Research and Demonstration:

Research and demonstration (R&D) should be the driving force behind all harvest operations on JDSF. The forgoing does not preclude harvest operations designed for manipulation of stand structure for future research. Additional R&D emphasis needs to be directed towards small land owner needs. The following are specific research suggestions:

1. Research and demonstration geared toward small land owners interested in economically maintaining and improving the health, beauty, and recreational value of their holdings.
2. Exploring ways to make timber harvesting more acceptable to the general public should be an important part of the R&D program.
3. The R&D program should test the benefits and or problems associated with forest practice rules existing and under consideration.
4. R&D should explore the process and benefits to wildlife and the aquatic environment of turning even age stands into all aged stands.
5. A integral part of the R&D program should be a well developed economic analysis of these different approaches so land owners and regulators can make the cost to benefit analysis.

Silviculture:

All timber harvest activities on JDSF should preserve or improve the long term forest health. Selection silviculture should be maximized. Even aged management should only be allowed for well justified research projects and as necessary to promote stand health. The size and scope of these projects should be no larger than the minimum needed for scientific validity. Group selection plots will be the minimum size consistent with wildlife concerns and obtaining regeneration, they will only be used when justified as the most ecologically beneficial way to obtain needed regeneration and or habitat. Variable retention should be used sparingly. When used it should be associated with research, stand health, wildlife concerns, and have higher than average retention levels. None of the above should be construed to prohibit the entire spectrum of harvesting intensity and or frequency as long as it is tied to research.

Herbicides:

Herbicides would only be used as a last resort after demonstrating an exhaustive evaluation of all other alternatives in dealing with a specific forest problem. The evaluation of alternatives would also look at the consequences of taking action and of taking no action at all. If herbicides are then considered they would be used as part of scientifically designed study to answer specific research questions. Under such circumstances the smallest number of acres would be used to achieve the research answers. A maximum acreage cap would be established, and the research would be designed in such a way to minimize the need for future use of herbicides.

Old Growth and Mature Forest Stands:

The remnant stands of original forest that have not ever been harvested should be preserved so as to provide a baseline from which comparisons can be made. Using these areas as cores, logical corridors, buffers, and extensions should be developed, utilizing existing older second growth stands when possible, to provide habitat for species associated with the late seral stages of forest development and to provide opportunities for human enjoyment. When these habitat areas overlap an older second growth stand, at a minimum, a portion, or at a maximum, all of that stand should be considered for inclusion into designation for a "late seral" management alternative. Within this management unit, the old growth cores shall remain unharvested, while the second growth components may be subject to some harvest designed to accelerate development of late seral characteristics.

Scattered individual remnant old growth trees identified as such because of size, special characteristics, or known stand history, should be protected from harvest unless they pose a hazard to persons, property, or natural resource values. Additionally, at a minimum, immediately adjacent trees or trees which are close enough to influence growth and form of the retained old growth tree, shall be retained.

However, if after careful study including examination of the canopy, a known old growth tree is determined to be without any identifiable old growth characteristics, and other trees of the same species in the same height class will be retained, in conjunction with a research project to confirm the determination, the old growth tree may be harvested and utilized.

Old growth trees mistakenly cut due to misjudgment of age or absence of old growth characteristics shall be left in the woods to provide large wood on the forest floor and for wildlife refuge.

Threatened and Endangered Species:

Given that this is a publicly owned forest, sufficient acreage should be dedicated towards management alternatives that specifically contribute to the maintenance and recovery of the region's threatened and endangered species.

Wildlife and Riparian Management:

Recognizing the unique positive regional status of the wildlife and riparian habitats in JDSF, develop overall wildlife and riparian management strategies consistent with a balance of economic , environmental, and recreational goals and objectives. These strategies are to be implemented through all management activities (see also, principles for Old Growth and Mature Forest Stands and Threatened and endangered Species)

All management activities need to be evaluated as to how they impact or enhance fish and wildlife and their habitat.

JDSF should scientifically explore the benefits and problems associated with various riparian management strategies and their contributions to salmon recovery.

Until research results provide a scientific basis for estimating the effects of alternative riparian management regimes, JDSF should take a very conservative approach toward timber harvesting in riparian zones other than in conjunction with the research program.

Timber Revenues:

Harvest levels should be determined by the needs of the forest, the guiding principles, as reflected in the management plan, not a revenue target. All revenue from JDSF sales should be re-invested back into the forest first; excess can be put to use by the state forest system and, in infrequent emergency situations, by other natural resource programs. The top priority should be funding an on-going timber sale program which will help to generate revenue to fund other programs including, but not limited to: demonstration, research, recreation, and infrastructure improvements. JDSF timber revenue should be augmented through grant funding, or general fund dollars, depending upon the type of programs the forest is trying to support. If there is not sufficient funding for all identified programs, funding will be allocated on a priority basis.

Jackson Advisory Group:

Overarching Principle: The advisory Group should represent and consider a broad range of views, with emphasis on local input and resource expertise.

Purpose: Initially to participate in the development of the Phase II management plan and to review and field evaluate the implementation of the proposed 2007 and 2008 Timber Harvest Plans. Subsequent responsibilities would include field based evaluations (prospective and retrospective) which would provide information for future research and management activities.

Participation: Open nominations, appointed by the Board of Forestry. Members would represent the public interest and be drawn from a broad spectrum of backgrounds and resource expertise with an emphasis on appointments of local representatives. Professions represented should include forest ecologist, fisheries biologist, botanist, Registered Professional Forester, Licensed Timber Operator and recreational planner. Views represented should include local timber industry, environmental community, recreational users, local businesses and forest neighbors. 10-12 people.

Authority and reporting: Group would interact directly with JDSF staff and management team and report to the Board of Forestry in an advisory capacity. Decision making would preferably be consensus based.

Term: 2 years, staggered.

Support staff: Permanent position, CDF staff with an independent facilitator.

Education:

Part of the legislative mandate for JDSF has never been adequately fulfilled; education needs to become a high priority. The forest has a unique opportunity to reach out to and educate the general public on issues associated with ecology, biological diversity, forest processes, forest management etc.

Roads:

The inventory and improvement plan should be finalized as a matter of highest priority and work scheduled on an accelerated basis.

Budgeting:

JDSF should not load the forest maintenance and operational costs on the timber sales. These costs should be funded through a budgeting process for JDSF.

Staffing:

The staff of JDSF needs to be augmented with recognized professionals to protect all public trust resources. This needs to be a team approach commensurate with being a world class leader in demonstration forestry.

Recreation:

JDSF should identify, with citizen input, the recreational opportunities on the forest and develop a recreation action plan to advance such opportunities. This plan would be integrated with forest management and the ecological outcomes developed for the forest. This would include reaching out to recreational experts to help put this plan together. Trans-forest hiking and horse trails should be pursued, working with neighboring landowners. With public input, staff should explore ways to expand funding for the recreation program.

Data Collection:

High Quality research requires accurate baseline and ongoing data on all forest components. Sufficient staffing at JDSF is critical to insure valid data collection. The following are minimum data collection needs at JDSF:

1. Credible forest inventory and growth information easily understandable by the general public.
2. A forest wide wildlife and botanicals inventory, and monitoring program.

Hardwood:

As part of a research project, JDSF should work towards hardwood utilization as an alternative to herbicide use. This research should consist of: identifying what hardwood component is needed in the timber stand, how to manage hardwood for a high quality product, determine habitat contribution, economic return for the land owner, creation of employment opportunities and the development of a market for these hardwood products.

~~P-223 ATTACHMENT~~

P-223 Attachment

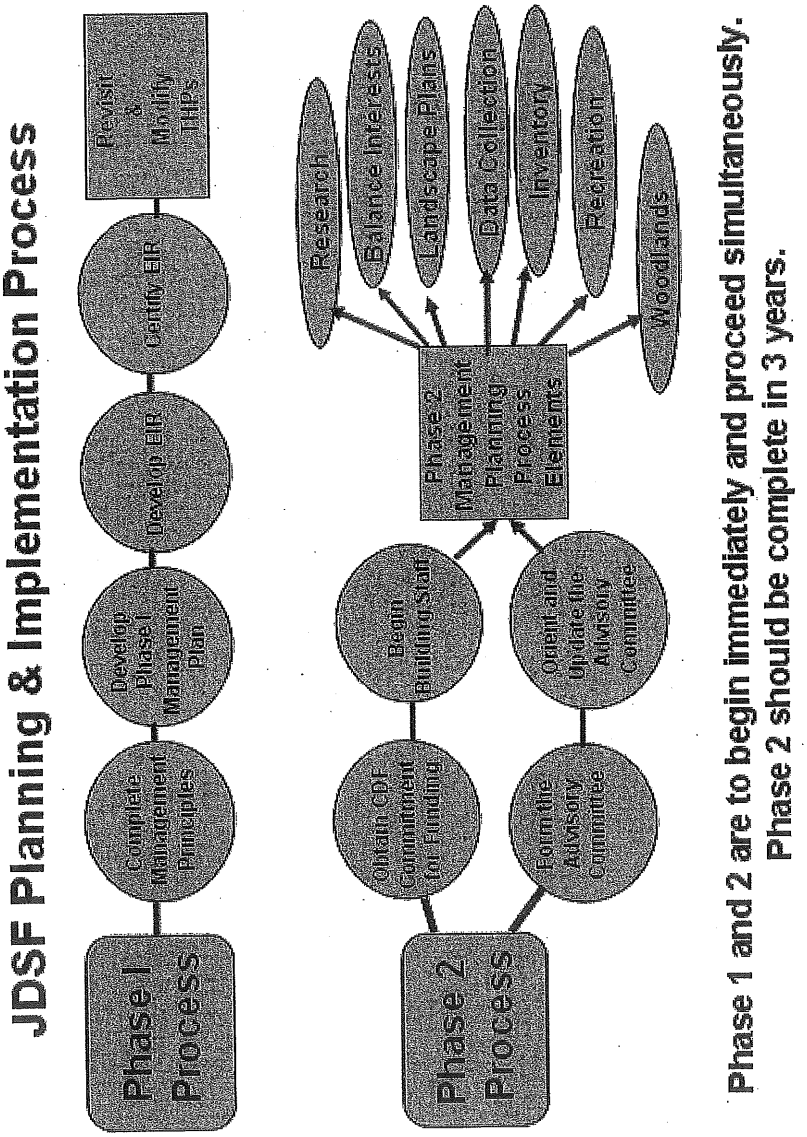
Interim Harvesting Criteria

We recognize the need for interim harvesting beginning in 2007 and for the duration of Phase I of the Management Plan development. This interim period should not exceed three years. During Phase I, Timber Harvest Plans (THPs) shall be submitted consistent with the following:

1. Utilize uneven aged management
2. Apply all silvicultural principles stated elsewhere in our recommendations.
3. Aim to generate sufficient revenue to fund the development of Phase II of the Management Plan, including rebuilding adequate staff at JDSF and implementing our recommendations for forest, wildlife and botanical inventories. In addition to financing routine operations, long term initiatives should be limited in Phase I to completion of the road inventory and rehabilitation plan, an expanded timber inventory and demonstration and research related expenditures.
4. THP locations should be chosen so they do not preclude future options for long-term landscape-level planning in Phase II.
5. To facilitate (4), every effort should be made to avoid harvesting areas that:
   (a) have not been logged since 1925 or
   (b) are mature second-growth stands contiguous with existing CDF-designated late seral development areas or adjacent to state park lands.
6. With the exception of the enjoined THPs, to assure harvesting in 2007 and 2008, emphasis should be placed on revising and finalizing harvest plans already in the system or those with the necessary field work completed.
7. If timely THP submission is not possible consistent with (5) the department may propose harvesting consistent with (1-4) using selection harvesting that removes no more than 30% of the conifer basal area of the stand, leaves at least 70% of the overstory stand canopy and maintains or increases the average stand diameter of the residual crop trees. Any such proposed plan shall be submitted to the Demonstration State Forest Advisory Group (DSFAG) for review. The DSFAG shall recommend to the director whether the plan should be submitted, modified or eliminated from consideration. At such time as the Jackson Advisory Group (JAG) informs the Director that it is willing to do so, JAG shall take over the Phase I THP review function from the DSFAG.
8. The enjoined THPs, Brandon Gulch and Camp 3, will be harvested, if at all, within the context of Phase II of the Management Plan.

P-223 ATTACHMENT

P-223 - Attachment



Mailed Letter P-223

Joint letter by Bruce Burton, Vince Taylor, Mike Jani, Art Harwood, Kathy Bailey, and Mike Anderson
November 30, 2006

Response to Comment
The Board appreciates the effort of this group. The letter makes suggestions for the future management plan and planning process. The writers comment that a broad range of expertise is needed on the management staff of the Forest, that an advisory committee is needed, and that a credible and verifiable inventory should be established. The Board agrees that an increase in the range of management expertise would be beneficial, and that the appointment of an advisory committee would also be beneficial. While the Board agrees that a more detailed inventory of forest resources would be useful and beneficial, the existing timber inventory is accurate and state-of-the-art. This inventory is updated periodically in an appropriate manner.

Principles for the Management of Jackson Demonstration State Forest
Submitted by the group immediately above, November 30, 2006

Response to Comment
The Board notes these comments and suggestions for the future management of JDSF. The "Principles" are suggested by the authors in the absence of expressed specific environmental concerns that may result from management in the absence of these suggestions. The Board will not speculate as to specific environmental concerns that the authors jointly or individually may wish to convey, instead accepting these comments purely as a suggested management alternative for JDSF. Some of the suggestions made by the authors have been incorporated into the management plan.

~~P-224~~
P-224

WILLITS REDWOOD COMPANY

QUALITY REDWOOD TIMBERS

220 Franklin Avenue
Willits, California 95490

willsrwd@sonic.net

(707) 459-4549
Fax (707) 459-0775

December 1, 2006

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460
Attention: George Gentry, Executive Director

Dear Sirs:

While affixing our signature to the consensus report of the Mendocino Working Group, Willits Redwood Company would like to make its position clear to the Board of Forestry. Willits Redwood Company has been witness to the bleeding of Mendocino County's timber industry during the past five years of inactivity on Jackson State Demonstration Forest. In our view, the inactivity has been directly responsible for environmental degradation on the State Forest, job losses in the lumber 1 industry and logging industry, and the conversion of timber production lands of Mendocino County to non-timber purposes. We feel that in our contentious world, Jackson State Demonstration Forest needs to demonstrate to timberland owners in California that the timber production is predictable, sustainable, and the preferable land use alternative. It is with these concerns that we support the immediate resumption of timber harvest activities on Jackson State Forest that the Group's recommendations offer.

However, the adoption of the Group's recommendations appears to have grave consequences for the continued viability of the enjoined Camp 3 Timber Sale, which Willits Redwood Company has purchased. The planning horizon for harvest under Phase II of the recommendations could 2 easily degenerate into more years of waiting. Additionally, the recommendations appear aimed to prohibit harvesting in mature second growth stands, or at a minimum would so alter the size class distribution of the sale as to render the original Camp 3 sale void.

Willits Redwood Company has steadfastly maintained its financial commitment to the Camp 3 timber sale, incurring significant financial loss in the process. The Board of Forestry should understand that acceptance of the committee's recommendations must be concurrent with a 3 commitment by the Board to make Willits Redwood whole. Our preferable alternative is to harvest the Camp 3 sale as contracted by the State of California and utilize the logs in our facility. With any action by the Board in conflict with this alternative, we feel it is responsibility of the Board or its representative to open this dialogue at its earliest convenience.

We appreciate giving this matter your consideration.

Sincerely,

Bruce Burton, President

Chris Baldo, Secretary

Mailed Letter P-224

Response to Comment 1
The Board generally agrees that a shortage of revenue to the state forest has resulted in a reduction in road maintenance and restoration activity, which is likely to have increased the level of impact associated with state forest roads. A total elimination of timber sales has probably contributed to a reduction in employment within the timber industry. Support for a resumption of timber sales noted.

Response to Comment 2
Comments concerning the recommendations of the Mendocino Working Group noted.

Response to Comment 3
Support for the Camp 3 timber sale noted. The Board recognizes that this timber sale is subject to a civil suit that resides before the court. The this sale must be examined for consistency with the ADFFMP, and the Board notes that the sale is subject to a settlement agreement and a timber sale contract, in addition to unresolved to existing court proceedings

P-225

P-225

MANNON, KING & JOHNSON
ATTORNEYS AT LAW

SAVINGS BANK BUILDING, SUITE 304
200 NORTH SCHOOL STREET
P.O. BOX 419
UKIAH, CALIFORNIA 95482

CHARLES B. MANNON
JAMES F. KING
STEPHEN F. JOHNSON

TELEPHONE: 707-468-9151
FACSIMILE: 707-468-0284
jim@mkjlex.com

December 8, 2006

William E. Snyder
Deputy Director, Resources Management
California Department of Forestry and
Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

George D. Gentry
Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RECEIVED
DEC 11 2006
BOARD OF FORESTRY

Re: My client, Willits Redwood Company, Inc.
Timber Sale Agreement, Camp 3 2003
Agreement No. 8CA02027
Jackson Demonstration State Forest (JDSF)

Dear Sirs:

I represent Willits Redwood Company, Inc. ("WRC"), which was the high bidder and entered into the above-referenced timber sale agreement with the State of California on May 6, 2003.

As you are aware, the timber sale was stopped in its tracks by an injunction issued by the Mendocino County Superior Court shortly after timber operations had commenced. The timber sale has been stalled in litigation while the Board of Forestry processes an EIR concerning the management plan for JDSF. Accordingly, WRC and the Department of Forestry entered into an agreement in December of 2005 to extend the timber sale agreement through April 1, 2008.

My client is concerned that its contractual rights under the timber sale agreement are being ignored by the Board of Forestry and CDF as the administrative process of revising

the management plan plays itself out. WRC does not wish to become a victim of bureaucratic inaction. It already has suffered significant loss as a result of the court injunction and the ensuing delay in getting the new management plan approved.

I am writing to request a written explanation of the Board's and the Department's position regarding WRC's contractual rights. Specifically, WRC wants to know whether the Board intends to give due consideration to WRC's contractual rights in the process of adopting a new management plan. Has the EIR even considered WRC's rights as an innocent purchaser? Does the Board intend to address this subject in the EIR?

If WRC's rights are going to be lost or impaired in the shuffle, I will advise WRC to file a claim with the State Board of Control and pursue whatever litigation is appropriate to make the company whole. However, I have advised WRC that it would be premature to do so until we have given your agencies an opportunity to provide us with a written explanation of the State of California's intentions and ability to honor the 2003 timber sale agreement.

Your prompt attention to this matter will be greatly appreciated. Thanks for your cooperation.

Sincerely yours,

James F. King

Mailed Letter P-225

Response to Comment
The Board and the Department are aware of contractual obligations concerning the timber sale. The management plan does not preclude the timber sale between Willits Redwood Company and the State of California. However, the timber sale is subject to existing court proceedings, a settlement agreement, and timber sale contracts.
.

Mailed Letter P-226
Note: Comment numbers inserted within text by the Board

February 21, 2007

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan

Dear Members of the Board,

Comment 1
The Mendocino Working Group (MWG) got together some time back in hopes of helping find a long term resolution to the Jackson Demonstration State Forest (JDSF) stalemate. Everyone in the group wants to see JDSF back in production in 2007. This desire is driven by numerous factors such as; regional economic stability, needed restoration work, augmenting the staff at JDSF, and maintaining existing infrastructure.

In response to our recommendations, CDF has proposed an initial implementation of the management plan and associated harvesting restrictions.[1] We have reviewed these recommendations and find that while staff included some of our recommendations they fail to capture adequately some key elements of our proposal that we feel are critical for successful resumption of operations in JDSF.

Comment 2
The MWG feels the key to long-term successful management of JDSF is meaningful local input. We feel strongly a well balanced advisory group structured similar to our suggestion is imperative. This portion of the management plan needs significant clarification and is not an issue that can be dealt with after the fact.

A compromise between CDF's and the MWG's position has been suggested, with appointments to the group being made by the director and ratified by the board; with the advisory group reporting to the director, and at its discretion, to the board. This is acceptable to the working group.

Below is our original recommendation amended to reflect the board's desired changes in language ("initial implementation period" rather than "Phase I") and the suggested compromise. We recommend that this amended recommendation be included in the DFMP:

> *Overarching Principle: The advisory Group should represent and consider a broad range of views, with emphasis on local input and resource expertise.*
>
> *Purpose: Initially to participate in the development of a long-term landscape and revised management plan during the initial implementation period; and to review and field evaluate the implementation of the Timber Harvest Plans proposed for the initial period. Subsequent*

[1] ***Potential Harvest Limitations to be Applied during Initial Implementation of the Proposed Jackson Demonstration State Forest Management Plan,*** Department of Forestry and Fire Protection February 7, 2007

responsibilities would include field based evaluations (prospective and retrospective) which would provide information for future research and management activities.

During the initial period of implementation of the Forest Management Plan this group will render advice on, but not limited to, the following topics to develop recommendations on modifying the contents of "Desired Future Forest Structure Conditions and Silvicultural Method" identified within the FMP:

> *The location and extent of recreation areas, corridors, trails, and designated access-ways that will be managed to enhance the full spectrum of recreational opportunities.*
>
> *The extent and general location of areas to be dedicated to late seral development where timber production will be secondary to habitat development.*
>
> *The extent and general location of areas to be dedicated to old forest structure zones. The OFSZs will maintain or develop key old forest features. The OFSZs will be available for timber harvest.*
>
> *The extent that it is necessary to create even-aged stands for potential future research needs.*
>
> *The need to revise the residual old growth policy, as articulated in our principles statement dated November 30,2006.*
>
> *The extent and conditions under which herbicides to control native hardwoods should be utilized.*

Participation: Open nominations, appointed by the Director of CDF, subject to ratification by the Board of Forestry. Members would represent the public interest and be drawn from a broad spectrum of backgrounds and resource expertise with an emphasis on appointments of local representatives. Professions represented should include forest ecologist, fisheries biologist, botanist, Registered Professional Forester, Licensed Timber Operator and recreational planner. Views represented should include local timber industry, environmental community, recreational users, local businesses and forest neighbors. 10-12 people.

Authority and reporting: Group would interact directly with JDSF staff and management team and report to the Director of CDF and, at its discretion, to the Board of Forestry in an advisory capacity on matters related to forest management policies and changes in the forest management plan. Decision making would preferably be consensus based.

Comment 3

The MWG is concerned with the language suggesting the initial period will sunset no more than 36 months after approval of the Forest Management Plan by the Board. We agree that 3 years should be more than adequate to bring this to resolution, but we don't feel a specific ending time for the initial period should be set. During the initial period, JDSF will be re-staffed with personnel with a broad range of expertise in addition to silviculture, landscape-level planning will be undertaken on a broad array of issues in cooperation with the Jackson Advisory Group, and a credible and verifiable inventory will be established. We envision that a detailed and sustainable long term plan for JDSF will be produced in cooperation with the advisory group, based on detailed specific information that provides for a consensus-based balancing of ecological values, education, research, recreation, timber production and regional economic stability. The initial period should continue until the revised plan is submitted to and approved by the Board of Forestry.

Comment 4

Our proposal for this initial period envisioned low impact harvesting in non-controversial areas. The intent was to generate revenue to restore and enhance staffing, remedy the more significant environmental problems on the forest, initiate a wildlife inventory, a botanical inventory and generate a reviewed and verifiable forest inventory, during the time that CDF was working with the advisory group to develop a long-term landscape and management plan. Our group would enjoy better understanding the decision making process that generated the initial list of plans for 2007 as outlined in the February 7th paper titled *"Potential Harvest Limitations to be applied during Initial Implementation of Proposed JDSF Management Plan".* Often disagreements of this nature are a result of insufficient information we would appreciate a response. Our group is very interested in seeing harvesting resume this year and needs to understand why these plans are favored over others that seem less controversial and lower impact.

Comment 5

Another concept that our group came to consensus on was that in the long run harvest levels should be the result of scientific and biological justification, within the context of a long-term landscape plan that addresses habitat, ecological, recreational/spiritual, education, and research values, rather than what seems to be a politically derived number.

Comment 6

Augmenting the existing staff at JDSF is critical to final development and implementation of the management plan. The resumption of harvesting is critical to existing infrastructure, restoration, and regional economic stability. The MWG appreciates the cooperation both the Board of Forestry and the Department have shown by assimilating many of our ideas into the management plan. Our group is hopeful that all involved understand the short timeline and are committed to moving this process forward.

Mike Anderson
Art Harwood
Vince Taylor
Kathy Bailey
Mike Jani

Mailed Letter P-226

Response to Comment 1
Comments noted.

Response to Comment 2
The Board has made the creation of a JDSF-specific advisory committee a provision of the management plan. The committee charter and membership will be determined by the Department with approval by the Board.

Response to Comment 3
The Board believes that the management for JDSF is viable, workable, and in compliance with existing legislation and Board policy. The management plan has been subject to an extensive period of public and agency review, and reflects a substantial level of input. However, the Board believes that an interim period will provide the public and the various advisory entities with an opportunity to make recommendations for potential improvement of the plan. The Board firmly believes that an additional period of up to 3 years is ample in order for a full review of management policies forest implementation plans.

Response to Comment 4
The short-term harvest schedule has been amended to reflect a desire on the part of the Board, the MWG, and others, that harvest during the interim period maintain future management options and flexibility while avoiding some of the areas of controversy as suggested by Mendocino Working Group and others. However, it is not the intent of the Board to avoid all areas that may be considered controversial to some members of the public. The primary purpose of the state forest is to demonstrate forest management, and to produce a range of conditions for future research and demonstration, while also producing a sustainable level of timber production.

Response to Comment 5
The Board concurs with this statement. Allowable cut is determined largely by an assessment of growth, yield, and stand management over the long-term. There is, however, some level of discretion in the determination of annual cutting levels in the short term. In addition, the setting of interim harvest restrictions has potential to alter the short-term planning capability of the Forest staff, which can in turn alter the short-term harvest level and the potential for revenue generation. The Board expects the short-term average annual harvest level to vary between 20 and 25 million board feet per year.

Response to Comment 6
The Board concurs with these comments.

Mailed Letter P-228

Note: Comment numbers inserted within text by the Board

July 25, 2007

Ruben Grijalva, Director
California Department of Forestry and Fire Protection
1416 9th Street
PO Box 944246
Sacramento, CA 94244-2460

Dear Mr. Grijalva:

We unanimously support the following candidates for appointment to the advisory committee for Jackson Demonstration State Forest. In choosing these candidates, we strived to provide expertise in relevant areas and a balance among different interests. We hope that these candidate recommendations will be considered as a whole.

We have not yet identified a person to represent recreation interests on the committee. We will continue to look for the appropriate person.

The advisory committee plays a crucial role in our consensus recommendations for Jackson Forest. We hope that you will be able to establish this committee in the near future, so that it will be available to assist the department in ensuring that near-term harvests are designed and implemented so as to avoid unnecessary controversy.

We have proposed that your appointments to the advisory committee be ratified by the Board of Forestry. To allow the committee to begin functioning as soon as possible, your appointments could immediately sit on the committee, subject to approval by the Board within some reasonable period, for example, three months.

- Greg Giusti – Forest Advisor, RPF, University of California Cooperative Extension. He has been actively involved with Jackson Forest, served on the Citizens Advisory Committee to JDSF, and acts as staff consultant to the Forest Council of the Mendocino Board of Supervisors.
- Doug Albin – Department of Fish and Game, Mendocino County. Doug is considered to be a very knowledgeable Mendocino person on issues related to salmon and salmon habitat.
- Teresa Sholars – Botanist, faculty member of College of the Redwoods in Fort Bragg. Teresa has broad and specific knowledge of the botanicals, including mushrooms, in Jackson Forest.
- Chris Baldo – Co-owner of Willits Redwood Company sawmill; degree in Forestry, University of California Berkley; Registered Professional Forester; and President of Roots of Motive Power.
- Mike Anderson – Owner of Anderson Logging Company, Fort Bragg, the largest logging contractor in Mendocino County. RPF. Formerly a member of the Board of Forestry.
- Mike Jani – Chief Executive Officer of Mendocino Redwood Company. RPF.
- Kathy Bailey –Active in forest-related issues since 1976. Was California Sierra Club's principal spokesperson on state-regulated forest issues for more than a decade until her "retirement" from that volunteer position in 2003. She has continued to be involved with Jackson Forest.

- Linda Perkins – Long-time dedicated forest activist, Chair of the Mendocino Group of Sierra Club's Redwood Chapter, former member of the board of the Redwood Forest Foundation, Inc., whose mission is to purchase timberlands and manage them as community forests.
- Vince Taylor – Founder and head of the Campaign to Restore Jackson State Redwood Forest. Vince has a professional background in public policy economics.
- Jere Melo – Member of the Fort Bragg City Council, RPF, and former chief forester of the Georgia Pacific Fort Bragg operation.
- Joe McBride – Professor and Division Chair, Division of Forestry, and Professor of Landscape Ecology, Landscape Architecture and Environmental Planning, UC Berkeley; current member of the Demonstration State Forest Advisory Group.
- *Recreation Representative – Recommendation in process.*.

We appreciate your efforts to ensure that Jackson Demonstration State Forest will serve as a model of excellence in forest management and forest research. We believe all of the recommended advisory committee members would contribute to reaching this goal.

Sincerely,

Mike Anderson

Kathy Bailey

Bruce Burton

Art Harwood

Mike Jani

Vince Taylor

Mailed Letter P-228

General Response
The Board appreciates the recommendations for committee membership. The committee charter and membership will eventually be a decision made by the Department and the Board, but will include consideration of recommendations made by others.

The letter above deals exclusively with the process of appointing an advisory committee for JDSF, and does not represent an expression of environmental concern.

P-229

from 2/2/2006 public hearing @ Ukiah

James D. Smith
P. O. Box 1101
Willits, Ca. 95490

This document is made in response to the Draft EIR/EIS for Jackson State Forest, of 10/12/2005. This main position of this response is that this draft EIR/EIS should be amended for the following reasons:

1. The forest management plan for Jackson State Forest should be amended because of the lack of protections for fire. This forest is at very high fire risk, and should be managed with fire protection as its highest priority. The proposed timber harvesting plans are totally inappropriate, because they will do nothing to reduce the great fire danger, which is an ever-increasing problem because of the huge amount of undergrowth, and this fire danger threatens perhaps 80% of the forest. Instead, better fire protection plans should be developed that would lower the fire hazards for the entire forest.

1

One possible fire protection plan would provide for the thinning of the forest using modern equipment for tree thinning, along with the removal of undergrowth and other fire combustible materials, which are currently present in the forest. Currently, about 25,000 to 45,000 acres of this forest needs to be thinned, and cleaned of undergrowth, old logs, dried woody debris, trash, and all other combustible materials, immediately, in order to prevent forest fires. Timber harvesting is inappropriate and could increase the risk of forest fires, as proposed in this EIR/EIS.

Plans for timber harvesting should be changed to plans for fire protections, in terms of reducing the fire hazards and combustible materials. Most of Jackson Forest is second growth, and there are a great amount of trees fewer than two feet in diameter. These smaller trees need to be thinned, chipped and mulched into pulp, to prevent fire. This material should then be removed and utilized as new forest products, which could be sold and use to raise revenue.

2

Such plans could also include the development of additional forest materials, like pulp, mulch, wood chips, redwood bark, and poles for telephones and other types of uses, that would utilize trees that are smaller in diameter than are currently used by logging, but would still raise revenue.

2. The forest management plan for Jackson State Forest should be amended because of the lack of a comprehensive plan for the development, management and reconstruction of habitat for coho salmon and other endangered species, including marbled murrelet and the northern spotted owl.

3

3. The forest management plan for Jackson State Forest should be amended because of the loss of acreage -- about 2,000 acres are missing. The CDFs documents from 2004, and other documents published previously to those documents list the forest as being 50,200 acres, or larger. The public has been told that plans for forest management include the acquisition of additional lands, yet these reports indicate the actual size of the forest is decreasing. Why is that?

4

4. The forest management plan for Jackson State Forest should be amended because of the need for better maps and establishment of boundaries for the state forest. This forest should be utilized for research, and therefore, better maps should be produced. Additionally, the forest's boundaries need to be better defined, and marked, to prevent

5

mistakes. Mapping could become an area for research, and GIS systems could be innovated for mapping and forest management.

Additional maps should include details of the forest management plan, including more detailed information concerning the 23 special concern areas, or (SCAs). Stands of Old Growth should be located and identified on these maps, along with habitat areas of endangered species. Mapping could also help to develop a better system of fire management plans.

6

5. The forest management plan for Jackson State Forest should be amended because of disputes about the number of acres of Old Growth, which need to be resolved. This dispute is caused by insufficient mapping and a lack of details on critical areas of great concern to the public, and to the environmental health of the region. When the forest was acquired in the 1940's and 50's, there were only about 400 acres of old growth remaining. However, because the forest has grown for several decades, and because the definition of "Old Growth" could include both "mature seral" and "late mature seral" trees, there is much more Old Growth within this forest, than listed in the EIR/EIS. There are approximately 9,000 acres of Old Growth, including large tracts of residual Old Growth along James Creek, and in other places throughout the state forest. Therefore, the draft EIR EIS is in error. Because of this error, more research should be conducted by the makers of this forest management plan, to determine the exact amount of mature seral, and late mature seral (or Old Growth) trees, within the forest.

7

6. The forest management plan for Jackson State Forest should be amended because of the need for more research in other areas besides timber harvesting. Research plans should include silvaculture research, along with endangered species and corresponding habitat research. Silvaculture research should include all types of environmental science research, with the goal being to expand our knowledge about the environment, and how it functions.

8

7. The forest management plan for Jackson State Forest should be amended because of the need for more consideration for a rapidly changing viewpoint by both state legislature and the public, as to what the main purpose of our public lands should be. Many people in both the California legislature and the public sector believe that the CDF should develop more uses for the forest than timber harvesting. These uses include education and research, conservation, fire prevention, habitat protection and recreation. For this reason, the comprehensive EIR/EIS should be developed slowly, over a time span of several years, to allow time for appropriate response by both the public and the state legislature.

9

In conclusion, the draft EIR/EIS could cause disasters, in terms of short-sighted exploitation of our forest. Everyone could become big losers, and this proposed management plan could result in the destruction and/or degradation of this vitally important coastal rainforest. An example of the sort of disaster warned of could include a major forest fire, perhaps in conjunction with environmentally destructive logging operations. Jackson State Forest has been growing for five decades, and is now in critical danger of burning, in a flash forest fire, which could burn tens of thousands of acres, due to the large amounts of young trees and underbrush, that are extremely combustible during the late summer months.

10

BOF Hearing Written Testimony P-229

Response to Comments 1 and 2
Significant impacts related to fire hazard are not expected to occur. Please see DEIR Section VII.8 for the assessment of hazards. Numerous factors will contribute to help prevent significant wildfires within JDSF, including maintenance of access for fire control apparatus, proximity to fire protection resources, and continued thinning and natural development of forest stands. The management plan includes provisions to consider biomass thinnings and controlled understory burns in the future, in an effort to demonstrate and better understand the role that these stand manipulations have upon wildfire occurrence and behavior. However, the Board does not agree that the entire Forest should be thinned over a very short period of time, due to the potential for this form of stand manipulation, on a vast scale, to result in significant impacts to watershed, fishery, recreation, timber, and wildlife resources.

Response to Comment 3
The Draft Forest Management Plan (DFMP) and the Administrative Draft Final Forest Management Plan provide numerous measures that will contribute to the protection and recovery of listed species. these include measures for protecting and recruiting snags and large woody debris, protection of riparian areas, development of late seral forest and older forest structure, and an accelerated road management plan to reduce sediment inputs to streams.

Response to Comment 4
The acreage accounting in the 2005 DEIR accurately describes JDSF as being approximately 48,650 acres in size. The difference with earlier reported figures is the result of a more accurate acreage measurement approach.

Response to Comment 5
The Board believes that the maps utilized in the DEIR and RDEIR are adequate for the information and analysis required in a programmatic EIR. The Board concurs regarding the research role of JDSF. Improvement of the quality of mapping or the forest for administrative, assessment, and research purposes will be ongoing.

Response to Comment 6
Map Figures are provided in the DEIR and RDEIR to indicate the special concern areas, including old growth groves (see Map Figure D in the DEIR or Map Figure 1 in the RDEIR. Species habitat is addressed in Map Figures J and K in the DEIR. CAL FIRE's Fire and Resource Assessment Program has produced various kinds of fuels and fire risk maps for the state, including the JDSF area. Results of these maps were used in the DEIR (see section VII.8 Hazards and Hazardous Materials).

Response to Comment 7
The DEIR accurately accounts for the approximately 459 acres of old growth stands remaining on JDSF. Old growth is considered a subset of late seral of late successional forest.

Response to Comment 8]
The DFMP and ADFFMP both embrace a wide range of forest-related research. They are not limited to timber harvesting by any means. All types of research identified in the comment are appropriate to JDSF.

Response to Comment 9
The propose of JDSF is more than just timber harvesting, and includes the range of interests identified in the comment. The creation of a JDSF Advisory Group, as provided for in the ADFFMP, will provide additional opportunity for ongoing public input on the management of the Forest.

Response to Comment 10
See response to comments 1 and 2. As indicated by the analysis in the DEIR, the Board believes that the management plan adequately addresses the risks of catastrophic fire. The analysis in the DEIR and RDEIR indicate the implementation of the ADFFMP, with the application of the various management measures and mitigations, will not result in significant adverse environmental impacts.

IV.13 Responses to Individual DEIR E-Mail Modified Form Letters

This section presents responses to individual public comments that were based on form letters but include additional comments that may be substantive. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Attachments were not included herein if our response did not directly reference the attachment. Form letters are found in section V of the FEIR.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

C2D-27

From: mail@nwilsonphoto.com
Posted At: Wednesday, March 01, 2006 12:13 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 FL2 I adamantly oppose the state's proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation.

I personally want Jackson State restored to an old growth redwood forest for wildlife and plant habitat, recreation, education and research.

1 The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is an absurd fiction, a pre-ordained conclusion not supported by science or common sense!

2 I personally took aerial photos showing a massive matrix of 20 square miles of adjacent clearcuts done in a short 5-year span in the Noyo and Pudding Cr. watersheds by Georgia Pacific, and of course each part certified by CDF as having "no significant environmental impact."

3 It is photographic proof that CDF can not be trusted to protect the public interest. It is strong evidence that the CDF and the Board of Forestry exists to serve the economic interests of the logging industry while maintaining the illusion that "Californa has the toughest forestry rules in the nation." If only those rules had any teeth and were actually enforced!

4 I personally showed photo blowups and gave slide show presentations of these aerial photo to the BOF at their meetings in a windowless concrete auditorium in Sacramento. They were proof that the BOF had not adequately addressed the cumulative impact of allowing scores of adjacent clearcuts filling entire watersheds over short time spans.

5 Using the words "forestry" and "harvest" in place of "logging" is an Orwellian ploy to fool the public, to portray the logging companies as "growing and harvesting trees," when in fact the industry has for over 100 years been repeatedly strip mining natural forests that no human planted, and doing so without regard to very significant negative impacts on the environment, on wildlife, on water quality, and on the future productivity of the forests.

6 In the bad old days, until it was shut down by public interest litigation only a few years ago, Jackson State forest was operated as a cash cow to subsidize statewide operations of the CDF while satisfying special interest demands to log this publicly owned forest.

7 For decades Jackson State was intensively logged under the fictions that it was done for scientific research, to demonstrate sound logging methods, and that such intensive industrial clear cut logging could be done without "significant" environmental impact.

8 It's time now to let the land -- and the plant, animal and aquatic communities that depend on it -- recover from over a century of sustained abuse at the hands of humankind.

It's time for scientific research into the long term aftereffects of sustained industrial logging, and to study whether the forest can ever recover to its natural, unmolested

1

state.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

FL 2

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR fails to meet its legal obligation to provide the information and analysis the public needs to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Please reject the Draft EIR.

Sincerely,

Nicholas Wilson
PO Box 943
Mendocino, California 95460
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

Email Letter C2D-27

Please see response to Form Letter 2

Response to Comment 1
Based upon the analysis performed, which incorporated the best science available, significant impacts are not expected to occur. Please see DEIR Sections VII and VIII. The comment is not supported.

Response to Comment 2
The Board is aware of the history of timber operations within the assessment area. The analysis of potential cumulative environmental impacts associated with individual timber harvest operations is performed by the registered professional forester and undergoes a multidisciplinary review during the THP process. Significant impacts are not expected to occur.

Response to Comment 3
The comment is not supported. The Board believes that the implementation and enforcement of the Forest Practice Rules through the THP process is generally effective in preventing significant impacts.

Response to Comment 4
The comment is not supported. The cutting history within the assessment area is known. Please see Map Figure H of the DEIR for recent cutting history. The DEIR also acknowledges that impacts have occurred in the past. The analysis demonstrates that significant cumulative impacts are not expected to occur as the result of future management of JDSF, considered in conjunction with past, present, and reasonably foreseeable probable future projects within the assessment area.

Response to Comment 5
The comment is general in nature and not supported. The Board is aware of the fact that impacts have occurred in the past as the result of timber harvesting combined with other impacts. However, there is ample evidence of effective forest management within the assessment area. The degree of management and protection has generally increased over time, due to the implementation of regulations and a vast increase in management expertise and effective planning and implementation by land managers.

Response to Comment 6
One of the principle intentions of state forest management is to provide economic benefits. The revenue derived from the management of JDSF will continue to be used principally to fund the management of the state forests. In the past, this revenue has funded a number of state programs, as was deemed appropriate by the legislature.

Response to Comment 7
See General Response 2, 6 and 10.

Response to Comment 8
JDSF will continue to available for research on a broad range of issues related to forest management, including restoration and recovery.

C2D-30

From: doloresmclark@yahoo.com
Posted At: Thursday, February 09, 2006 8:36 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

MY HUSBAND, MYSELF, AND OUR ADULT CHILDREN PURCHASED OUR PROPERTY BORDERING JACKSON STATE FOREST 10 YEARS AGO. WE REPRESENT THE NEW WAVE OF CONSCIOUSNESS OF THE 21ST CENTURY IN CALIFORNIA. IN THE 19TH CENTURY AND 20TH CENTURY THIS FOREST AND THE SURROUNDING FORESTS WERE SEEN AS A MEANS TO AN END--THE BUILDING AND REBUILDING OF NORTHERN CA. YOUR CONSTITUENTS OF THE 21ST CENTURY ARE NO LONGER MAKING THE SAME CHOICES FOR THEMSELVES AND THEIR GRANDCHILDREN. AS WE UNIVERSITY EDUCATED AND FINANACIALLY ABLED "BABYBOOMER" RETIREES MOVE TOWARD A LIFESTYLE OF ECOLOGICAL CONSCIOUSNESS, WE WANT OUR REPRESENTATIVES TO REFLECT OUR CONCERNS.

WE ARE AWARE AND OPPOSED TO THE CLEAR CUTTING OF JACKSON STATE FOREST, THE DESTRUCTION OF SECOND-GROWTH STANDS, AND THE USE OF HERBICIDES.

WE ARE ALSO APPALLED AT THE INEFFECTUAL PLANS IMPLEMENTED FOR THE RESTITUTION OF THE FOREST STREAMS FOR THE SALMON. WE HAVE MONITORED THE PROGRESS OF THE HARE CREEK SINCE THE FISH AND GAME AND THE FOREST DEPT. DEEMED IT NECESSARY TO DROP HEALTHY REDWOODS EVERY TEN FEET INTO THE STREAM. THE STREAMS HAVE WARMED UP BECAUSE OF THE LESSENING OF THE SHADE. POOLS THAT NATURE HAD CREATED HAVE FILLED UP WITH SILT BECAUSE OF THE BLOCKAGE OF THE TREES. RATHER THAN IMPROVE THE CONDITIONS FOR THE SALMON, THE FISH ARE NOW HAVING TO BATTLE AGAINST A POLICY BADLY IMPLEMENTED. 1

THE NEW MANAGEMENT PLAN FOR THE FOREST MUST, MUST, MUST INCLUDE AN ECOLOGICALLY TRAINED BIOLOGIST WITH POWER TO SUPERVISE THE MANAGEMENT OF THE SALMON STREAMS!!!!!!! WE SUPPORT PLANS E OR F.

YOUR CONSTITUENTS OF THE 21ST CENTURY ARE WELL EDUCATED, KNOW HOW TO EFFECTIVELY USE THE INTERNET TO COMMUNICATE WITH EACH OTHER ABOUT ISSUES THAT ARE DEAR TO THEIR HEARTS. JACKSON STATE FOREST ONE OF THE LAST REMAINING FORESTS THAT BELONG TO THE PUBLIC HAS BEEN AND WILL CONTINUE TO BE REEVALUATED AS TO HOW WELL IT IS BEING MANAGED . THE LAST FIVE YEARS OF VOICED CONCERNS REFLECT ONLY THE BEGINNING OF THE NEW WAVE OF CONSCIOUSNESS.

RESPECTFULLY, DOLORES M. CLARK 29001 HWY 20 FT. BRAGG, CA 95437

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research. 1 FL 2

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

1

FL 2 The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

Dolores Clark
29001 Hwy 20
Ft. Bragg, California 95437

cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

Email Letter C2D-30

Please see response to Form Letter 2

Response to Comment 1

The LWD placement trial on Hare Creek is a cooperative effort with DFG and CAL FIRE. Subsequent assessment of the project by DFG has noted several positive effects. This includes further accumulation of woody debris, formation of deeper pools, storing of sediment, and sorting of gravels downstream from the LWD. This provides improved spawning habitat as well as winter cover for juvenile fish. Monitoring of water temperatures has produced no evidence of warming due to the incidental cutting of trees to provide LWD.

The authorized levels of State Forest staff and budget were increased beginning with the 06/07 fiscal year. This included adding a wildlife biologist. Also stated in the ADFFMP; “In assessing needs for the coming decade, greater biological expertise appears to be a high priority. Expertise in fisheries would augment the current wildlife biologist position. Additional expertise in geology, botany, hydrology, and ecology would also be of value. It is recognized that existing staff can be trained to perform many of these functions at a significant level, depending upon individual aptitude, education, and training.”

C20-33

From: redwoodmary@yahoo.com
Posted At: Wednesday, March 01, 2006 9:04 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1,2 Climate Change is here and each local decision now has cumulative impact. Stream
3 temperatures are rising, and science has clearly measured that salmon cannot come back to
4 spawn when impacted by logging. Species disappear with the elimination of forest cover. Species habitat is disappearing all over California. It is time to take the courage to do something different.

5 I have walked these forests of Jackson State Forest and seen the beautiful areas spared from current logging and people enjoying the beauty of this forest. I have also witnessed over the years the destructive logging driven by greed for the dollar. Money has become more important then saving a forest for future generations or for current generations to find refuge in from the daily grind of a society where nature is not valued.
As a California state resident who once resided near the border of Jackson State Forest and who now visits this precious natural resource to get away from the hustle and bustle of urban life, I cannot understand why the California Board of Forestry and the State of California who are guardians for the public trust do not take action to protect this forest.

6 We have already witnessed in our lifetime the transition of productive forests into clear-cut areas where biological diversity has been destroyed in Mendocino County. Yet, Jackson State Forest is a 2nd growth forest - and restoration companied by light use recreation is the only prescription that makes sense in order to restore the habitat for species. Using
7 this forest to allow timber companies to bid for roughshod logging has been wrong all along. This forest has been used for the State's revenue for discretionary projects for far too long.
Local Residents for years have pleaded for the State to protect this natural resource that is valuable to them as a forest
sanctuary- for species and humans.

/ Jackson State Forest cannot be kept as cash cow to keep feeding the state revenue, there
8 is no justifiable reason to keep logging and destroying this precious biotic island of diversity.Every area in the world where forests have been cut and diminished has suffered from change in microclimates.

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clear cutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document (Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

1

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. Its 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

Redwood Mary
P.O. Box 14146
Berkeley, California 94712
cc:
Senator Don Perata
Mendocino County Board of Supervisors
Assembly Member Loni Hancock
Governor Arnold Schwarzenegger

2

Email Letter C2D-33

Please see response to Form Letter 2

Response to Comment 1
The potential for the future management of JDSF to significantly impact climate has been considered. The management of JDSF will provide net carbon sequestration, thus helping to reduce the potential for global warming. Please see DEIR Section VII.16 for the assessment of carbon and climate related effects.

Response to Comment 2
Data collected within JDSF indicates that water temperature has remained relatively stable over the past several years, and most sites are within a favorable temperature range for salmonids. Future management will provide for continued maintenance of cool water temperature, as well as continued canopy development in areas where shade canopy is lacking. Significant impacts related to water temperature are not expected to occur.

Response to Comment 3
Although logging of the past, in addition to other freshwater and ocean influences, have affected both the juvenile and adult salmon populations, no significant impacts to salmon populations or aquatic habitat are expected to occur. Forest management will not prevent salmonids from returning to spawn, since significant changes to habitat are not expected to occur. Please see DEIR Section VII.6.1 for the assessment of potential impacts to aquatic resources.

Response to Comment 4
The commenter has not provided significant detail related to the general concern that species disappear with the elimination of forest cover, and that species habitat is disappearing all over California. The Board has thoroughly considered the potential for timber harvest activity to impact wildlife, within JDSF and beyond JDSF within the assessment area. Significant impacts are not expected to occur. Please see DEIR Section VII.6.6 for the assessment of potential impacts.

Response to Comment 5
A reasoned response to the general and speculative comments related to greed and the value of nature is not possible. The Forest is being protected and managed as intended by the legislature and the Board.

Response to Comment 6
Forest restoration and public recreation are both major elements of the ADFFMP. The effects of past harvesting within the assessment area, including JDSF, have been considered. Although clearcutting can affect the diversity within specific harvest units, the forest and habitat continues to develop, retaining and recruiting a high degree of diversity at the landscape level. The practice of clearcutting will be limited within JDSF.

Response to Comment 7
JDSF was established by the legislature specifically to demonstrate economical forest management, including the production of forest products that creates revenue for the State of California. The expenditure of the revenue is determined primarily by the Governor and the Legislature on an annual basis. Generally speaking, the spending of this revenue is not discretionary, though some discretion is exercised within the annual allocation in an effort to manage the state forest in an appropriate manner.

Response to Comment 8
It is recognized that stand management creates temporary changes in microclimate. The commenter fails to provide a specific cause for concern related to changes in microclimate. Within the state forest, these changes tend to be both localized and temporal in nature, as the forest stands regenerate, grow, and develop. Significant impacts related to minor localized changes in microclimate are not expected to occur.

CBD-37

From: captainf@albionnatioin.org
Posted At: Tuesday, February 28, 2006 3:33 PM
Conversation: Jackson State Forest Utilization

Subject: Jackson State Forest Utilization

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I advise this review committee that the very nature of forest product utilization and the ecology of the North Coast are in jeopardy in the movement of CDF towards immediate profit as opposed to long term benefit for this forest.

2 The primegrowth aspects of the redwood forest are impaired by current logging practice as indicated by many studies and the common sense examination of several watersheds (10 mile in particular) where the immediate needs of corporate owners has, and is, proceeding at a
3 totally reckless pace. This situation is one where examples of appropriate forestry are demonstrated by thining harvest and local yarding, all to maintain conditions for the optimal growth that the forest practice act depended on.
4 Failing this task undoubtedly means substantial and perhaps terminal damage to the forest's ability to respond to the rapidly changing conditions; we are now forming the redwood forest's immune system and MUST be wise in our efforts.

5 Please attend to the rapidly changing forest and cultural dynamic that seriously extends to the very survival of our biosphere.

FL2 That being said: I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

1

Allan Graham
POB47
Albion, California 95410
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

2

Email Letter C2D-37

Please see response to Form Letter 2

Response to Comment 1
The planned management of JDSF does not jeopardize the nature of forest product utilization or the ecology of the North Coast, as the writer asserts. Nor is it the intent of either the Board or the Department to move towards immediate profit, rather than the long term benefit of the forest. Due to the general and unspecific nature of the concern, a reasoned response would call for speculation.

Response to Comment 2
The expressed concern related to prime growth aspects of the redwood forest being impaired by current logging practice is also unclear, as is the concern relative to corporate owners proceeding at a totally reckless pace.

Response to Comment 3
The Board and the Department intend to utilize appropriate forest management methods for JDSF. Stand thinning is one of the management methods that will be used. The commenter mentions a term called "local yarding" intended to maintain conditions for the optimal growth, but does not include a sufficient explanation of the intended meaning of the term. A reasoned response is not possible.

Response to Comment 4
It is unclear what the commenter means by "failing this task" and "substantial and perhaps terminal damage to the forest's ability to respond to the rapidly changing conditions", as well as the meaning of "we are now forming the redwood forsest's immune system". A reasoned response is not possible. The ADFFP will manage the Forest with the goal of maintaining or restoring natural ecological function.

Response to Comment 5
It is not clear what the commenter means by the statement, "Please attend to the rapidly changing forest and cultural dynamic that seriously extends to the very survival of our biosphere." No specific potential adverse impact is stated, and a reasoned response is not possible.

C2-44

From: aklydian@yahoo.com
Posted At: Friday, February 10, 2006 12:43 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes FL2 restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

1 It is of primary interests for everyone to develop environmentally friendly industries and technologies. The loss of so much forrest land would have dramatic and unpredictable concequences. The forests in question act as a stabilizing agent in the ecosystem over a much larger area and cutting down the trees would result eventually result in ever increasing climate changes over the entire area eventually spreading beyond the boundaries of the state. Water tables and contamination filtering would be altered resulting in wildlife loss and widescale ecosystem imbalences in the whole region. Please protect the Jackson State forest at all costs. It's the only rational thing to do.

Sincerely, Richard Dame

Sincerely,

Richard Dame
26 Cesar-Klein-Ring
Hamburg, T3A 2H4
Germany

1

Email Letter C2-44

Please see response to Form Letter 2

Response to Comment 1
The concerns expressed by the writer are very general in nature. As stated the concerns are not related to specific management actions or proposals. A reasoned response cannot be made. The Board concurs that "environmentally friendly industries and technologies" are of primary interest, and are beneficial.

The Board does not propose to produce a "loss" of forest land. The Forest will be managed in a sustainable manner, and natural ecosystem process will be maintained or restored. The potential impacts of management were extended beyond JDSF to the assessment area. The Board has determined that no significant impacts related to climate change are expected to occur. The Forest growth will result in a net increase in carbon sequestration during the planning period.

Forest management will be conducted in a manner that reduces long-term sedimentation and that applies appropriate techniques to avoid significant levels of new sediment. The comment related to "widescale ecosystem imbalances in the whole region" is not specific and not clearly stated. No support is provided for any of the concerns expressed in the letter.

C2-46

From: karlstad@mcn.org
Posted At: Tuesday, February 28, 2006 1:17 PM
Conversation: Jackson State Forest Highest Use

Subject: Jackson State Forest Highest Use

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I strongly support the management of Jackson State Forest this century for maximum carbon sequestration so that revenue-generating activities, in the name the people of California, at Jackson State Forest are not merely negating the vital (and costly) California initiatives addressing GHG emissions. For state and national economic and security interests, the Jackson State Forest key priority must be restoration to old growth redwood forest for maximal carbon sequestration and related research. The appropriate compatible uses are protection/restoration of fishery habitat and use/enhancements for recreation, and education.

FL2 I firmly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation.

I oppose approval of the draft environmental document (Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon-bearing streams, nor does it provide for actively restoring salmon habitat or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is incorrect and foolish.

2 The people of California must not have the best carbon sink they own degraded and limited....for the short-sighted convenience of a little "cash cow"!

Sincerely,

Ken Karlstad
P.O. Box 1182
Fort Bragg, California 95437
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

Email Letter C2-46

Please see response to Form Letter 2

Response to Comment 1
The management of JDSF will promote a high level of carbon sequestration, resulting in a positive cumulative effect. Carbon will be sequestered in the growing inventory of standing live trees, as well as within the forest products that come from the Forest. The growth and use of wood will further offset the production and use of building materials that utilize vast amounts of fossil fuel. Significant impacts related to carbon sequestration are not expected to occur. Please see DEIR Section VII.16.

The Board agrees that protection and restoration of both habitat and fisheries are compatible uses for the Forest. However, the legislation and policy related to the management of JDSF specify that sustainable forest management and timber production are primary uses of the Forest.

Response to Comment 2
JDSF represents an active carbon sink for the State of California and the nation as a whole, in addition to the many millions of acres of timberland in public ownership. The Forest will not be used as a "cash cow". The growth and utilization of timber will remain sustainable, and harvest will remain well below the level of annual growth during the term of the management plan.

C2-60

From: kschubeck@hotmail.com
Posted At: Sunday, February 12, 2006 3:50 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL2 I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

1 I studied the DEIR and was amazed that all of the shaded charts gave alternatives C1 and C2 the same level of negative effects or positive effects as alternative D, E and F. Considering the drastictly different silverculture methods, stream buffers and other differences found in alternative D, E and F from what is business as usural in C1 and C2 I find the shaded areas in the DEIR to be false and misleading.

2 The citizens of California concerned with the managment of JDSF have been working and speaking out on this issue for many years including lawsuits and creating the alternative D which I spent over a 1000 hours working on over 18 months with a diverse groups of concerned people. You as the BOF should know that we will keep active with more lawsuits and public education until you adopt a management alternative that restores the forest and restores the salmon habitat.

Thank you for your consideration.

Monroe Robinson Mendocino Forest Restoration Coalition

Sincerely,

1

monroe Robinson
42700 Little River Airport Rd.
Little Rivier, California 95456
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

2

Email Letter C2-60

Please see response to Form Letter 2

Response to Comment 1
The comment related to finding of similar negative or positive effects attributable to many of the alternatives is unclear. This comment is assumed to concern the various tables within the DEIR that compare impacts among the various alternatives. The Board recognizes that the resulting impacts may vary by alternative, depending upon the specifics being considered, but also wishes to inform the commenter that the level of impact depicted in the tables is segregated by broad classes or levels of impact; from beneficial to significant. Alternatives C1 through F often share the similar impact level category, but this is not always the case (e.g. Table VII.14.4 Recreation).

Response to Comment 2
It is the Board's intention that the management of JDSF provide for restoration of forest and aquatic habitats.

C2-75

From: skippy@mcn.org
Posted At: Monday, February 06, 2006 11:27 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 The draft eir/Plan for Jackson forest does not encompass the vision promised by the State at the inaugaration of Big River Park -- that the Mendocino Coast Parks in combination with that part of Jackson State Forest in the Big River watershed would all be allowed to become an old-growth forest protected form commercial logging: to create a wildlife sanctuary.

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

FL 2 The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

skip taube
42255 Little Lake Rd.
POB 1833
Mendocino, California 95460
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

Email Letter C2-75

Please see response to Form Letter 2

Response to Comment 1
The portion of JDSF that lies adjacent to Big River State Park in the Big River watershed will be largely managed to promote late seral conditions. This includes late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1). Late seral habitat development will be provided by either no harvesting to allow stands to develop in a non-managed state, or by understory thinning, selective harvest or other management activities designed to promote late seral characteristics. There will be an emphasis on the retention and recruitment of snags and downed wood. See also General Response 9 and 12.

C2-83

From: jdh_666@comcast.net
Posted At: Saturday, February 04, 2006 3:38 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

FL2 I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The least harmful alternative to the forest, Alternative E, promotes restoration of old growth, but it fails to commit funds to decommission the hundreds of miles of road that are pouring sediment into salmon streams and fragmenting wildlife habitat, nor does it provide for actively restoring salmon habit.

The draft EIR rules out Alternative E as a feasible alternative by making a conclusory statement that it is contrary to state law and Board of Forestry policy. This makes a mockery of the EIR process, because it does not provide the legally required consideration of Alternative E.

1 Your agency may not apporve your preferred alternative if there is an alternative that would substantially lower the negative environmental effects of the project as proposed. Public Res.
Code section 21002. Alternative E is such an alternative. The EIR is legally required to compare the merits of Alternative E and the other alternatives and evaluate that comparison.

2 Cal.Code Regs. section 15126(a). Your conclusory rejection of Alternative E is also illegal, because a finding that Alternative E is not feasible must be accompanied by an explanation of why that alternative is not feasible. Cal. Code Regs. section 15126.6(c). You must also accompany any such finding with "a supporting statement of facts." Resource Defense Fund v. Local Agency Formation Com. (1987) 191 Cal.App.3d 886, 896.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is contrary to logic and absurd on its face.

FL 2 The draft environmental document is so large and obscure that I am unable to review it thoroughly. Its more than 1500 pages make the electronic version impossible to use, and the printed copies are more money than I can afford at over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,

Jeff Hoffman
132 B Coleridge Street
San Francisco, California 94110
cc:
Senator Carole Migden

1

Email Letter C2-83

Please see response to Form Letter 2

Response to Comment 1
CEQA (PRC §21002) requires a lead agency to mitigate the significant environmental effects of a proposed project to a level of less than significant **or**, where that is not achieved, adopt a feasible alternative that avoids or substantially lessens the project's significant effects. The DEIR analysis of Alternative C1, originally selected by the Board as the proposed project alternative, identifies mitigation measures that reduce all of the project's significant effects to a level of less than significant; therefore, there is no requirement to adopt a project alternative.

The RDEIR provided analysis of a new Alternative G that incorporates elements from several alternatives, including E. Again, this proposed project alternative identifies mitigation measures that reduce all of the project's significant effects to a level of less than significant; therefore, there is no requirement to adopt a project alternative.

Response to Comment 2
Alternative E was not "rejected", and was thus included in the alternatives analysis in both the DEIR and RDEIR. The DEIR and the RDEIR included an in-depth comparison of the proposed project alternative and the other project alternatives, including E, as required (CCR §15126.6). A detailed impact analysis revealed that elements of several of the final alternatives under consideration (A, D, E, and F) may be infeasible in part (see DEIR Table VI.1 or RDEIR section II.5 and Table II.4) due to the fact that they may not be consistent with the Public Resources Code, regulations, or Board policies. A clear discussion of the statutory framework from which the state forests are managed is contained in Section II (Introduction) of the DEIR and a detailed compilation of relevant statutes, regulations, and Board policies is provided in DEIR Appendix 5.
The Board, prior to certifying the FEIR, will make the findings required under CCR §15091 supported by substantial evidence in the record
.

C2-115

From: bats3@comcast.net
Posted At: Tuesday, February 14, 2006 1:12 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 It is rather pathetic that CDF is still proposing clear cut logging on publicly owned land, specifically Jackson State Forest. It is not the legal charge of CDF to justify by example the most destructive form of log extraction used by private industry, i.e. clearcut and herbicide logging. Old forests are already extremely rare in Mendocino
2 County. The County has already had its private forest lands pealed and its streams degraded by decades of such needlessly destructive logging practice. It this what CDF
3 means by "demonstration"? I have toured the water quality monitoring sites at Jackson and read reports from Jackson. Some are legitimate, some are obviously intended to support and cover for the dammage done at Jackson and on private lands under permit by CDF.

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes
FL2 restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

Kevin Collins
P.O. Box 722
Felton, California 95018
cc:
Senator Joe Simitian
Mendocino County Board of Supervisors
Assembly Member John Laird

1

Email Letter C2-115

Please see response to Form Letter 2

Response to Comment 1
The commenter states that clearcut and herbicide logging is proposed, and that this practice is the most destructive form of log extraction used by private industry. The practice of clearcutting may be utilized, but will be limited to research and specific regeneration problems. Herbicides will also be utilized, but in a careful and controlled manner. The comment is not specific in identifying the form of destruction that is believed to occur as the result of these management practices. Both clearcutting and herbicide use will be practiced and mitigated in a fashion that is not likely to produce significant impacts. Please see DEIR Section VII the assessment of potential impacts to forest resources, including wildlife, fisheries, and watershed resources.

Response to Comment 2
The forest will be managed to develop a significant acreage of late seral and older forest structure. The Board is aware of the harvest history within the assessment area, and of the historic stream damage that has occurred. The management of the Forest will not produce impacts at levels observed in the past. The Forest will be managed in a manner that provides an opportunity for recovery of forest, watershed, and biological systems. Significant cumulative impacts are not expected to occur.

Response to Comment 3
The Board will not speculate as to the specific water quality monitoring sites and reports being referred to by the writer. The basic premise of the comment is unsupported and unfounded.

C2-129

From: bill.bauriedel@stanfordalumni.org
Posted At: Monday, February 13, 2006 10:35 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 It is always time to rebuild our redwood forests. Jackson State Forest must be saved from the axe and saw. There are so many good reasons to preserve rather than destroy. Salmon streams are essential to the survival of this species. Third growth forests are not as strong as second growth which in turn is not as strong as first growth redwood, so lets not replace second growth with third growth. Jobs are important, so put the former loggers to work rebuilding streambeds, managing these precious forests and rebuilding a diverse ecoculture. The days of clearcutting are over, so we must invest in productive ecosystems, tourism and private and public forest management.

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it
FL2 provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

William Bauriedel
3673 South Court
Palo Alto, California 94306
cc:
Senator Joe Simitian
Mendocino County Board of Supervisors
Governor Arnold Schwarzenegger
Assembly Member Ira Ruskin

1

Email Letter C2-129

Please see response to Form Letter 2

Response to Comment 1
The meaning of the comment related to rebuilding our redwood forests is not clear. It is the Board's intent that the redwood forests within JDSF remain healthy and sustainable, and that ecological process be maintained or restored. A significant area of JDSF will be managed to develop late seral forest or older forest structure. All old growth groves will be preserved.

Please see the assessment of potential impacts to the various biological resources of JDSF, found in DEIR Section VII.6. Significant impacts are not expected to occur.

It is unclear what the commenter means by the statement that third growth forests are not as strong as second growth, which is not as strong as first growth. A reasoned response is not possible. While future management will create new age classes of trees as part of the sustained management of JDSF, most of the forest will be managed on an uneven-aged basis, which will ultimately produce stands of trees of different sizes and ages. The terms second and third growth are relevant primarily to even-aged forms of stand management, which may be utilized on no more than 26 percent of JDSF.

JDSF is, and will continue to be a diverse ecosystem. Clearcutting remains a viable form of stand management within the region, the state, and the nation. However, the use of clearcutting will be limited within JDSF.

C2-148

From: ipcnt@juno.com
Posted At: Wednesday, March 01, 2006 3:49 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 The proposed management plan will undoubtedly increase damage to stream habitat and which in turn will severely negatively impact salmon spawning. The resulting decrease in salmon will be a further economic hardship to the comercial salmon fishery. This would ultimately have the effect of reducing tax revenues to the state.

In addition to commercial fishing, it would impact recreational fishing. There are large politically active organizations affiliated with recreational fishing. I am sure that they would bring their politcal clout against any politician or other official who supported a plan, like the proposed management plan, that would endanger salmon habitat.

PL2 I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

Sincerely,

Peter Schumacher
1368 Tenth Ave
San Francisco, California 94122
cc:
Senator Jackie Speier
Mendocino County Board of Supervisors
Assembly Member Leland Yee

1

Email Letter C2-148

Please see response to Form Letter 2

Response to Comment 1
The management of JDSF will provide for continued recovery of the stream habitat system. Please see the analysis performed in the DEIR (Section VII.6.1). Significant impacts are not expected to occur. The plan is not expected to contribute to a decline in the commercial or sport fishery.

C2-149

From: tworns@pacific.net
Posted At: Wednesday, March 01, 2006 3:45 PM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

I oppose approval of the draft environmental document(Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities. FL2

The draft EIR rules out Alternative E as a feasible alternative, saying it is contrary to state law and Board of Forestry policy.
This makes a mockery of the EIR process.

The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

The draft environmental document is so huge and obscure that I am unable to review it thoroughly. It's 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy - over $200 per copy!

The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives. Please reject the Draft EIR.

1 I would like to add to add to this standard letter that I am not opposed to careful logging in Jackson State Forest and that I think herbicides might need to be used on exotic plants that threaten to crowd out our natives. Clear cutting seems to have created an environment at Jackson State Forest where some exotic invasives thrive and it seems to me that the loggers have gotten away with leaving the logged areas in an environmental shambles, prone to erosion, no shade for forest floor species and vulnerable to invasion by exotics. Thank you for your time

Sincerely,

Andrea Davis
9680 Laughlin Way
Redwood Valley, California 95470
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

1

Email Letter C2-149

Please see response to Form Letter 2

Response to Comment 1
The Board considers the management plan for JDSF to include provision for logging activity that is both careful, mindful, and protective of the various resources found within the Forest. Invasive plants will be controlled and prevented from spreading, by use of an integrated weed management system.

Most of the invasive plants found within JDSF and on adjacent forest lands in the assessment area can thrive in an environment that includes sunlight and bare soil surfaces that are prone to seed establishment. In cases where past clearcuts or other forms of harvest have created these conditions, invasives have expanded. The Plan will incorporate consideration of these mechanisms and will attempt to control conditions under which invasive species can spread. This will include control of existing populations to reduce the availability of seed. The common invasive species within JDSF include French broom, Scotch broom, and Pampas grass. These species do not tend to invade areas in the absence of bare soil. Most timber harvest areas retain significant levels of ground cover. The proposed management of invasive species has been assessed in the DEIR. Please see DEIR Section VII.6.2 and Section VII.8.

Recent timber harvest operations within JDSF have prevented significant impacts associated with erosion, and have maintained a well vegetated understory. However, there have been instances where roads and trails utilized to move logs from the forest have created conditions conducive to the establishment of invasive species. The management plan provides for consideration of these conditions, and provides a means to prevent the spread of invasive species. Redwood forest is capable of rapid regeneration when the overstory canopy has been reduced or removed. The regeneration potential is clearly evident throughout JDSF, including areas that have been clearcut in the past. Significant impacts related to reductions in shade are not expected to occur.

CZ-173

From: gioia@sonic.net
Posted At: Tuesday, February 28, 2006 1:44 AM
Conversation: Jackson State Forest

Subject: Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I strongly oppose the latest draft nvironmental report (DEIR) for the Jackson State Forest. I've been ill, but this issue is very important to me so I hope this will reach you in time and be included in your considerations.

We've been fighting for six years to prevent massive logging of this recreational and ecological treasure. It is more important than ever for you to start managing our redwood forest for restoration instead of wholesale logging. Now that the Mendocino Board of Supervisors voted to reject the California Department of Forestry's plan for management of Jackson State Forest, the possibility of real reform has suddenly opened up.

The board's action broke a 10-year deadlock. Progress is now possible, but although the "compromise" plan supported by the supervisors would be an improvement over clearcutting 30 percent of the forest, it would still emphasize industrial logging rather than the restoration alternative that I favor. The closest lternative, Alternative E, promotes estoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of road that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habit or expanding recreation opportunities.

FL2 I oppose the DEIR's plan for clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

1 "We the People of California" bought the Jackson State Demonstration Forest to demonstrate wise logging practices to the industry and to provide income for the Department of Forestry to run its program. It is the negligence of the Department that forced us to take the legal actions we continue to support to stop all logging activity in the forest until we work this out. "We the People of California" want our forest back.

2 We've witnessed heartbreaking abuses by logging companies that were allowed to clear cut large areas with no supervision. The forest managers admitted that they were unaware that this abuse would take place and were unhappy with the outcome,but no one was punished for the outrage. We've been camping in the forest when companies were flying the trees out by helicopter from sun-up to complete dark - on a weekend - to get as many trees out as they could before the courts opened on Monday. We've filled in surveys about sharing the forest with recreation and education without seeing any positive change. We've written letters and sent emails that fallen on blind eyes. We've supported legal actions with money that we can't afford to spend. We've worked with legislators to get new laws passed that were vetoed by the governor.

3 We will not give up the fight. This is an incredible, very unique forest and we must protect it and you must help us protect it. It's not just a source of money for your coffers.
It's a magnificently beautiful redwood forest; one of the only forests that still has accessible, nearly pristine areas the public can enjoy (when we were allowed to). We've been involved there for 30 years and have seen all the changes, while you have new personnel every few years. We're going to continue this fight until you come up with a truly balanced plan for recreation, restoration, education, and income - in that order.

1

Sincerely,

Gioia Davis
16315 Watson Rd
Guerneville, California 95446
cc:
Senator Wesley Chesbro
Mendocino County Board of Supervisors
Assembly Member Patty Berg
Governor Arnold Schwarzenegger

2

Email Letter C2-173

Please see response to Form Letter 2

Response to Comment 1
Opposition to the DEIR noted. The Forest will be managed on a sustainable basis for research and demonstration purposes. Restoration of older forest and properly functioning ecological processes is one of the goals of the management plan.

The County Board of Supervisors voted in support of Alternative D. Many elements of Alternative D have been incorporated into the alternative that was adopted (Alternative G).

The Board believes that JDSF has been managed in an appropriate manner, in compliance with the legal mandate established by the legislature, and according to Board policy. Alternative G will provide for a broader range of management than in the past, with restoration and ecological function being very important considerations.

Response to Comment 2
The comments related to clearcutting of large areas without supervision are general and unsupported. The Board does not concur with these unsupported claims. Reference to helicopter yarding after dark prior to the opening of courts is unclear and does not appear to refer to JDSF. No helicopter yarding operations within JDSF have been associated with civil suits.

Response to Comment 3
Please see the DEIR for an assessment of the potential impacts to recreational resources (Section VII.14). Significant impacts are not expected to occur. The Forest has remained open to recreational activity.

C5-1

From: Marien Grace [mariengrace@sbcglobal.net]
Posted At: Wednesday, February 22, 2006 9:01 AM
Conversation: Comment on Draft EIR for Jackson Demonstration State Forest

Subject: Comment on Draft EIR for Jackson Demonstration State Forest

George D. Gentry, Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460
Email: board.public.comments@fire.ca.gov

Dear Mr. Gentry:

This letter is written to comment on the Draft Environmental Impact Report for Jackson Demonstration State Forest.

FL 5

Alternative C-1, the proposed project, permits too much logging and provides too little protection for old-growth forest, wildlife habitat, and watercourses.

1

Jackson is the largest of eight state-owned forests in California, covering nearly 50,000 acres. It is the only state forest that is home to a significant percentage of mature redwoods, an increasingly rare and valuable forest ecosystem for both wildlife habitat and recreation. The forests have been under stress from too much logging and other unsustainable practices for too long. Please protect these resources for the future generations.

FL 5

I urge you to revisit the environmental impact report for Jackson Demonstration State Forest, and develop an alternative that would:

o restore the natural forest ecosystem;
o safeguard fish and wildlife habitat;
o protect water quality;
o eliminate clearcutting as a management tool; o cordon off old growth from harvest; and o end herbicide use.

Thank you,

Marién Grace
35 Century Lane
Petaluma CA 94952
mariengrace@sbcglobal.net

1

Email Letter C5-1

Please see response to Form Letter 5

Response to Comment1
See General Response 9, 14, and 15.

7-1

From: Lamar Pittman [jinxandme@yahoo.com]
Posted At: Wednesday, February 15, 2006 10:35 PM
Conversation: Request for Jackson State Demonstration Forest protection

Subject: Request for Jackson State Demonstration Forest protection

Feb 16, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 First I want simply to say save all of the forest. Each tree cut down would require many, many years to be replaced. Mature trees are so vital to provide oxygen to our oxygen compromised atmosphere.
There can never be enough trees.

In addition to the above is the obvious need to keep habitat for wildlife intact. The human uses for wood can easily be substituted by other readily available products. Tragically wildlife habitat is steadily being encroached upon for human use. I feel this is an undue and avoidable error. So please leave the forest to remain as it is now.

FL 7 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region. 42

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Lamar Pittman
2011 W 84th Pl
Los Angeles, CA 90047-2904

1

Email Letter 7-1

See response to Form Letter 7.

Response to Comment 1
See General Response 2, 8, 9, 11, 12, 15 and 16. The Board contends that the "human uses of wood" cannot be easily replaced with resources that do not have environmental impacts.

7-18

From: Sue Pappalardo [robinbyrd2@yahoo.com]
Posted At: Friday, February 17, 2006 5:42 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 17, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 I believe redwood forests should be protected. They are disappearing at an alarming rate. I don't know why logging redwoods is allowed at all. They should be treated like an endangered species.

FL 7 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

42

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Sue Pappalardo
1481 San Miguel Canyon Rd
Royal Oaks, CA 95076-8402

1

Email Letter 7-18

See response to Form Letter 7.

Response to Comment 1
The comment writer states that redwoods should be treated as an endangered species. According to the *Dictionary of Forestry* published by the Society of American Foresters, the definition of an endangered species is: "any species of plant or animal defined through the Endangered Species Act of 1976 as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register." The broad range and abundance of redwood trees in California exclude them from this definition.

7-23

From: Cristine Bailey [cnjbailey@frontiernet.net]
Posted At: Friday, February 10, 2006 10:18 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

FL 7 As a Californian who loves the state for it's open spaces and natural heritage, and a supporter of Defenders of Wildlife, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

1 Fir can be treated to act like redwod. We must balance all aspect s of our lives to protect the unique resources that make our state worth visiting like the redwood ecosystem in Jackson Demonstration State Forest situated in the central part of the coastal redwood range.

FL 7 There is no other national forest with redwoods nearby, and here redwoods are preserved at the lowest rate of their entire range. In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Cristine Bailey
PO Box 203
Canyon Dam, CA 95923-0203

1

Email Letter 7-23

See response to Form Letter 7.

Response to Comment 1
JDSF is not managed solely for the production of redwood lumber. The role of JDSF as a research and demonstration forest cannot be replaced with a shift to an alternative timber product.

1-24

From: Barbara Smith [bls92742@yahoo.com]
Posted At: Tuesday, February 14, 2006 1:03 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 14, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 Because I am an American citizen and tax payer, I believe I am a co-owner of all national and state lands. I want open land to remain as is, I do not want more roads, services, or harvesting of resources and as a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

FL 7 Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

LV

Barbara Smith
6139 Craigmont Dr
Goleta, CA 93117-1736

1

Email Letter 7-24

See response to Form Letter 7.

Response to Comment 1
JDSF will remain a redwood forest and will continue to be managed for research and demonstration. See also General Response 2, 13, 14, 15 and 16.

7-35

From: Kathleen Stevens [crazyteacher07@aol.com]
Posted At: Friday, February 10, 2006 6:28 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

FL 7 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest. 42

1 Alternative F balances a high level of environmental protection I urge you to adopt the meaningful reforms that are outlined in Alternative F. As a native Californian, I beg you to preserve this area for our posterity. It took hundreds, thousands of years to grow these unique giants. It would be criminal to endanger them in any way.
There is no valid economic reason to destroy this habitat. This area is more precious than any amount of money. It can Never be replaced.

2 My brother, John Gray, was well known in CDF for his forestry management. He would turn over in his grave if he thought you would endanger this property. I speak for him. Let future generations look upon the Jackson Demonstration Forest with awe and wonder at it's venerable beauty! Thank you for considering my comments.

Sincerely,

Kathleen Stevens
7425 Onyx Ave
Rancho Cucamonga, CA 91730-1329

1

Email Letter 7-35

See response to Form Letter 7.

Response to Comment 1
The ADFFMP does not propose to cut old growth (see General Response 8). The management plan calls for sustainable management of the forest (see General Response 15).

Response to Comment 2
Rather than "endanger" the forest, the ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The plan is designed to balance demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

Since its inception, JDSF has been managed as a research and demonstration forest. JDSF serves as a unique resource for developing the science that will guide the development of improved management practices and future forest practice rules. To support the research and demonstration mandate there has been an effort to maintain a viable outdoor laboratory by managing the forest to create diverse stand and habitat types. This diversity is needed to assess the effects of a broad range of management activities. Requests to manage JDSF for a single purpose, such as development of late seral and old growth stand conditions, while important, will severely limit the research and demonstration potential of the forest. The diverse habitats created by a broad spectrum of management practices has allowed for flexibility and opportunity for research as the issues and concerns involved in forest management have evolved over the past 50 years.

JDSF's management direction derives directly from legislative statutes, regulations, and policies set by the State Board of Forestry and Fire Protection. Per Board policy, the primary purpose of JDSF is to conduct innovative demonstrations, experiments, and education in forest management (Board of Forestry Policy 0351.2). The legislation that provided for establishment of JDSF makes it very clear that demonstration of maximum sustained timber production is one of the primary purposes of forest management on JDSF. Implementation of the ADFFMP is not expected to cause significant adverse environmental impacts.

7-54

From: Susan Fiedler [ocgypsy@yahoo.com]
Posted At: Saturday, February 11, 2006 10:19 AM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 11, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

FL 7 Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

1 I'd like it publicized who the wood is being sold to, as well.
A certain country that has demolished all their own resources as fast as they could and took out Pearl Harbor once upon a time?
My father would have frowned upon my having a Japanese car in his driveway and so I never have crossed that line. Nearing 50 and still want America to take care of her resources, the bottom line of your corporations be damned.....

Sincerely,

Susan Fiedler
2517 W Conley Ave
Anaheim, CA 92804-3311

1

Email Letter 7-54

See response to Form Letter 7.

Response to Comment 1
Information regarding who the timber is sold to is available to the public. Sale of raw timber from JDSF for export is not allowed. PRC 4650.1 requires that timber from JDSF cannot be exported "unless it is sawn on four sides to dimensions not greater than 4 inches by 12 inches". CCR 1516 requires that "said timber will not be substituted for timber exported from the purchaser's private land". See DEIR Appendix 5; Statutes, Regulations, and Policies Governing State Forests.

Currently California imports approximately 70% of its wood products.

7-81

From: Kent Oberlin [kent.oberlin@cox.net]
Posted At: Friday, February 10, 2006 6:33 PM
Conversation: Please protect the future of Jackson forest...

Subject: Please protect the future of Jackson forest...

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board , 42

FL 7 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

My family and I have enjoyed hiking through the forest for years...we make an anual trip to the beautifully quaint town of Mendecino and trek out from there. Growing up nearby in Marin County I developed a love for such wonderful areas as Mendecino, Mt. Tampalpais, and Point Reyes...I do not think I would be who I am today without "knowing" these natural habitats.

1 ..please consider the uniqueness of the Northern California region and its unspoiled natural habitats before you consider changing management plans that have protected these areas for years...

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Kent Oberlin
2619 Falls View Rd
San Marcos, CA 92078-0912

1

Email Letter 7-81

See response to Form Letter 7.

Response to Comment 1
The designation of JDSF as a research and demonstration forest remains unchanged. See Email Letter **7-35**, Response to Comment 2.

7-114

From: Roseann Dudrick [rossiwrites@yahoo.com]
Posted At: Sunday, February 12, 2006 10:06 PM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 13, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 With the crisis of global warming at hand, ridding our state of the last of these forests is a wrong move and one we can ill-afford. These trees serve as the last if our protection and those in denial of this crisis need a wake-up call. Are we going to keep destroying then try to repair the damage when it's too late? As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

FL 7 Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Roseann Dudrick
9000S Crow Canyon Rd
128
Danville, CA 94506-1136

1

Email Letter 7-114

See response to Form Letter 7.

Response to Comment 1
See Email Letter **C2-46,** Response to Comment 1; and Email Letter **7-35,** Response to Comment 2.

7-122

From: Sandi Morey [ssmofa@cwnet.com]
Posted At: Sunday, February 12, 2006 8:15 AM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 12, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board , 42

As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region. FL 7

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

On a personal level, I have spent time in this forest. It is ethereal and beautiful. 1 There is a type of fungus called "pipe fungus" which looks like a small circle of fairy pipes. This grows nowhere else, not even in other old growth redwood forests on the coast. I have personally seen a family of river otters playing in the river that runs through this forest. I found a colony of bats in an overturned large redwood stump, have seen a huge, magenta telia moth resting on a tree trunk, was dive bombed by a large, bottle green beetle with gold curling antenae, found a group of mormon crickets as big as your fist, seen a pink and black foot long tiger salamander one evening by the river. To lose this treasure for any reason seems shortsighted to me. 3 It will be more valuable as a resource in the long run to bring ecotourism perhaps or pricey outdoor education opportunities. I feel it is valuable beyond any use we may have for it in its ability to shelter so many species, but I appreciate that humans have to "use" any resource to make it "pay its way".

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Sandi Morey
3461 Laguna Ave
Oakland, CA 94602-2901

1

Email Letter 7-122

See response to Form Letter 7.

Response to Comment 1
The comment letter states that “pipe fungus” grows nowhere else than JDSF. The comment letter does not provide a scientific name. The common name provided does not match any common name any used in David Aurora’s 960 page reference book “Mushrooms Demystified, (Second edition, 1986, Ten Speed Press, Berkley CA.) There is fungus known as fairy clubs. *Monotropa uniflora* is a non-green plant known by the common name Indian pipe. It has some status as a rare plant (G5-S2S3 CNPS2.3), but is not known from Mendocino County per CNDDB 6/2/2007.

The DEIR (VII-6.2-10) discloses there are five fungi species known only from JDSF. These species do not match the description in the comment letter. The comment letter does not provide adequate information to support the claim that this plant or fungi occurs only at JDSF. The DIER and FEIR contains measures insure rare plants are protected from management impacts. Because JDSF has a range of forest ages and conditions, there may be plants or fungi found at JDSF that are not found in old growth redwood forests as the commenter observes.

Response to Comment 2
The management of JDSF will continue to provide a broad range of habitat for wildlife. See General Response 11 and 12.

Response to Comment 3
See General Response 2, 14 and 15.

7-186

From: Kelley Pedigo [kelleymp@pacbell.net]
Posted At: Friday, February 10, 2006 11:49 AM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

1 Please consider the future generations;your children and your grandchildren. Too many forest resource dependant communities have died because of greed and lack of foresight. If the forest communities dont manage their resources, which includes jobs and healthy thriving communities, than the workers and communities have noone to blame but themselves. Having been a forest worker for 20 years I have lived in some of the most beautiful small towns located next to some of the wildest most wildlife and forest rich communities. I have seen some of these communities place a value on these valuable resources, by placing protections and high standards of management these resources have paid back the communities in endless ways. Noone wants to pay to come and see clearcuts and muddy streams.

FL 7 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Please do the right thing by thinking about the next generation to come.

Sincerely,

Kelley Pedigo
PO Box 16537
South Lake Tahoe, CA 96151-6537

1

Email Letter 7-186

See response to Form Letter 7.

Response to Comment 1
See General Response 15.

7-209

From: Ted Raab [tkraab@stanford.edu]
Posted At: Friday, February 10, 2006 11:03 AM
Conversation: Comments on Jackson State Demonstration Forest Management Plan

Subject: Comments on Jackson State Demonstration Forest Management Plan

Feb 10, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

42

Dear California State Forestry Board ,

As a Professional Ecologist and supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region. In the remaining
1 forests of Northern California, we need to maintain habitat for 'mesocarnivores' such as martens.

Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
FL 7 In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Ted Raab
Stanford University
Dept. of Biological Sciences
Stanford, CA 94305-5020

1

Email Letter 7-209

See response to Form Letter 7.

Response to Comment 1
The DEIR provides analysis of potential impacts and mitigations of the proposed project related to mesocarnivores such as marten and Pacific fisher (DEIR section VII.6.6). That analysis indicated that no significant adverse impacts are anticipated due to implementation of the proposed project as mitigated.

7-251

From: Dolores Boutin [boutin@goldrush.com]
Posted At: Monday, February 13, 2006 1:06 PM
Conversation: Save Jackson State Demonstration Forest

Subject: Save Jackson State Demonstration Forest

Feb 13, 2006

California State Forestry Board California State Forestry Board P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board ,

As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

1 If logging is necessary, it should be done in such a way that it does not damage the habitat and the environment any more than is absolutely needed. For wood products, most should be grown in private tree farms, not public forests. For paper products, plants
2 other than trees should be used, and again, grown on farms. Exporting of timber should be strictly controlled so as to not lose our valuable natural resources. Logging jobs are being lost to mechanization and other sources of work need to be looked into. Financial
3 support for restoration and maintenance of our forests could help keep some of the people working on the land.

Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

FL 7 Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coastal redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.
In the area that includes Mendocino, Sonoma and Marin Counties, only 1.36 percent of redwoods are protected in parks and reserves, according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Dolores Boutin
PO Box 1450
Tuolumne, CA 95379-1450

Email Letter 7-251

See response to Form Letter 7.

Response to Comment 1
See General Response 2, 15, and 16.

Response to Comment 2
Sale of timber from JDSF for export is "strictly controlled". PRC 4650.1 requires that timber from JDSF cannot be exported "unless it is sawn on four sides to dimensions not greater than 4 inches by 12 inches". CCR 1516 requires that "said timber will not be substituted for timber exported from the purchaser's private land". See DEIR Appendix 5; Statutes, Regulations, and Policies Governing State Forests.

Currently California imports approximately 70% of its wood products.

Response to Comment 3
Analysis of the economic setting and effects of the proposed can be found in Section III of the DEIR. Timber sales are the primary source of funding for restoration and maintenance on the state forests.

IV.14 Responses to Individual RDEIR E-Mail Comments EC-1 to EC-184

This section presents responses to individual public comments (i.e., not form letter or form letter based) received via e-mail. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

E-mail submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

EC-1

Gipson, Lisa

From:	Rob Ellingson [rpe3@eoni.com]
Posted At:	Monday, July 16, 2007 11:33 AM
Conversation:	Alternative G -Supplemental EIR for Jackson Demonstration State Forest
Posted To:	Jackson State Demonstration Forest Public Comment
Subject:	Alternative G -Supplemental EIR for Jackson Demonstration State Forest

1 I have reviewed Alternative G for the Jackson State Forest and feel that it is the right direction for the future. Your staff members have obviously spent a great deal of time formulating this plan and should be congratulated for their work.

Robert Ellingson

Email Letter EC-1

Response to Comment 1
Support for Alternative G noted.

California Forestry Association
1215 K Street, Suite 1830
Sacramento, CA 95814
(916) 444-6592 fax (916) 444-0170
www.foresthealth.org cfa@foresthealth.org

EC-2

July 16, 2007

California Board of Forestry and Fire Protection
P.O., Box 944246
Sacramento, California 94244-2460
JDSFPublicComment@fire.ca.gov

Re: Jackson Demonstration State Forest Recirculated Draft EIR and Mgmt Plan for Alternative G

1 The California Forestry Association ("CFA") submits the following comments regarding the *Jackson Demonstration State Forest Recirculated Draft Environmental Impact Report and Draft Management Plan for Alternative G* (DEIR and/or Draft Plan). CFA is a non-profit trade association representing forest landowners, professional resource managers, and producers of wood products and biomass energy throughout California. They manage their lands, not only to provide a sustainable timber supply for the manufacture of wood products that Californians and citizens throughout the world rely on, but also to ensure that the public trust resources on those lands are adequately protected for future generations.

2 Many of our members are dependent, in part, on timber sales offered on the Jackson Demonstration State Forest (JDSF) to help sustain their lumber milling operations along the North Coast. Other members derive a portion of their revenues as licensed timber operators who are responsible for conducting harvesting operations on the JDSF. Moreover, all forest landowners and professional forest resource managers benefit from the research and technical information derived from the demonstration projects conducted on the JDSF.

3 After reviewing the Draft Plan, we conclude that the level of harvest proposed in Alternative G is too far below the expected growth of the forest. CFA therefore supports a management plan with annual timber harvest set close to growth and includes protection of listed species and recruitment of recovery habitat for listed species as opportunities arise. CFA recommends combining the harvest rate elements of Alternative B with the research-driven elements of Alternative G.

BACKGROUND

4 JDSF provides an opportunity to demonstrate sustainable forest management techniques on nearly 50,000 acres of forest and watershed lands, as well as the opportunity to explore the potential for long-term sustained yield at the forest level, offering the public and private sectors an opportunity to view the potential level and balance of production and protection that can be realized from a large forested ownership when provided with the proper incentive.

5 The management of the JDSF has been an area of controversy for many years. The California Legislature ("Legislature") established the state forest system for the specific purpose of retaining the forest land **"in timber production** for research and demonstration purposes" and charged the California Department of Forestry and Fire Protection ("CDF") as the manager of that system, **"to achieve maximum sustained production of high-quality forest products** while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries and aesthetic enjoyment."[1]

[1] PRC §§ 4631, 4631.5, 4639 and 4645.

Demonstration forests play an important role in testing the efficacy of forest management techniques, and it is the policy of the state to acquire areas for the purpose of demonstration of economic forest management.[2] California's Public Resources Code ("PRC") defines "management" to mean "the handling of forest crop and forest soil so as **to achieve maximum sustained production of high-quality forest products** while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment."[3]

5

In addition to the statutory mandate for demonstration forests, Board Policy 0351.2 states, in part, "[t]imber production **will be the primary use** on the Jackson State Forest . . ." and "[r]ecreation is recognized as a secondary but compatible land use . ." Board Policy 0351.4 also directs CDF to conduct regular periodic timber sales on the JDSF.

DISCUSSION

It is clear from the enabling legislation, Board policies, and timber harvesting regulations that the principal purposes of JDSF is the demonstration of sustainable and economic timber production, through regular periodic timber sales, in consideration of other forest values and in compliance with all applicable rules and regulations. The essential theme of **"maximum sustained production of high-quality forest products"**[4] is the primary driver of management at JDSF. This can be accomplished without eliminating recreation, fisheries, aesthetics, and other non-timber related values, which while important, are not the mandated priority of JDSF.

6

Unfortunately, CDF has drafted an update to the current JDSF Management Plan that elevates wildlife, watersheds, and ecosystem processes to a level of importance superior to timber production. Given the legal mandates discussed above, this is an improper prioritization of uses for JDSF.

Therefore, CFA strongly encourages CDF to adhere to statutory mandates by managing JDSF for research in various natural sciences of the forested landscape; demonstration of existing and new methods of sustainable timberland management; educational efforts, tours, publications and demonstrations; maintenance and enhancement of wildlife and fisheries habitats; and public recreations **in their proper order of priority**.

7

Despite recommendations by those who would prefer to see the purpose of JDSF changed to focus primarily, or even solely, on habitat or recreation, such a decision would be inconsistent with the mandate to demonstrate sustainable timber management as called for in the enabling legislation. In order to remain consistent with this mandate, the Management Plan must be developed in that manner. Therefore, the newly proposed Alternative G should be modified to incorporate elements of Alternative B that will substantially increase timber harvest levels including the ability to utilize the clear cut method beyond the arbitrary cap proposed in Alternative G. This will more fully facilitate the research and demonstration value of the forest for varying sizes of forest entities.

For the reasons set forth above, CFA strongly encourages the Board to revisit Alternative B which includes an annual timber harvest set close to growth per year and conservation practices that meet or exceed the requirements of the Forest Practice Rules. This alternative includes protection of listed species and recruitment of recovery habitat for listed species, includes a demonstration program, and the maintenance of existing recreational facilities while adhering to the legislative intent and mandate found in statute for JDSF. A vibrant forest industry needs a regional view and perspective, similar to what current forestland owners and managers encounter. Alternative B most

8

[2] PRC § 4631.
[3] PRC § 4639.
[4] PRC § 4651.

8 closely provides that perspective. JDSF was not intended to be a "cash cow," however, it is perfectly appropriate to harvest under the Forest Practice Rules in order to fund research and development, management and forest improvement projects. Alternative B will provide more funding than the other alternatives and therefore, more research will be available to demonstrate that balance is possible.

CONCLUSION

9 CFA strongly encourages the Board to combine Alternative G, with its strong emphasis on research, with the timber harvest levels in Alternative B. In so doing, you will meet the clear legislative directive for "maximum sustained production of high-quality forest products" and your own policy that requires that "timber production will be the primary use on the Jackson State Forest . . ."

Sincerely,

Michele Dias

Michele Dias
Vice President for Environmental and Legal Affairs

Email Letter EC-2

Response to Comments 1-2
Comments noted.

Response to Comment 3
Comment noted. The Board's proposed Administrative Draft Final Forest Management Plan is based on minor modifications to Alternative G, which was circulated as a part of the 2007 Recirculated Draft Environmental Impact Report (RDEIR). The proposed Administrative Draft Final Forest Management Plan establishes that, given the various management constraints and goals of the Plan, the annual average harvest is expected to be in the range of 20-25 MMBF per year and may not exceed 35 MMBF. The harvest ceiling established in the Administrative Draft Final Forest Management Plan, although not likely to be achieved, is close to the average annual harvest level estimated for Alternative B.

Response to Comment 4
The Board recognizes the importance of the research and demonstration role of Jackson Demonstration State Forest (JDSF). The Board and the Department of Forestry and Fire Protection (CAL FIRE) have both expressed an interest in JDSF being the flagship of a world-class research and demonstration forest system. The top goal detailed in the Administrative Draft Final Forest Management Plan is Research and Demonstration (see Administrative Draft Final Forest Management Plan, Chapter 1):

> **Goal #1 - RESEARCH AND DEMONSTRATION:** Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.

Response to Comment 5
The potential role for JDSF in testing the efficacy of forest management techniques is specifically addressed in the Administrative Draft Final Forest Management Plan, including the designation of three areas for testing approaches to riparian restoration demonstration (see Map Figure 5).

The statutes and Board policies for the management of the Demonstration State Forests and JDSF in particular are discussed and reproduced in the 2005 DEIR (see, e.g., Section II and Appendix 5). The Board carefully reviewed these mandates in its consideration of management direction for JDSF and finds that the Administrative Draft Final Forest Management Plan is consistent with them.

It should be noted that Board Policies 0351.2 and 0351.3 both stress that the primary purpose of the Demonstration State Forests is to conduct innovative demonstrations, experiments, and education in forest management (see response to Comment 4 above, Goal #1).

Goals #2-4 more specifically describe how a balance is to be achieved among (#2) Forest Restoration, (#3) Watershed and Ecosystem Processes, and (#4) Timber Management. Recreation, which is addressed under Goal #5, clearly plays a secondary role to other forest management objectives. Maximum sustained production of high quality timber production is addressed under the response to Comment 7.

Response to Comment 6
See response to Comments 5 and 7.

Response to Comment 7
See response to Comment 5. Public Resources Code (PRC) § 4639 defines "management" of JDSF as:

> ... the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

The Board has substantial discretion in determining the consideration to be given to the listed nontimber values while implementing the direction for maximum sustained production of high quality forest products.

The statutes and Board policies for the management of the Demonstration State Forests and JDSF in particular are discussed and reproduced in the 2005 DEIR (see, e.g., section II and Appendix 5). The Board carefully reviewed these mandates in its consideration of management direction for JDSF and finds that the Administrative Draft Final Forest Management Plan is consistent with them. See also the response to Comment 5.

Response to Comment 8
While the Board has not chosen the specific management direction of Alternative B, the Administrative Draft Final Forest Management Plan approved by the Board provides the various elements described in the comment. While the Board anticipates that the Administrative Draft Final Forest Management Plan will result in a lower level of harvest than would Alternative B [an expected 20-25 million board feet (MMBF) per year for the Administrative Draft Final Forest Management Plan, but in no case greater than 35MMBF/year, as compared to 35.6 MMBF/year for Alternative B], the Board notes that this level of harvest will provide substantial revenues for management of JDSF, including research and demonstration.

Response to Comment 9
Comment noted. Please also see response to Comments 5 and 7.

EC-4

pson. Lisa

From: mgood@citlink.net
Posted At: Thursday, June 21, 2007 9:10 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly support giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

2 I can support Alternative G in its present form. Any clearcut or similar harvest needs to have a research justification and have no limites as to the area required for scientific validity.

There should no period in Alternative G during which forest managers have to work with a new public advisory committee to develop a long-range landscape and management plan. That is like having a truck driver step into a operating room.

To ensure success of the interim planning effort, all proposed interim timber harvests should not be reviewed by the Jackson Advisory Committee. This review is not needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Michael Goodner
22104 Lippencott Ct.
Burney, CA 96013

Email Letter EC-4

Response to Comment 1
Support for Alternative G noted.

Response to Comment 2
Opposition to limitations on silviculture and the JDSF advisory committee noted.

EC-35

Gipson, Lisa

From: dartley@connectwireless.us
Posted At: Friday, June 15, 2007 9:26 PM
Conversation: Comments on Alt. G for Jackson State Forest
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Comments on Alt. G for Jackson State Forest

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I retired from the US Forest Service in 2003. In 1980 I received a master of forestry degree from Oregon State University. The USFS was kind enough to give me a 2 year educational leave of absence, if I agreed to work 10 more years for the agency after graduation.

1 The Forest Service seldom uses the regeneration Rx called clearcut anymore. In about 1993 or 1994 thet realized the ecosystem damage they were creating by emulating the often used method on private industrial lands.

Clearcutting is an effective cutting method if ever tree that grows is destined to become a commodity.

However, if the forest is multiple use (like most federal and state forests) I can think of nothing but an extraordinary situation when clearcutting might even be considered.

To plan for clearcutting on a multiple use forest tells me that either 1) the managers don't know what they are doing, or 2) they have a hidden agenda to stray from the multiple use objectives of the forest.

2 I would recommend that the plan for the Jackson forest be reviewed by an unbiased cadre of foresters and ecologists.

Sincerely,
Dick Artley
415 East North 2nd
Grangeville, ID 83530

1

Email Letter EC-35

Response to Comment 1
Opposition to clearcutting noted. JDSF is a research and demonstration forest and the proposed management is consistent with existing legislation. The silvicultural allocation is based on creating diverse stand and habitat types to maintain a viable outdoor laboratory and support a diverse research program. The Board contends that timber harvesting, including limited even-age management, is compatible with multiple use concepts. No significant adverse environmental impacts are expected. Please see General Response 2 and 10 for a discussion of the purpose of the state forest system and evenage management, respectively.

Response to Comment 2
The management plan and RDEIR represent careful consideration of input from a wide breadth of resource professionals.

EC-37

From: bherbert@slvwd.com
Posted At: Wednesday, June 27, 2007 3:32 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL Thanks to the Board for its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

1 I remain completely opposed to clearcutting on this State Forest. Managing in the public
2 interest, clearly does not mean managing primarily for timber production, regardless of the method of silviculture. Rather, it means managing primarily for other beneficial
3 public uses, such as wildlife habitat, water quality, and carbon sequestration. These benefits require restoration of the forest to mature seral stage, abandonment of forest roads and landings, and no-cut buffer zones along all streams.

Thus, I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into
FL Alternative G.

I do support the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee.

It is time to move forward.

Yours truly, Betsy Herbert, Ph.D.

Sincerely,
Betsy Herbert
150 Thayer Rd.
Santa Cruz, CA 95060

1

Email Letter EC-37

See Response to Comment Form Letter 9.

Response to Comment 1
See General Response 10.

Response to Comment 2
See General Response 2 and 16.

Response to Comment 3
One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. The current plan is based on a monitoring and adaptive management feedback system. Goals are set for desired future conditions and monitoring is utilized to provide feedback regarding the effectiveness of management strategies in achieving those goals. Subsequent management actions will be modified as necessary to insure that resource conditions are on the correct trajectory to meet the stated management goals. The management plan represents state of the art management practices and implementation is not expected to produce significant adverse environmental impacts.

The protection and restoration of functioning ecological systems is given high priority. This includes managing all Class I and II WLPZs for development of late seral conditions (see General Response 11), a road management plan (see General Response 13), designation of 33% of the forest to some form of older forest structure (see General Response 8 and 9), and maintenance and enhancement of wildlife habitat (see General Response 12).

Forest growth will continue to exceed the planned harvest level by a wide margin, resulting in an increasing inventory and positive impacts related to carbon sequestration.

EC-38

From: jmuskratnorcal@yahoo.com
Posted At: Wednesday, June 27, 2007 7:12 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I hope that you can revise this measure to ensure the public that Jackson State Forest will be left for the tax payers to enjoy.
The unspecified "future research possibilities" statement is too vague.

Clearcuts have ruined ecosystems, steams and rivers, not to mention the scenery. A more sustainable approach to logging must be utilized before our state starts resembling Oregon and their awful clearcut lands.

I'm sure that a compromise can be reached before destroying what little is left of California's natural legacy.

Sincerely,
Jeff Musgrave
PO Box 28
Trinidad, CA 95570

Email Letter EC-38

Response to Comment 1
See General Response 15.

Response to Comment 2
See General Response 10.

EC-39

Dipson, Lisa

From: djconnel@yahoo.com
Posted At: Thursday, June 28, 2007 6:16 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I urge you to incorporate the recommendations of the Mencino working group into Alternative G. It is critical that forest protection be real, and not subject to the economic pressures of big lumber.

Sincerely,
Daniel Connelly
996 De Haro St
San Francisco, CA 94107

Email Letter EC-39

Response to Comment 1
See General Response 17.

EC-41

Dipson, Lisa

From: avalencia@mcn.org
Posted At: Thursday, June 28, 2007 1:29 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

The Board of Forestry is to be lauded for responding in large part to the consensus achieved by members of Mendocino County working group on how Jackson State Forest should be managed.

1 I find it puzzling, however, that the agreement to restrain clear cutting--in particular, to restrict its use greatly and use only under clearly defined research circumstances--was not heeded. Frankly, it looks as if the leeway currently provided could counter all of the other beneficial practices included in Alternative G.

Please reconsider and incorporate the publicly desired guidelines on the practice of clear cutting in Jackson State Forest.

Sincerely,
Alis Valencia
18875 Trillium Lane
Fort Bragg, CA 95437

Email Letter EC-41

Response to Comment 1
See General Response 10.

EC-42

Gipson, Lisa

s Silver [pacifictbird@yahoo.com]
Posted At: Saturday, July 14, 2007 3:59 PM
Conversation: New Alternative in Revised JSRF DEIR
Posted To: Jackson State Demonstration Forest Public Comment
Subject: New Alternative in Revised JSRF DEIR

Date: 7/12/7

To: JDSFPublicComment@fire.ca.gov

From: Rodger Silvers

Re: Additional Alternative to Recirculated DEIR

Dear Board of Forestry and Fire Protection,

I'm surprised and saddened to learn that the latest alternative in the recirculated DEIR
1 allows clear-cutting across a quarter of Jackson State Redwood Forest. I also believe after a review of the latest alternative, that the plan underestimates the need to combat
2 global warming. At the same time, it lacks safeguards and guarantees for preserving
3 JSRF natural heritage during proposed experimental, investigational, and scientific processes.

Please make retaining and maximizing JSRF's green-house gas absorbing capacity and preservation of its old growth heritage a greater priority. Please also replace any clear-cutting in favor of defter and smarter harvesting of individuals trees. Leave Jackson State Redword Forest in better shape than you found it -- not a hodge podge of failed compromises and clear-cut death zones.

Thank you.

7/26/2007

EC-42 cont.

Sincerely,

Rodger Silvers

Luggage? GPS? Comic books?
Check out fitting gifts for grads at Yahoo! Search.

Email Letter EC-42

Response to Comment 1
See General Response 10.

Response to Comment 2
Forest growth will continue to exceed the planned harvest level by a wide margin, resulting in an increasing inventory and positive impacts related to carbon sequestration. RDEIR, Table III.19 serves to rank the various alternatives in regards to carbon sequestration over the 100-year planning period. While the Board recognizes the importance of the environmental effects of global warming, requests to manage JDSF for a single purpose, such as maximizing carbon sequestration, will severely limit the research and demonstration potential of the forest. The diverse habitats created by a broad spectrum of management practices will allow for flexibility and opportunity for research as the issues and concerns involved in forest management evolve, including carbon sequestration.

In addition to the value that JDSF can provide directly, the demonstration of a broad range of management practices and the information gained from research on the forest can extend the value of JDSF beyond its borders. Land use conversion to non-forest uses, and the resulting emissions of green house gases, is an ongoing problem. By demonstrating economic forest management JDSF can serve to reduce this trend.

See also the response to DEIR comment letter E-116.

Response to Comment 3
See General Responses 8, 9, and 15.

EC-43

From: Brent Rusert [rusert@mcn.org]
Posted At: Monday, July 16, 2007 9:42 AM
Conversation: jdsf
Posted To: Jackson State Demonstration Forest Public Comment
Subject: jdsf

Sirs,

1 what continues to occur to me as I peruse both the draft EIR and alternative G is why are you cutting any S. sempervirens, especially older ones?

2 Face it, in the foreseeable future JDSF needs to study the art of re-forestation, esp. on former industrial timberlands. Have our foresters do their research "in the field".

Thank you,

Brent Rusert
188 S. Harold St.
Fort Bragg, CA 95437
<rusert@mcn.org>
707 964 9360

"To destroy the invisible government, to dissolve the unholy alliance between corrupt business and corrupt politics is the first task of the statesmanship of the day". Theodore Roosevelt 1912

Email Letter EC-43

Response to Comment 1
See General Response 2, 9, and 16.

Response to Comment 2
JDSF is "former industrial timberland" that through reforestation efforts has developed into a largely healthy young growth forest. JDSF continues to be available for a wide variety of forest research, including reforestation and restoration. See also General Response 15.

EC-44

Dipson, Lisa

From: Alea Waters [aleawaters@pacific.net]
Posted At: Monday, July 16, 2007 11:15 AM
Conversation: Support the Mendocino County Working Group rec's re: JacksonState Forest!
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Support the Mendocino County Working Group rec's re: JacksonState Forest!

Dear BOF:

1 This letter is to URGE you to PLEASE support the recommendations of the Mendocino County Working Group regarding MINIMIZING CLEARCUTTING IN JACKSON STATE FOREST BY RESTRICTING CLEARCUTTING TO CLEARLY JUSTIFIED SCIENTIFIC RESEARCH OR FOR FOREST HEALTH.
These recommendations need o be INCORPORATED INTO ALTERNATIVE G - as recommended, not only by the M.C. Working Group, but by the Mendocino County Board of Supervisor's UNANIMOUS VOTE.
Clearly this is the will of the people of Mendocino County. You, as agency representatives, have a DUTY to carry out the will of the citizen's whose taxes pay your salaries!
Please respond. Thank you,
Alea Waters, RN

Email Letter EC-44

Response to Comment 1
Public comment was encouraged throughout the development of the DFMP and EIR process and the comments and recommendations of the Mendocino working group, the Mendocino County Board of Supervisors and the people of Mendocino County have been carefully considered.

The Board and CAL FIRE are responsible for developing a management plan for JDSF that is consistent with existing legislation and supports the research and demonstration mandate of the state forest system. Timber harvesting, including the allocation of various silvicultural prescriptions, under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a diverse research and demonstration program. See also General Response 2 and 10.

EC-45

Gipson, Elisa

From: Alea Waters [aleawaters@pacific.net]
Posted At: Monday, July 16, 2007 11:31 AM
Conversation: Incorporate Recommended Clearcutting Restrictions into JacksonState Alternative G!
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Incorporate Recommended Clearcutting Restrictions into JacksonState Alternative G!

Dear BOF -

1 This email is to urge you to incorporate the clearcutting restrictions outlined by the Mendocino Working Group, and unanimously supported by the Mendocino County Supervisors, into Alternative G, for Jackson State Forest.
Clearly, THIS IS THE WILL OF THE PEOPLE.

2 These proposals will restrict clearcutting to clearly justified cases of scientific research or forest health only.

3 This is a public forest owned by the people. We have been working for years to save it from the saw, and to preserve a valuable Mendocino County resource for ourselves, our children and our grandchildren.

4 The forest was never intended to be handed to logging corporations for their profit making ends. It has required tremendous work from the citizen's of Mendocino County to prevent the destruction of Jackson State Forest.

5 As agency representatives, it is your responsibility to carry out the will of the people, whose hard earned tax-dollars are paying your salaries.
ADOPT THE RECOMMENDATIONS INTO ALTERNATIVE G.

Thank you for your attention. Please respond.

Lang Russell
langrussel@pacific.net

Email Letter EC-45

Response to Comment 1
See Email Letter EC-44, Response to Comment 1 above.

Response to Comment 2
See General Response 10.

Response to Comment 3
See General Response 15.

Response to Comment 4
See General Response 2, 16, and 17.

Response to Comment 5
See Email Letter EC-44, Response to Comment 1 above.

EC-48

Jameson, Marc

From: Leddy, Jeff
Sent: Wednesday, September 26, 2007 8:01 AM
To: Jameson, Marc
Subject: FW: Jackson State Forest Alternative G

-----Original Message-----
From: dirctor@MendocinoWoodlands.org [mailto:dirctor@MendocinoWoodlands.org]
Posted At: Monday, July 16, 2007 3:50 PM
Posted To: Jackson State Demonstration Forest Public Comment
Conversation: Jackson State Forest Alternative G
Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

July 15, 2007

Board of Forestry and Fire Protection PO Box 944246 Sacramento, CA 94244

Dear Members of the Board:

1 On behalf of the Board of Directors of the Mendocino Woodlands Camp Association and the thousands of campers that attend the Mendocino Woodlands annually, we are strongly urging you to adopt Alternative G for the management of Jackson State Forest.
In addition, I am addressing a small corner of the Jackson State Forest that has an immense impact on the Mendocino Woodlands.
2 That portion is now referred to as the Mendocino Woodlands Special Treatment Area (STA). Our goal at MWCA is the complete restoration of the original park, from all of the buildings and structures in the state park, to the reunification of the STA with the Woodlands. We intend, at this time, to address this issue of reunification of the land to its original boundaries.
Following are background and reasons.

3 Without access to the unspoiled trails within the STA, the public?s experience would be severely limited. There are only four complete trails within the confines of the narrow 720 acres of the park. Altogether they total about 3 miles; a mere 12% of the 25 miles presently available to the visitor.
The STA that surrounds the Woodlands has been the subject of much discussion and confusion over the years. Originally, it was part of a grand park created by the federal government, which was then called the Mendocino Woodlands Recreation Demonstration Area.
The following negative impacts are compelling reasons for the complete cessation of timber harvests in the Mendocino Woodlands Special Treatment Area.
4 1. Camping experiences for the public would be greatly spoiled by noise and dust, thereby causing diminished use of this historic park.
5 2. Hiking/Camping experiences for the public would be greatly spoiled by the view of cut-down trees, also causing diminished use of this historic park.
6 3. Available trails would be greatly reduced.
7 4. Degradation of watershed.
8 5. The Little North Fork of the Big River would have additional silt, impeding salmon?s ability to spawn.
Because of its very close proximity and the fact that the STA overlooks the entire park, we feel strongly that the STA should be reintegrated into the Mendocino Woodlands State
9 Park, thereby permanently protecting the STA from future timber harvests and preserving the peace and beauty for which the public comes to the Woodlands, as originally mandated.

1

At this time, the Mendocino Woodlands Camp Association respectfully requests that the Board of Forestry and Fire Protection consider these possible solutions to the challenges involving the STA:

10 1. The Special Treatment Area be transferred into the jurisdiction of the California Department of Parks and Recreation, thus ending many years of costly management conflicts and preserving, intact, the original RDA. CDF would not be giving up any investment on their part as the entire Mendocino Woodlands Recreation Area was given to the people of California as a gift.

2. Set the STA aside, with no harvesting activity, as a baseline example of how the redwoods can heal themselves and become old growth once again.

3. If the California Department of Forestry feels that they must manage the forest to bring about old growth characteristics, then use the south side of the STA, which is not contiguous with the rest of Jackson State Forest, as a baseline example of how the redwoods can heal themselves and become old growth once again, and manage the north side with an easy hand, with clearly stated limitations and practices, to insure the public that this land will be treated with the public?s use and enjoyment in mind.

We understand that the board has a big challenge in dealing with the Jackson State Forest and thank you for your time and consideration on this matter.

Don Taylor Executive Director Mendocino Woodlands Camp Association

Sincerely,
Mendocino Woodlands
PO Box 267
Mendocino, CA 95460

2

Email Letter EC-48

Response to Comment 1
The Board duly notes the urging of the comment to adopt Alternative G.

Response to Comment 2
The Board notes the comment's proposal to put the Woodlands STA and the Woodlands Park under unified management.

Response to Comment 3
The Board does not intend to preclude access to the recreational trails within the Woodlands Special Treatment Area. These trails have been identified within the management plan, and will be afforded with the protection specified therein. In addition, Alternative G proposes to designate the STA as a Late Seral Development Area, with the exception of the existing Railroad Gulch research area, which was selectively harvested in the 1980s. Significant impacts to recreational resources or aesthetics are not expected to occur.

Response to Comment 4
The potential impacts upon recreational resources have been considered, and no significant impacts are expected to occur. Any future project contemplated to occur within the STA will include a site-specific assessment of potential impacts to aesthetic resources, recreational use, watershed resources. This assessment would include potential impacts associated with noise, dust, erosion, slope stability, vegetative disturbance. In addition, the Department's management within the STA is constrained by the existing Memorandum of Understanding between CAL FIRE and DPR. The legislation that established the park and STA also specifies that the CAL FIRE must consult with the Department of Parks and Recreation concerning matters that may affect the park. Please see DEIR Sections VII.2, 5, 6, 7, 10, 12, 14 and Section VIII).

Response to Comment 5
One of the primary purposes of the Woodlands Camp, as established by the Legislature, is childhood education, including education concerning resources conservation and utilization. Due to the designation of most of the STA as a Late Seral Development Area, any timber operations in areas so designated would be selective in nature, involving primarily light timber removal. Only a single timber operation is proposed for this area in the Short-Term Harvest Schedule (RDEIR Alterntive G, Table II.3); the continuation of a study that demonstrates forms of uneven-aged management. This harvest project, when planned in detail, will include an assessment of potential impacts to aesthetics, recreational resources, and watershed resources. Significant impacts to recreational resources and aesthetics are not expected to occur.

Response to Comment 6
There will be no reductions in the availability of trails as the result of timber harvest, though directly affected trail segments may be temporarily closed.

Response to Comment 7
Please see DEIR Section VII.10) for an assessment of potential effects to watershed resources. No significant impacts are expected to occur.

Response to Comment 8
Please see DEIR Section 6.1 for an assessment of potential effects to aquatic resources. No significant impacts are expected to occur.

Response to Comment 9
The National Park Service purchased this land primarily from various large timber ownerships within a few years of clearcut logging of the area. After constructing a camp and trails in the area, the Service deeded the land to the State of California, after 10 to 15 years of National ownership. The area was incorporated into the state forest with the knowledge that forest management would eventually occur.

Please see earlier responses above. No significant impacts to the Woodlands STA and Park are expected to occur.

Response to Comment 10
The Board duly notes the suggested alternative management options for the Woodlands STA.

EC-49

PO Box 256
Philo, CA 95466
707-895-3716
kb@pacific.net

California Board of Forestry and Fire Protection
JDSFPublicComment@fire.ca.gov
1416 – 9th Street
PO Box 944246
Sacramento, CA 94244-2460

Jackson Forest RDEIR Alternative G

Dear Board Members:

Thank you for the opportunity to comment on behalf of California Sierra Club on the new Alternative G in the Recirculated Draft Environmental Impact Report (RDEIR) for management of Jackson Demonstration State Forest (JDSF). As you know, I have been following Jackson-related issues since about 1996. I hereby incorporate by reference the letter dated February 27, 2006 which I sent on behalf of Sierra Club regarding the Draft EIR (DEIR). If the final EIR document is to make sense, many of the criticisms that I addressed about the DEIR, particularly the erroneous nonsense in some of the map figures like Map K and Map R, just for example, must be fixed. 1

This letter is also in addition to the letter I signed with others calling ourselves the Mendocino Working Group, which was submitted to the record earlier. The concerns raised in that letter are a consensus effort of representatives of the local timber industry and environmental community to identify some concerns we hold in common. 2

Additional Information is Needed

Some of the informational requests I made in Sierra Club's previous letter have been included or partially included in Alternative G. Map Figure 2 of Alternative G does provide a useful visual representation of where stands that contain more old large trees are located. It would have been even better if you had also included the map you generated and handed out to various members of the public dated April 27, 2006 entitled "Second-Growth Stands Regenerated Prior to 1926." The combination of this map and Map Figure 2 provide a much more complete representation of the older second growth stands at Jackson that the conservation community is particularly concerned about than either does alone. Given that this information is needed to make the most informed decision about management at JDSF, the RDEIR is incomplete without it and it should be included in the Final. 3

The language in Alternative G's first Goal and Objective section illustrates one of the reasons why the most complete information on older forest stands is important:

> **Goal #1 - RESEARCH AND DEMONSTRATION:** Improve the amount and quality of information concerning economic forest ~~management~~ and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, ~~small~~ forest landowners, resource professionals, timber operators, ~~and~~ the timber industry, and researchers.
>
> Objectives:
>
> Maintain a diverse, dynamic matrix of forest habitats and seral stages to provide a broad range of forest conditions available for research and demonstration.
>
> Make the State Forest available to educational institutions and other agencies for conducting research and demonstration projects.
>
> Conduct resource management demonstrations and investigations directed to the needs of the general public, small forest landowners, resource professionals, timber operators, and the timber industry.
>
> Design a range of demonstrations and comparisons to serve a broad set of clients such as conservation-oriented, restoration-oriented, small landowner, and intensive production approaches to forest management.

4 To be able to achieve Objectives 1 and 4 above, the RDEIR must include the known relevant information about older forest stands. Without the stand harvest history information, one can only speculate why the forest stands within the Camp Three and Brandon Gulch THPs outlined in Figure 2 are more dense with larger trees than are the stands adjacent on the northeast, southeast and west as indicated in Figure 2. However, a quick look at the 4/27/06 "Regenerated Prior to 1926" map indicates that those denser stands were "not harvested" since at least 1926, while the neighboring stands were "partially harvested" since 1926. This is useful information for anyone trying to design an experiment about or within older forest, and for those who are trying to determine where to locate late seral development areas or old forest structure zones, both of which are categories that are designated in the RDEIR.

5 An EIR is supposed to be a public disclosure document that assists the public in determining the environmental effects of proposed government action. Thus, the public should not need to come into the process with copious personal knowledge about why certain actions have been taken. The EIR is supposed to adequately describe the setting and provide information about proposed

actions and their effect on the environment. The RDEIR fails in these tasks on a number of counts:

6 It uses an overly broad region on which to base its statements about the regional condition of older forest stands, so the RDEIR understates how important the older forest stands at Jackson are to the regional ecology.

7 It fails to explain why the Camp Three and Brandon Gulch areas have not been designated for "late seral development" even though they appear to be obvious candidates for inclusion: These THP areas are adjacent or in close proximity to an existing late seral development area which would enhance the utility of the area to regionally rare wildlife and would maintain an existing old tree corridor; The forest stands in these THP areas are rare even in the context of Jackson (Map Figure 2 indicates both areas as growing 15-20 trees per acre greater than 30" diameter at breast height (DBH)); And these areas have not been harvested for at least the last 82 years according to the 4/27/2006 map that
8 has not been included in the RDEIR. Yet the RDEIR provides no rationale for logging them as proposed, nor for failing to designate these areas for "late seral development." Through personal knowledge I understand why decision-makers wish to designate these areas for immediate harvest. However, I have never personally understood, nor has there ever been an adequate justification for why these areas have not been designated for late seral development and nothing in the RDEIR provides any information about that. This is significant information and it is missing in the RDEIR.

Old Forest Structure Zone

9 The Old Forest Structure Zone needs work. On multiple occasions such as at public hearings and at the Mendocino Board of Supervisors, I have heard Deputy Director Russ Henly describe the Old Forest Structure Zone (OFSZ) as stretching from west to east and north to south in Jackson providing a contiguous band of old forest structure across the forest. The reality is somewhat different. The RDEIR says:

> Establishment of an Older Forest Structure Zone (OFSZ) (D, E & F)
>
> A 6,803 acre area of the Forest, ranging across the Forest from west to east and north to south, is designated to be managed as an Older Forest Structure Zone (see Map Figure 1). The objective of this form of management is to produce structural characteristics of older forest, which include large trees, snags, down logs, and a high level of structural diversity, across a large contiguous area that also includes existing old growth groves and areas designated for the development of late seral forest characteristics. The portions of this Zone available for timber management would be managed on an uneven-aged basis to recruit these structural conditions and wildlife habitat elements, to coincidentally grow and produce timber through careful thinnings and periodic replacement of large trees and to provide recreational opportunities.

3

9 cont'd An examination of Alternative G Map Figure 1 clearly indicates that the OFSZ as currently designated does not at any location dip south of the mid-point of Jackson Forest and except for a very limited number of locations could actually be more accurately described as "running from west to east along the northern boundary of the forest." Why does it matter? Because the sort of old forest structure it is supposed to create would be more effective at providing both contiguous habitat and recreation opportunities if it crossed from the Noyo watershed over to the Big River watershed in the western part of the forest where existing old forest structure currently exists. Providing OFSZ south of Highway 20 would also help bridge the somewhat formidable obstacle of this major highway.

10 Besides the failure of the OFSZ to meet the rhetorical flourish of its description, it also fails to include some obvious locations along West Chamberlain Creek, an area that has high recreation use by people going to the Eric Swanson Old Growth Waterfall Grove. Including OFSZ along this stretch would protect an existing scenic corridor that has a lot of residual old growth trees still growing and would also provide another way to link into the Big River watershed. At 76

11 square miles, Jackson should be providing a number of old forest corridors to link the Noyo River drainage, the Big River drainage, and some of the smaller coastal streams such as Jughandle Creek. Considering the OFSZ will allow certain types of timber harvest, expanding the OFSZ would allow Jackson to cultivate the high quality mature timber that the City of Ft. Bragg has asked you to develop for future harvest.

12 The RDEIR should also clarify what is intended in "late seral development" zones as compared to "old forest structure zones." The intended differences are not clear in the document.

13 James Creek area is another place where the OFSZ should be reconsidered. The designation of the isolated and terrifically steep easternmost edge of the ridge as OFSZ is not without merit, but inclusion of the area along Road 100 following North James Creek to where it meets the lovely James Creek Old Growth Grove should also be considered because the riparian area there is interesting, it leads directly to the old growth, there is a high level of visitor use from the Willits area particularly, and scattered old growth residuals leading to the old growth grove make the area a good base for the OFSZ.

Jughandle Ecological Staircase Marbled Murrelet Critical Habitat

14 The headwaters of Jughandle Creek are another area that the EIR should pay closer attention to. This area is adjacent to Jughandle State Park, which includes the unique-in-the-world "Ecological Staircase" where in a relatively short walk one can proceed through very different forest cover types that arise due to the changing underlying geology. Much of the Pygmy Forest part of the staircase, which is unique to the Mendocino Coast, is located on Jackson and is managed by CDF and State Parks jointly as the Pygmy Forest Preserve. The Pygmy is adjacent to the final step in the ecological staircase, located on

4

14 of 4

Jackson, and it is a forest stand that, according to RDEIR Map 2, has 12-15 trees per acre greater than 30 inch DBH and has only been "partially harvested" since 1926 according to the 4/27/2006 map. Yet this unique area is slated under Alternative G for near-term timber harvest as the south unit of the Mitchell Creek THP. This is literally the only location on earth where this stair-step condition exists and except for its final step it is already protected. If this is not a unique resource that shouldn't be disturbed I would be hard pressed to describe what is. Additionally, the US Fish and Wildlife Service has published its intent to continue to designate this area as Critical Habitat for the federal and state-listed Marbled Murrelet because of its stand condition and propinquity to known nesting marbled murrelets in the Russian Gulch watershed. The RDEIR fails to identify these issues or provide any rationale for why the forest around the headwaters of Jughandle Creek is proposed for timber harvest. This is an unidentified significant impact.

This letter, if read in conjunction with the letter from the Mendocino Working Group, identifies some of Sierra Club's highest priority concerns with Alternative G. Most of these are the very same concerns Sierra Club has been voicing about Jackson for the last decade or thereabouts. Alternative G provides an adequate framework from which to address these concerns so for the first time there is really the possibility that a resolution to much of the controversy could be achieved. We strongly encourage you to continue to work toward achieving such a resolution.

Sincerely,

Kathy Bailey

Kathy Bailey
Forest Conservation Committee
California Sierra Club

Attachment: See fax for 4/27/2006 map

5

Email Letter EC-49

Response to Comment 1
The comment requests that an earlier letter be incorporated with the more recent letter by reference. A response has been prepared to the environmental concerns expressed in the earlier letter; see response to DEIR comment letter P-188.

Response to Comment 2
The comment informs the Board of an additional letter submitted by the Mendocino Working Group. The Board acknowledges this letter.

Response to Comment 3
The commenter would have preferred that an additional map be included in Alternative G. The map in question is an estimate of harvest history produced by Department staff, based upon local harvest records and professional judgment (Russ Henly, personal communication). The map was provided to Ms. Bailey at her request, and was considered DRAFT material. The comment states that the addition of the map would help to identify older second growth stands that the conservation community is concerned about. The DEIR and RDEIR include a comprehensive assessment of the potential for impacts to forest resources, including watersheds and wildlife (see DEIR Sections cite and cite).

The value of forested areas as wildlife habitat is determined by structure and relationship to the broader landscape. Various written and graphic depictions of forest structure are incorporated into the DEIR. Forest structure is extremely diverse, and affected by harvesting, fire, soil productivity, vegetative regeneration and development, underlying geology, and management history. The final management plan reflects consideration of legislation, policy, and potential environmental effects. While it is possible that many other potential information sources may increase the ability to characterize certain aspects of the Forest resources, such as "older second growth", the Board utilized the appropriate level of available information.

Response to Comment 4
The comment states that achievement of Goal 1, Objectives 1 and 4 must include known relevant information about older forest stands. Further, the comment states that one can only speculate why the forest stands within the Camp Three and Brandon Gulch THPs are more dense with larger trees than adjacent stands. The comment states that a map of forest history produced by the Department (see Response 3 above) is needed to inform the decision concerning where on the landscape to locate late seral development areas or old forest structure zones.

The RDEIR includes information on the history of the Forest and the structure of the forest stands. Further, the RDEIR clearly describes the range of habitats and seral stages that will be produced over time (Page II-7). The diameter distribution (number of trees by size) of trees within various stands or areas of the Forest is quite variable, and can be estimated by various means. This distribution is potentially affected by harvesting history, soil productivity, species of trees, and other factors. A combination of these factors accounts for a high estimate to trees over 30 inches in diameter within the two THP areas relative to other adjacent areas. The resultant forest structure is one of a number of considerations used in the allocation of land area to late seral development and older forest structure development in the long term. It will take another 100 to 400 years for this future structure to develop, depending upon many factors. The location of these features on the landscape is a much more important consideration than the timber harvest history, which is not a definitive indicator of forest structure in many cases.

The late seral development areas and older forest structure zone were situated on the landscape primarily in consideration of proximity to known or potential habitat for endangered species, not timber harvest history. These areas were also placed in a manner that provides linking habitat or corridor for wildlife.

Response to Comment 5
The comment states that the EIR is supposed to be a public disclosure document to assist the public in determining the environmental effects of proposed government action, and that the public should not need to bring personal knowledge to the EIR process. The EIR should adequately describe the setting and proposed actions. The comment states that the RDEIR fails on this account (see Responses below).

The Board has produced an EIR that adequately describes the project, proposed actions, the environmental setting, and potential environmental effects. However, the Board, in preparation of the EIR, is unable to speculate concerning the nature of specific detailed information that any member of the public may wish to be provided or included in the analysis.

Response to Comment 6
The comment states that the RDEIR uses an overly broad region on which to base consideration of regional condition of older forest stands, thus understating the importance of older forest stands at JDSF to regional ecology.

Since the concern is not explained in sufficient detail, making an appropriate response is difficult. The term "older forest stands" is not described in the literature. It is a relative term. The literature most often attributes habitat and ecological value to forest structure conditions, which are quite variable. The RDEIR includes the best available information on forest habitat structure within an assessment area that includes the Noyo and Big River watersheds (DEIR Section VII.6.6, Map Figure J). The document also includes a discussion of forest and habitat resources within the greater redwood region (DEIR Section VII.6.6). This is an appropriate level of consideration for the EIR.

Response to Comment 7
The comment states that the RDEIR fails to describe why two specific areas were not designated for late seral development, though in her opinion, they appear to be obvious candidates for inclusion.

The designation of late seral development areas within the Forest is intended to provide for future development of habitat for a broad range of species. This is intended as a restoration effort, as well as an effort to produce a broad set of forest conditions available for research and demonstration. The Board does not intend to include, nor would it be appropriate to designate all potentially suitable stands in late seral development area. Virtually the entire forest is potentially suitable for eventual development of late seral forest conditions.

The comment states that inclusion of the two THP areas would enhance the utility of the area for regionally rare wildlife and maintain an existing old tree corridor. Further, she states that these stands are rare even in the context of JDSF.

The Board has fully considered the potential impacts of management upon threatened and endangered species (DEIR VII.6.1, VII.6.2, VII.6.6 and RDEIR III-22 to III-58). This is an important consideration, though not the only consideration of the Board in consideration of the management of JDSF. These are young redwood stands, located in an area designated for forms of uneven-aged or selection management. The future development of late seral and older forest was considered in a spatial context, and was intended primarily to enhance future habitat values, largely as a restoration effort. Speculation concerning enhancing the utility of this area for regionally rare wildlife was not the Board's sole consideration.

There is no legal definition or legal determination mechanism for the rarity of young forest stands. Based upon structural characteristics, there is an abundant area of JDSF with characteristics similar to the two THP areas cited above by the commenter. The Board is not aware of any regional inventory or characterization of young forest stands based upon age or management history.

Response to Comment 8
The RDEIR provides no rationale for harvesting the Brandon Gulch or Camp Three THP areas, nor for failing to designate them as late seral development area.

JDSF was established by the legislature specifically for the purpose of demonstration of economical timber management. The potential for significant impacts to occur as the direct result of harvesting in the Forest has been considered (DEIR Sections VII and VIII inclusive). The rationale for harvesting these areas can be found in the legislation, Board policy, regulation, and the RDEIR.

Response to Comment 9
The comment states that the physical location of the Older Forest Structure Zone does not match the description in the RDEIR.

The physical location of the Older Forest Structure Zone is clearly depicted on RDEIR Map Figure 1. This location matches the written description, though the written description is not intended to provide sufficient detail to enable an exact mapping of the zone.

The comment states that the zone would be more effective for providing contiguous habitat and recreational opportunities if it crossed from the Noyo watershed into the Big River watershed in the western part of the forest where existing old forest structure currently exists, and would help to bridge the obstacle of Highway 20. This suggestion is duly noted by the Board.

Many alternatives to enhance or optimize various aspects of future habitat development and recreational opportunity may exist, but it is the Board's intention to provide for effective management of the Forest in compliance with existing legislation and Board policy, in consideration of potential environmental effects. The comment has not indicated that a significant impact is expected as the result of the proposal outlined in the RDEIR, but recommends and requests consideration of specific changes that are not well explained and speculative in nature. The entire area of JDSF represents habitat for aquatic or terrestrial species. The area adjacent to Highway 20 is forested, and will remain forested in various stages of habitat development and structure. Please see DEIR Sections VII.6.6 and 14 for the assessment of potential impacts to wildlife and recreational resources.

Response to Comment 10
The comment suggests that the Older Forest Structure Zone be amended to include locations along the west fork of Chamberlain Creek, since it is an area of high recreational use, and it would protect an existing scenic corridor that has a lot of residual old growth trees, also providing another link into the Big River watershed.

The comment's suggestions are duly noted. As stated in Response 9, virtually the entire area of JDSF is forested habitat. The comment suggests that the Older Forest Structure Zone be expanded into the Chamberlain Creek area. This zone was not a necessity to prevent a significant impact wildlife, but is an attempt on the part of the Board to provide additional habitat for a broad range of species that utilize this forest structure. The Board recognizes that the roads and trails in this area are traveled by recreationalists, and that scattered residual old growth trees can be found in the area. The large old trees and those smaller old trees with structural characteristics of value to wildlife will be preserved (ADFFMP Chapter 3). In addition, the main traveled roadway up the west fork of Chamberlain Creek is designated as a Road and Trail Corridor, within which only a limited range of silviculture may be utilized in order to maintain forested views. This road also lies primarily within the Watercourse and Lake Protection Zone, which is designated as a Late Seral Development Area. Lastly, the Waterfall Grove and Older Forest Structure Zone extend partially down the west fork of Chamberlain Creek, and include the headwaters of the west fork (RDEIR Map Figure 1). Any future proposal to harvest timber in this watershed will incorporate an assessment of potential aesthetic impacts (DEIR Sections VII.2 and 14).

Response to Comment 11
The comment states that JDSF should be providing a number of old forest corridors to link the Noyo, Big River, and small coastal watersheds. This would also provide an opportunity to develop the high quality products that the City of Fort Bragg has requested.

The comment's suggestions are duly noted. The management plan includes provisions to develop late seral or older forest structure on a third of the forest area. The stream protection zones form a web across the entire forest, and this web connects to the late seral development areas, old growth groves, and older forest structure zone. The comment suggests that additional area be designated for this purpose. Based upon the analysis performed for the EIR, the Board has determined that significant impacts to wildlife are not expected to occur.

The City of Fort Bragg has requested that JDSF produce large logs from mature young forest stands. It is the intention of the Board, as provided in the management plan, to produce high levels of these high quality forest products. Through implementation of selective forest management, long-rotation even-aged management, and limited harvest within the Older Forest Structure Zone, an abundance of high quality forest products will result, in compliance with the request by the City of Fort Bragg and others.

Response to Comment 12
The comment requests that what is intended in late seral development areas when compared to older forest structure zones is not clear.

Late seral development is described in various terms within the Administrative Draft Final Forest Management Plan (ADFFMP). The stated intention is to develop stand and habitat conditions typical of late seral forests. This would include larger, older trees, with structural characteristics of old trees (e.g. large trunks, large limbs, cavities, broken or multiple tops). At the stand level, this may include multiple canopy layers and understory vegetation. The ADFFMP points out that these conditions will not be created over the life of the plan, but over a much longer period. Some of the potential stand treatments mentioned include light thinning, thinning from below, understory burning, and other treatments designed with the intention of accelerating the development of late seral conditions, including habitat for the marbled murrelet (ADFFMP Chapter 3).

The objective of the Older Forest Structure Zone is also to produce structural characteristics of older forest, including large trees, snags, down logs, and a high level of structural diversity. Management of these areas would be on an uneven-aged basis.

Perhaps the largest contrast between the two designations is that within the Older Forest Structure Zone, one objective is to grow and produce timber through careful thinnings and periodic replacement of large trees. One of the key elements of Late Seral Development is the actual development of large and old trees and an old forest, which is to be sustained. The Older Forest Structure Zone, by contrast, will focus upon development of structural characteristics of older forests while being available for periodic harvest and replacement of the larger trees (RDEIR Alternative G).

Response to Comment 13
The comment suggests that OFSZ designation should be considered for the James Creek area. The primary reasons cited by the comment are that the riparian area there is interesting, it leads directly to the James Creek old growth grove, there is a particularly high level of visitor use from the Willits area particularly, and there are scattered old growth trees which provide a good base for the OFSZ.

The comment is duly noted by the Board. The RDEIR includes a graphic depiction of the OFSZ (Map Figure 1). The OFSZ includes a swath of the James Creek watershed that connects the James Creek old growth grove and other old groves in James Creek to the watercourse protection zone throughout James Creek, including most of the concentrations of larger residual old growth trees known to exist and preserved within the various old growth groves.

Response to Comment 14
The comment suggests that closer attention be paid to the headwaters of Jughandle Creek, due primarily to it's proximity to the Ecological Staircase, the pygmy forest, the fact that Department data estimates 12 to 14 trees per acre greater than 30 inches in diameter, and due to the fact that this area is included in a draft proposal by the USFWS as critical habitat for the marbled murrelet. The comment suggests that this is a unique resource that shouldn't be disturbed, and that harvesting timber as proposed represents an unidentified significant impact.

The management plan will protect the pygmy forest and does not propose to affect the Ecological Staircase located within the adjacent designated State reserve. The DEIR specifically evaluated the potential to impact the pygmy plant community and associated cumulative effects. No significant impacts were identified (DEIR VII-6.2-34-35, 042). Virtually the entire forested area (with commercial timber species) located within the Jughandle Creek watershed upstream of the Staircase and located within JDSF has been managed on a selective basis since the 1960s. This form of management will continue, maintaining a managed forest landscape. This management is not expected to impact the adjacent pygmy forest or the Ecological Staircase, which is managed by the Department of Parks and Recreation. While it is a true statement that the Department has estimated that there are 12 to 15 conifer trees per acre greater than 30 inches in diameter in most of the watershed, the same holds true for a very large nearly contiguous area across the entire west and central areas of the Forest (see RDEIR Map Figure 2). This fact indicates that the forest stands within Jughandle Creek are not unique within the forest.

The pygmy forest is part of the Ecological Staircase. Upstream forest management operations have little if any potential to impact this area, due to physical separation by both topography and distance. Any proposed timber harvests within the Jughandle watershed would be required to evaluate impacts to the shared watershed insuring that the State Park would be protected. A significant level of environmental protection will be applied in all timber operations, which will protect downstream resources. Significant impacts are not expected to occur.

The upper reaches of Jughandle Creek are included in an area covered by a specific management measure (DEIR Section VII.6.6). Over the course of the coming few years, the management measure specifies that supplemental habitat needs of the marbled murrelet will be considered, and additional habitat may be designated for the species. No occupied habitat for the marbled murrelet is known to exist within the Jughandle Creek watershed at the present time. If any area is designated as critical marbled murrelet habitat, the EIR and Final Management Plan contain provisions for complying with appropriate consultation requirements.

EC 70

Gipson, Lisa

From: oakes@mcn.org
Posted At: Tuesday, June 19, 2007 8:30 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate all parties who are working to help develop a sustainable, healthy forest and forest industry with the resource of the Jackson state forest.

However, any measure in the plan to manage the forest that allows for clear-cutting for any reason should not be allowed in any future timber harvest plan.

There has been plenty of clear cut areas in our county where "research" can be done to determine how to bring health back to these ecologically scarred areas of forest.

1

Any plan to do any additional clear cutting of any scale for "research" is an absolutely disgraceful smoke screen for continued ecological destruction.

For the economic and ecological health so that future generations can profit from our forest resource, it is imperative to develop ecologicaly healthy timber harvest plans. This type of "research" will have my whole hearted support.

Respectfully,

Baile Oakes-Bannon PO Box 203 Westport, CA 95488

Sincerely,
Robert Oakes Bannon
36000 N. Hwy 1
"Westport, CA", CA 95488

Email Letter EC-70

Response to Comment 1
See General Response 10.

EC89

Gipson, Lisa

	rmcoppock@comcast.net
Posted At:	Tuesday, June 19, 2007 11:19 AM
Conversation:	Jackson State Forest Alternative G
Posted To:	Jackson State Demonstration Forest Public Comment
Subject:	Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

1 ***In the EIR, there is a matrix showing the different kinds of procedures, along with potential dmage. A major effect category is insignificant damage with mitigation. You seem to have discovered an interesting new meaning for insignificant, or mitigation, or both. Group selection of old trees, can't realy be mitigated in less than 1000 years. The new trees aren't like the old trees, and the ecoculture will always be diffrent.***

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Robert Coppock
32611 Albion Ridge C Rd
Albion, CA 95410

Email Letter EC-89

Response to Comment 1
No definition of "Old Trees" is provided. The commenter seems to suggest that 1000 year old trees will be harvested using group selection silviculture. There are no plans to utilize group selection harvesting in old growth groves. See General Response 8 for a discussion of old growth protection measures. See also the response to Form Letter 9.

EC 94

Ginson, Lisa

From: edwebnetjds@yahoo.com
Posted At: Tuesday, June 19, 2007 3:30 PM
Conversation: Spam: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Spam: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I strongly oppose Alternative G.

Please, do not approve it.

1 We need a comprehensive, long-term forest management plan, that is as fair as possible to all concerned parties.

Therefore, all the suggestions heard during the period of public comment last year, and this year, should be included into the comprehensive plan.

2 New forest products need to be developed, and new methods of harvesting these new forest products need to be demonstrated, along with the development and implementation of rules to regulate this harvest of new forest materials. Therefore, specific areas need to be set aside for the development of these new forest products, and forest managers need to be assigned to administrate this new harvest.

Fire prevention methods also need to be developed, implemented and demonstrated at Jackson State Forest.

3 The provisions made by the Sierra Club, and other environmental groups, which include both protections for Old Growth trees, or those trees that were in place and alive before 1850, and a ban on clear-cutting throughout the forest, should also be included into the comprehensive, long-term forest management plan which needs to be developed.

4 Other public comment throughout the last two years has called for the construction of more campsites and hiking trails, along with other development for recreational use, the construction of facilities and sites to promote education and research activities and uses, and these requests need to be included into this comrehensive, long-term forest management plan.

5 Additionally, an effective, long-term management plan needs to consider the acquisition of additional lands, for example the need to include the upper level tributaries within the James Creek watershed, along with long-term plans to restore important wildlife habitat areas and rehabitate streams, rivers and tributaries which have been damages, along with other forest restoration projects.

6 I applaud your efforts to include a large, protected area to be developed to promote Old Growth and a forested area with a thick canopy, which will eventually grow into a cathedral forest, and would like to suggest that it could be made to be even larger, perhaps 7,000 to 9,000 acres in size.

Thank you for your attention.

1

EC-94 cont.

I do not approve Alternative G.

James D. Smith P. O. Box 4225 Arcata, Ca. 95518

Sincerely,
James Smith
P. O. Box 4225
Arcata, CA 95518

Email Letter EC-94

The concerns and issues expressed in this email message have been considered and responses prepared. See Response to RDEIR mailed comment GM-28.

EC97

Gipson, Lisa

From:	rayduff@mcn.org
Posted At:	Tuesday, June 19, 2007 5:53 PM
Conversation:	Jackson State Forest Alternative G
Posted To:	Jackson State Demonstration Forest Public Comment
Subject:	Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I write to give my opinion on Alternative G. The Board of Forestry has done well in activity to protect Jackson State Forest for public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

I do oppose giving the forest managers any authority to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." Further research is needed on forest restoration, not on forest destruction.

1 Alternative G in its present form should not be supported. Our Governor has made it clear California should show leadership in reconstruction of our environment. Clearcut or similar destructive harvest methods do not contribute to reduction in harmful hydrocarbons. The Mendocino County working group recommend explicit research and any justification be limited to the minimum area required for scientific validity.

2 During the most recent period forest managers have worked with a new public advisory committee to develop a long-range landscape and management plan. This is a better way to manage the Forest.

FL 9 All proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

I want to end the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Ray Duff
Box 46
Caspar, CA, CA 95420

Email Letter EC-97

See response to Form Letter 9.

Response to Comment 1
The management of JDSF will result in a net capture of green house gasses. See also EC-42, Response to Comment 2 and E-116 (2005 DEIR) response.

Response to Comment 2
See General response 18.

EC100

Gipson Lisa

From: dgermanking@aol.com
Posted At: Tuesday, June 19, 2007 7:27 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

1 Clear cutting is not acceptable. It damages rivers and streams and destroys the land that is cut by increasing erosion. Please do not allow this destructive practice.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Dean Cobb
5837 Morgan Place #99
Stockton, CA 95219

Email Letter EC-100

Response to Comment 1
A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in Section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

Additional protection measures relating to mass wasting, surface erosion, road management, and riparian vegetation can be found in Chapter 3 of the DFMP or ADFFMP, and also are discussed in various sections of the DEIR (VII.6.6 Wildlife and Wildlife Habitat, VII.7 Geology and Soils, VII.10 Hydrology and Water Quality, and VIII Cumulative Effects) and RDEIR.

Adoption of the ADFFMP, with regard to clearcutting and even-age management, is not expected to result in a significant adverse environmental impact. See also General Response 10 and Form Letter 9.

EC 101

From: madroneweb@aol.com
Posted At: Tuesday, June 19, 2007 8:24 PM
Conversation: Jackson Demonstration State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson Demonstration State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I call upon the Board to think of restoration rather than allowing clearcutting of thousands of acres a year at Jackson Demonstration State Forest. Clearcut logging would negate the chances for decent marbled murrelet habitat to return to Jackson Forest -- and such habitat is needed in this area since unfortunately some scientists see chances of down-to-zero the chance for murrelets to still live south of the Humboldt County line before this half-century is out.

2 In some respects, I like certain improvements under new alternative G -- however, no additional clearcuts are needed either to study recovering from clearcuts at Jackson DSF or to study impacts of clearcuts and how best to recover from such harsh large-scale removal of vegetation leading to less stable hillsides, landslides and sedimentation, etc. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

FL 9 To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down to logging for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Once again, please follow the Mendocino County working group's recommendations in regards to possible clearcutting at Jackson forest. This is an important matter for those who know how decimated the redwood coastal region has become, and how the Schwarzenegger Administration will leave its mark in regards to nurturing or butchering redwood trees.

Sincerely,
Bruce Campbell
1158 26th St. #883
Santa Monica, CA 90403

69

Email Letter EC-101

Please see response to Mr. Campbell's February 24, 2006 (DEIR comment letter P-183) and July 12, 2007 (RDEIR comment letter GM-29) letters.

See also response to Comment Form Letter 9.

Response to Comment 1
See GM-29, Response to Comment 1. The DEIR includes a Contribution to Recovery of Marbled Murrelet Habitat management measure (DEIR Page VII.6.6-118-119) and identifies areas specifically for the recruitment of Marbled Murrelet habitat (DEIR Page VII.6.6-78-82). Alternative G designates an additional 1,549 acres in the area of upper Russian Gulch and lower Big River for late seral development prescriptions specifically intended to recruit habitat for the marbled murrelet (see RDEIR Map Figure 1).

Response to Comment 2
A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in section VII.7 of the DEIR. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

Additional protection measures relating to mass wasting, surface erosion, road management, and riparian vegetation can be found in Chapter 3 of the DFMP or ADFFMP, and also are discussed in various sections of the DEIR (VII.6.6 Wildlife and Wildlife Habitat, VII.7 Geology and Soils, VII.10 Hydrology and Water Quality, and VIII Cumulative Effects) and RDEIR.

Adoption of the ADFFMP, with regard to clearcutting and even-age management, is not expected to result in a significant adverse environmental impact. See also General Response 10.

EC110

From: hertzberg@colorado.edu
Posted At: Wednesday, June 20, 2007 1:47 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I am a tourist from Colorado. Each year I and my family spend thousands of dollars to visit areas in the Jackson State forest, so I am very concerned about the future of the Forest. The idea that areas of the forest would be clearcut, simply to provide profit for the state and private companies, is distressing. The forest represents an important ecological resource that needs to be carefully managed to provide maximum benefit for all stakeholders.

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Jean Hertzberg
23 Wendelyn Way
Boulder, CO 80302

Email Letter EC-110

See Response to Comment Form Letter 9.

Response to Comment 1
See General Response 10, 15, and 16.

EC114

From: wcwong@mindspring.com
Posted At: Wednesday, June 20, 2007 8:54 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I have appreciated the Jackson State Forest for its diverse habitat, its mature trees which nurture many dependent species of plants, fungi, animals, and birds. I am against wholesale clear cutting, for it is the mature trees which nurture the most diverse species of plants and animals. Fungi, for example, thrive under mature trees, and are fewer in number under immature ones.

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely yours, Carol and Weldon Wong 384 Fletcher Drive Atherton, CA 94027

Sincerely,
Weldon and Carol Wong
384 Fletcher Drive
Atherton,, CA 94027

Email Letter EC-114

See Response to Form Letter 9

Response to Comment 1

Species diversity, measured in sheer numbers, often increases both in early succession and in later seral stands that contain more complex structure including canopy gaps. Regarding fungi, the same trends have been observed in studies in Oregon. It would be interesting to conduct these studies at JDSF in redwood forests. For this type of research, harvested areas that include a range of ages and sites would need to be studied. Providing this range of forest conditions was a consideration in the guidance on clear cutting provided in Alternative G. See General Response 10.

EC120

	annabeing@att.net
Posted At:	Friday, June 22, 2007 4:08 PM
Conversation:	Jackson State Forest Alternative G
Posted To:	Jackson State Demonstration Forest Public Comment
Subject:	Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

FL 9 However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

I must tell you why I think this. I actually live in another state, Colorado. In my state we are losing Thousands of acres of trees - mostly national forest - to pine bark beetles. Entire areas of forest have already bee wiped out. The first signs of the beetles have 1 recently appeared in my county. And my county, like all of Colorado that is forested, depends on the forest for tourism income, among many other things.

It is almost incomprehensible to me, given the treasure that you have in Jackson State Forest, that you would clearcut any more trees than you absolutely have to.

Therefore, I cannot support Alternative G in its present form.
Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

FL 9 To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Anna Schoettle
1868 Del Rosa Ct
Boulder, CO 80304

Email Letter EC-120

See Response to Form Letter 9

Response to Comment 1
The forests of Colorado are not ecologically similar to JDSF. Problems related to Colorado's forests are beyond the scope of this EIR process. Adoption of the ADFFMP, with regard to clearcutting and even-age management, is not expected to result in a significant adverse environmental impact. See also General Response 10, 14, and 15.

EC122

From: boxdhs@yahoo.com
Posted At: Saturday, June 23, 2007 2:26 PM
Conversation: Spam: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Spam: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them. FL 9

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

Research, as defined by Webster's dictionary states: careful, systematic, patient study and investigation in some field of knowledge undertaken to establish facts or principles. Now what I want to know, as a concerned citizen, is where are the previous research results published for public inspection? 1
The results from previous 'research treatment plans' would need to establish indisputable evidence, in the form of facts or principles, that further clear cutting or 'research' as it has been quaintly labeled is justified.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible. FL 9

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
deborah shook
pobox 1830
mendocino, CA 95460

Email Letter EC-122

See Response to Form Letter 9.

Response to Comment 1
Research and education are important components of the management plan. The Board agrees that research and demonstration results should be widely distributed. CAL FIRE is currently developing a website to catalogue the research and demonstration projects and/or publications that have been developed on the State forests (http://demoforests.net/). The website is incomplete, but the intention is to provide a comprehensive catalogue and a means to disseminate information, including data sets, regarding projects on the State forests. The commenter is encouraged to visit the website. This website will be moved to the main CAL FIRE website (http://www.fire.ca.gov/) in the near future. See also General Response 10.

EC123

From: cadile@msn.com
Posted At: Saturday, June 23, 2007 7:24 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health. However, I strongly oppose giving the forest managers an open-ended license to cut thousands of acres each decade to provide for unspecified "future research possibilities".

1 Jackson State Forest is one of the only protected redwood forest areas west of highway 101 in Mendocino County. Much if not most of the redwood forest in that zone of the county is currently directly or indirectly affected by logging. I am deeply disturbed that given the scarcity of protected redwood forest land in the area, logging continues to take place within the State Forest. I have spent quite a bit of time inside this particular forest, and I can tell you that even the State Forest land that is NOT being currently (or 2 recently) cut is feeling massive negative effects secondary to logging. There are an 3,4 excessive amount of active roads within the park, there is major hillside erosion, and 5 there are immense populations of invasive plant species such as Scotch Broom wherever the logging activity has taken place. The primary activity that should be taking place right 6 now is restoration of this repeatedly abused piece of land, not continued destruction.

7 I cannot support Alternative G in its present form. Any timber harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are FL 9 designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Casey Cadile
1448 Topar Ave
Los Altos, CA 94024

Email Letter EC-123

An identical letter was received by mail (GMF-24). The following serves to respond to both letters.

See Response to Form Letter 9.

Response to Comment 1
The majority of public wildlands in the North Coast region of California are set aside as reserves and parks to preserve rare ecosystems and wild areas. Demonstration State Forests, by contrast, are public lands that by legislative mandate have a unique and distinctly different purpose from parks and wilderness areas. State Forests are mandated to conduct research, demonstration, and education on sustainable forestry practices using active forest management, including periodic timber harvests. See General Response 2 and 16.

Response to Comment 2
The Board recognizes that past logging operations, especially those prior to designation of the property as a state forest and the implementation of the Forest Practice Act, have resulted in significant environmental impacts. The Administrative Draft Final Forest Management Plan (ADFFMP) represents significant advancement in the management practices aimed at protection and restoration of environmental resources when compared to previous management plans. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. While the first goal under the ADFFMP is Research and Demonstration, the second goal is Forest Restoration and the third goal is Watershed and Ecosystem Processes (see Appendix I in the RDEIR). See also General Response 15.

Response to Comment 3
JDSF is not a park. See General Response 13.

Response to Comment 4
A detailed discussion of landslides and erosion, including management goals, proposed management actions, potential impacts, and mitigation measures, can be found in DEIR, Section VII.7. As part of the management plan special concern areas were identified, including those areas at high risk of slope failure. Implementation of a Road Management Plan (see General Response 13) and Hillslope Management to provide for slope stability, including input from a Certified Engineering Geologist, will be utilized to reduce the risk of management related adverse impacts associated with landslides and surface erosion.

Additional protection measures relating to mass wasting, surface erosion, road management, and riparian vegetation can be found in Chapter 3 of the DFMP or ADFFMP, and also are discussed in various sections of the DEIR (VII.6.6 Wildlife and Wildlife Habitat, VII.7 Geology and Soils, VII.10 Hydrology and Water Quality, and VIII Cumulative Effects) and RDEIR.

Adoption of the ADFFMP, with regard to timber harvesting, is not expected to result in a significant adverse environmental impact.

Response to Comment 5
The Board recognizes the problem of invasive plant species regionally and on JDSF. The Board further recognizes the potential for disturbance, including timber harvest operations, to exacerbate this problem. JDSF will utilize integrated weed management (IWM), including monitoring and adaptive management, as an approach to controlling invasive weed species (see DEIR, Section VII.6.2 and ADFFMP Chapter 3, Invasive Weed Species, for further information regarding management of invasive species).

Response to Comment 6
See General Response 15.

Response to Comment 7
Timber harvesting, including the allocation of various silvicultural prescriptions, under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a diverse research and demonstration program. See also General Response 2, 10, 15, and 16.

EC133

From: stevenchr@yahoo.com
Posted At: Wednesday, June 27, 2007 11:34 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

1 If you need an example of state forests that do not allow logging; Illinois banned logging on state public lands in the early nineties. The tourism dollars are a greater benefit than the small amount of revenue timber receipts generate for a select few logging companies.

FL 9 We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Steve Christianson
230 Selby Ranch Rd. #1
Sacramento, CA 95864

Email Letter EC- 133

See Response to Form Letter 9.

Response to Comment 1
The value of JDSF as a research and demonstration forest goes well beyond that of revenue generated from timber receipts. See General Response 2.

EC136

Dipson, Lisa

From: gioia@sonic.net
Posted At: Wednesday, June 27, 2007 3:03 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

I've been fighting this battle for the last 30 years.
I've tried every way possible to impress on those in charge how precious this forest is to our family and every person we?ve ever met in the forest. Everyone would say, ?This is special, don?t tell anyone it?s here. Keep it secret so they won?t spoil it.?

1 My husband and I fell in love in the peace of these redwoods and later returned to get married.
All of our fondest memories are there.

However, we have witnessed the careless atrocities your poor management practices have caused.
We?ve seen it all. We?ve seen acres of clear cutting, that no one was watching, and all they could tell us was this isn?t what the logging company agreed to, but no one stopped them or punished them for what they did. We?ve been camping on weekends when logs were scalped and carried out by helicopter from sun up til sun down. It was like being in a war zone and that?s just what it was. Logging companies attacking the forest for profit.

1

E-136 cont.

All you see are dollar signs that are wasted as soon as you get them - this forest can not be replaced. Protect it at all cost.

1 I?ve had to give up the last 5 years that I would have been healthy enough to camp, because by stopping you from logging, you?ve stopped me from getting to camp 8 (the home of my soul).
I can?t tell you how much pain this has cost my heart, but anything is worth it if we can protect this forest.

Sincerely,
Gioia Davis
16315 Watson Road
Guerneville, CA 95446

Email Letter EC-136

See Response to Form Letter 9.

Response to Comment 1
See Response to Comment Email Letter C2-173. Areas of the Forest have been closed to camping at various times, primarily due to wet conditions, access or maintenance difficulties, the availability of maintenance and security personnel, or the presence of threatened or endangered species. There is a known northern spotted owl activity center in the vicinity of Road 361 along the North Fork of the South Fork of the Noyo River. Camping is restricted seasonally near the site when it is occupied by owls.

Generally, forest roads with unimproved surfaces are closed to vehicular traffic during the wet weather season to prevent unnecessary damage to the road surfaces and to prevent erosion and siltation.

EC 140

Gipson, Lisa

From: beatrootalan@netscape.net
Posted At: Thursday, June 28, 2007 9:26 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them. A well-known aphorism says 'you don't know what you've got till it's gone'. We've all seen the depletion of treasured natural environments due to human influence and abuse. We must do all we can to avoid continuing this trend, and to reverse it. Conservation and restoration must be the priorities.

1

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Alan Cook
6942 Santa Rita Ave.
Garden Grove, CA 92845

Email Letter EC-140

See Response to Form Letter 9.

Response to Comment 1
See General Response 15.

EC144

Gipson, Lisa

	ssmofa@cwnet.com
Posted At:	Thursday, June 28, 2007 11:15 AM
Conversation:	Jackson State Forest Alternative G
Posted To:	Jackson State Demonstration Forest Public Comment
Subject:	Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

FL 9 I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them. 1 Forests have many aspects we still do not understand. The canopy holds many secrets and once these forests are gone, they cannot be recreated.

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G. This group has done a great deal of work on behalf of our grandchildren and preserving the great resource which we have mostly lost. A small forest area is still a reservoir for preservation.

2 I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan. This is the only solution which will work for everyone, including those not yet born and for the non-humans affected by our forest-use decisions.

FL 9 To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward. These decisions are always difficult and involve much give and take. We appreciate the work done so far.

Sincerely,
Sandra Morey
3461 Laguna Ave
Oakland, CA 94602

1

Email Letter EC-144

See Response to Form Letter 9.

Response to Comment 1
The Board concurs that "forests have many aspects we still do not understand". JDSF will remain a redwood forest and retain its designation as a research and demonstration forest. The current management direction is based on creating a broad range of stand conditions to support a diverse research program, including issues related to the ecology of the forest canopy.

Response to Comment 2
See General Response 15 and 18.

EC-147

From: omni@mcn.org
Posted At: Tuesday, July 03, 2007 1:46 AM
Conversation: Jackson State Forest Alternative G Comments
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G Comments

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

FL 9 However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

1 It is of worthy note that areas close to and abutting JSDF have been purchased privately and committed to sustainable forestry.
This is a trend that promises to continue throughout Redwood country and offers a truly sustainable mission fully compliant with the intent and spirit of the 1976 Forest Practice Act.
Those lands have been permanenly deeded/committed to zero clearcuts unless the forerst is endangered by some unforseen menace. This change in use is a strong statement, or rather mandate, for CDF to practice modern forestry that truly respects the nature of California forests.

With this and my long experience in natural systems I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

FL 9 I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are near the end of the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my personal and community thanks and support for moving us forward.

Sincerely,
BC Macdonald
POB69
Albion, CA 95410

Email Letter EC-147

See Response to Form Letter 9.

Response to Comment 1
The Board is aware of the management direction of neighboring properties. The Board and CAL FIRE are also committed to sustainable management practices on JDSF. Unlike the neighboring properties JDSF has a mandate as a research and demonstration forest. The Board and the Department are responsible for developing a management plan for JDSF that is consistent with existing legislation and supports the research and demonstration mandate of the state forest system. Timber harvesting, including the allocation of various silvicultural prescriptions, under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a diverse research and demonstration program. See also General Response 2, 10, and 15.

EC154

From: dwillis@mcn.org
Posted At: Sunday, July 15, 2007 10:34 PM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 Using clearcuts as "scientific research" reminds me of the justification for Japanese whaling, in which they are allowed to take a certain number of whales each year for "scientific research." Certainly there are enough clearcut areas in the Pacific West, not to mention northern California, to provide scientists with endess research opportunities for the foreseeable future.

2 It also seems clear to me that the future of Jackson state forest will involve more recreational uses in the near future, as our logging economy turns more and more to a tourist economy.

3 Jackson should not be used as a cash cow under the guise of research.

Having said that, I recognize that Alternative G has some positive aspects, especially in working with the public.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

FL 9 To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
donald willis
PO Box 1176
Willits, CA 95490

Email Letter EC-154

See Response to Comment Form Letter 9.

Response to Comment 1
See General Response 10.

Response to Comment 2
See General Response 14.

Response to Comment 3
The Forest will not be used as a "cash cow". The growth and utilization of timber will remain sustainable, and harvest will remain well below the level of annual growth during the term of the management plan.

EC159

Gipson, Lisa

From: IWS@sonic.net
Posted At: Monday, July 16, 2007 9:01 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 Clear cutting is an abomination driven by an combination of greed and ignorance, that completely lacks any sort of understanding of mycology and the association that exists between fungi, soils, water distribution cycles and the diverse plant community that supports a healthy forest. Without such an understanding we are left with simplistic 2 models of disease and are shocked and suprised by things like sudden oak death, and we are 3 and left with a legacy of costs ranging from soil loss and loss of productivity, damaged 4,5,6 fisheries and fire suppression without end. We are killing both important species and other species that are currently and ignorantly not deemed to be unimportant with this 7 neolithic approach. We also miss the opportunities to enhance carbon sequestration by failing to maximize sustained growth.

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Bob Rawson
PO Box 157
Sebastopol, CA 95473

1

Email Letter EC-159

Response to Comment 1
The DEIR/RDEIR has analyzed the effects of the proposed limited clearcutting. This analysis included the items listed by the commenter. The DEIR recognizes the role of mycorrhizal fungi. Clearcutting remains a frequently used technique in the redwood region. The limited clearcutting allowed in Alternative G would allow for possible research to determine which organisms and processes are at risk from this management practice and examine protection measures. This could provide benefits well beyond the boundaries of JDSF. See also General Response 10.

Response to Comment 2
Research into sudden oak death is ongoing at several state forests, including JDSF.

Response to Comment 3
See EC-123 Response to Comment 4.

Response to Comment 4
See General Response 11.

Response to Comment 5
No significant environmental impacts associated with wildland fires are expected as a result of implementing the ADFFMP. See DEIR section VII.8 and RDEIR section III.8

Response to Comment 6
No specific information is provided with regard to the concern that implementation of the ADFFMP will result in “killing both important species and other species”. A reasoned response is not possible. Adoption of the ADFFMP, with regard to clearcutting and even-age management, is not expected to result in a significant adverse environmental impact.

Response to Comment 7
Refer to EC-42, Response to Comment 2 and E-116 (2005 DEIR) response.

EC160

From: Donald Nierlich [cct@coastwalk.org]
Posted At: Monday, July 16, 2007 9:51 AM
Conversation: Jackson State Forest
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest

1 Although I live in Southern California, I have followed the discussion of timber cutting policy for Jackson State Forest with interest. This is because I have traveled widely, both in the State, the U.S. and internationally, and wherever I have seen clear cutting, I am appalled at the ecological consequences--the loss of habitat, the extensive destruction of the (above and below) ground flora and fauna, and the long -term horizon for regrowth. I can only support Alternative G with the proviso that clear cutting be strictly limited to approved forestry research.

Donald Nierlich
[Professor Emeritus, Microbiology]
[Coastwalk volunteer]
Santa Monica

Email Letter EC-160

Response to Comment 1
See General Response 10.

EC163

From: jbart@mcn.org
Posted At: Monday, July 16, 2007 11:07 AM
Conversation: Jackson State Forest Alternative G
Posted To: Jackson State Demonstration Forest Public Comment

Subject: Jackson State Forest Alternative G

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1 I live just down the road from Jackson State Forest. I cannot believe that clear cuts are
2 being considered in the plans as per Alternative G. Why would we destroy our last remaining forests in this way? With the evidence of global warming it is an even more frightening proposition.

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

FL 9

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,
Joselyn Bartlett
44002 Fern Creek Rd.
Caspar, CA 95420

Email Letter EC-163

Response to Comment 1
See General Response 10.

Response to Comment 2
Refer to EC-42, Response to Comment 2 and E-116 (2005 DEIR) response.

o:Board Members Forestry and Fire Protection FR (19166530989) 14:28 07/02/07GMT-5:00 Pg 01-01

EC-184

Dear Members of the Board:

Thank you for reorienting the management at Jackson Demonstration State Forest toward scientific research about a broad range of forest ecosystem issues.

FL 10 The idea of an Older Forest Structure Zone (OFSZ) is a good one, but the boundaries should be revised and expanded. The OFSZ fails to include many areas that currently have large, old trees, for instance near West Chamberlain Creek and Brandon Gulch. The region is so deficient in older trees, their location on Jackson should be the most important factor in designing the OFSZ. The Late Seral Development Areas within the OFSZ should also be expanded to ensure that significant intact areas of existing older forest remain for research and as reference stands. This is critical.

1 The National Oceanic and Atmospheric Administration (NOAA) has changed the listing of Coho salmon from threatened to endangered, thus assisting the recovery of the species must be a top mandate. Habitat and road crossing are critical issues for the species.

2 I think a comprehensive recreation plan that identifies key assets, locations and reasonable public access is key to increasing public support for your efforts in the Jackson Forest.

Thank you for taking Jackson Forest in a new healthier direction as a complex of ecosystems. Thank you for listening. Thank you for acting.

D Cooke
67 Rosewell Court
San Jose, CA 95138

Email Letter EC-184

See Response to Comment Form Letter 10.

Response to Comment 1
State agencies, including CAL FIRE, are directed through a variety of programs and policies to protect and manage California's aquatic resources. These include, but aren't limited to:

- California Forest Practice Rules
- Basin Plan (see Section VII.7, Geology and Soils, and Section VII.10, Hydrology and Water Quality)
- Fish and Game Code
- State and Federal Endangered Species Acts (see DEIR Section VII.6.1 regarding state and federal listings of salmonids)
- Clean Water Act (see Section VII.7, Geology and Soils, and Section VII.10, Hydrology and Water Quality)
- Draft Jackson Demonstration State Forest Management Plan (DFMP/ADFFMP)

Management policies on JDSF will integrate and comply with these regulatory programs. The ADFFMP has been developed to achieve desired future conditions that will provide site- and species-specific protection measures that contribute to maintenance or improvement of the long-term conservation of population viability of aquatic and riparian dependent species of concern and enhance habitat values over existing conditions. See also General Response 11, 12 and 13.

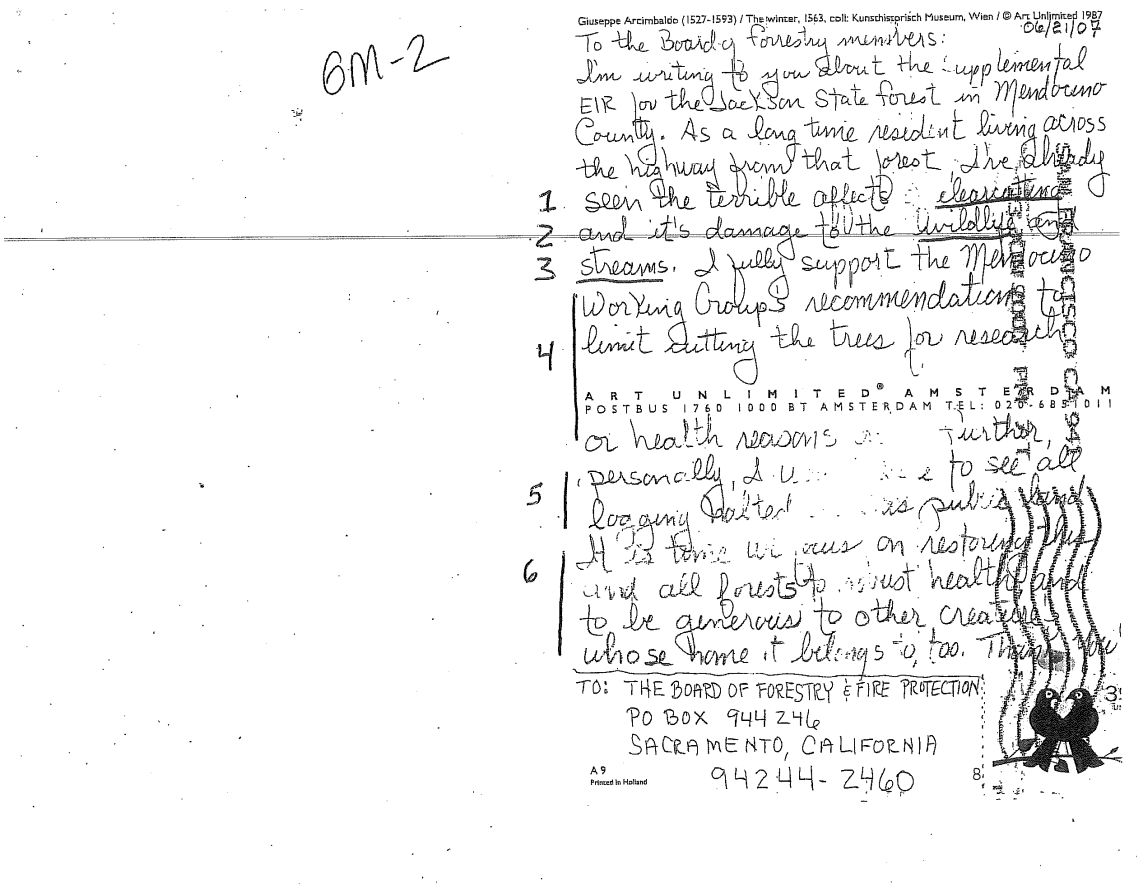
Response to Comment 2
See General Response 14.

IV.15 Individual RDEIR Mailed Comments GM-1 to GM-38

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Mailed comment submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.



GM-2

Giuseppe Arcimboldo (1527-1593) / The winter, 1563, coll: Kunsthistorisch Museum, Wien / © Art Unlimited 1987

06/21/07

To the Board of forestry members:

I'm writing to you about the supplemental EIR for the Jackson State forest in Mendocino County. As a long time resident living across the highway from that forest, I've already seen the terrible affects of clearcutting and it's damage to the wildlife and streams. I fully support the Mendocino Working Group's recommendations to limit cutting the trees for research or health reasons. Further, I personally, would like to see all logging halted on public land. It is time we focus on restoring the and all forests to their most healthy and to be generous to other creatures whose home it belongs to, too. Thank you

1
2
3
4
5
6

ART UNLIMITED® AMSTERDAM
POSTBUS 1760 1000 BT AMSTERDAM TEL: 020-685 1011

TO: THE BOARD OF FORESTRY & FIRE PROTECTION
PO BOX 944246
SACRAMENTO, CALIFORNIA
94244-2460

A9
Printed in Holland

Mailed Letter GM-2

Response to Comment 1
See General Response 10.

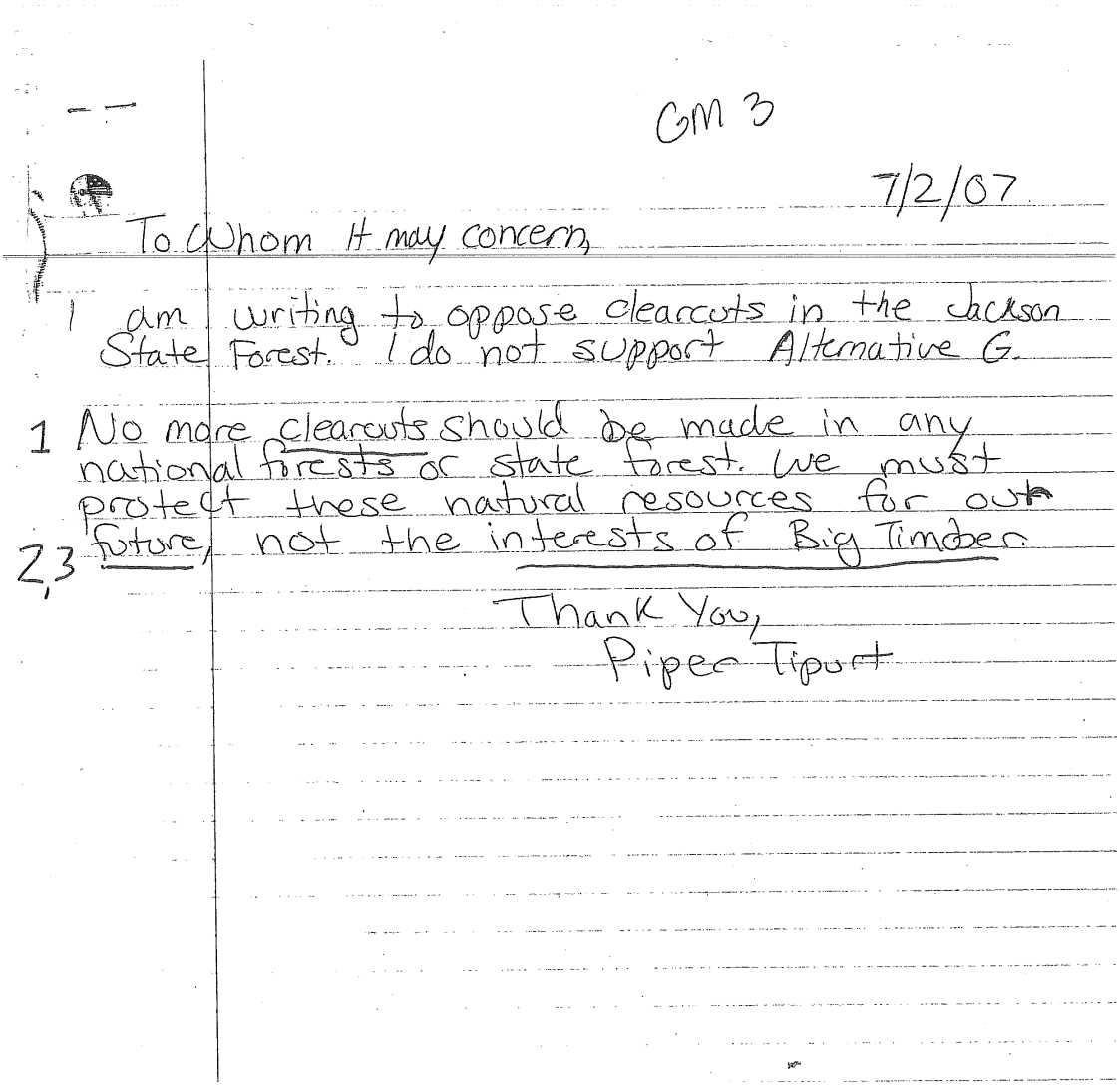
Response to Comment 2
See General Response 12.

Response to Comment 3
See General Response 11.

Response to Comment 4
Support of the Working Group recommendations noted.

Response to Comment 5
See General Response 16.

Response to Comment 6
See General Response 15.



GM 3

7/2/07

To Whom It may concern,

I am writing to oppose clearcuts in the Jackson State Forest. I do not support Alternative G.

1 No more clearcuts should be made in any national forests or state forest. We must protect these natural resources for our
2,3 future, not the interests of Big Timber.

Thank You,
Piper Tiport

Mailed Letter GM-3

Response to Comment 1
See General Response 10.

Response to Comment 2
See General Response 15.

Response to Comment 3
See General Response 17.

CM4

EMPLOYERS COUNCIL
of Mendocino County

July 6, 2007

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan & Alternative G

Dear Members of the Board,

The Employers Council of Mendocino County (ECMC) has reviewed the new Alternative G and would like to offer the following comments.

1 The Board of ECMC understands that Jackson Demonstration State Forest (JDSF) grows approximately sixty million board feet of timber per year. The original preferred alternative called for the harvest of thirty one million board feet per year, this new alternative has the target level down to twenty million board feet per year. With growth exceeding harvest at this magnitude we wonder how long JDSF can continue to be the world class research forest this new alternative is suggesting. ECMC would like to see the Board of Forestry take a serious look at what this harvest level is doing to the long term prospects of maintaining JDSF as a premier research forest. We hope the Board

2 will commit to interacting with the scientific community to insure as time goes on if this harvest level is not appropriate for long term research it will be adjusted.

3 ECMC is opposed to the concept of a local advisory entity. Entities such as these can provide perspectives that are valuable tools but often lack the expertise necessary to make meaningful long term management decisions. Management of JDSF needs to remain in the hands of professionals.

4 The staff of JDSF has a long history of excellent management of the state forest. Management flexibility is crucial for any operation. ECMC is concerned that the staff of JDSF has the necessary flexibility to manage the forest. This flexibility needs to be in the form of silvicultural prescriptions, new techniques, and cutting edge demonstrations. On the ground management decisions need to be made by a team of professionals and not a system of committees and advisory groups.

Employers Council of Mendocino County ✦ 597B Main Street
Ukiah, CA 95482 ✦ (707) 462-5021 · (fax) 462-0318
www.ecmconline.com ✦ ecmc@pacific.net

The forest has been in the past an important component of Mendocino County's economic infrastructure. Our goal is to see JDSF back in production as soon as
5 possible. Our hopes are that this new management alternative is something that will provide certainty and a long lasting management scenario under which JDSF can once more be the most respected research and demonstration state forest in the nation.

Our last comment is our perception of one of the leading issues that has brought on the current situation at JDSF. The enabling legislation talks about the JDSF role in education. It is our belief if JDSF lived up to its legislative mandate and played a real role in education of the public, much of the misinformation that seems to prevail about
6 management of this forest and others would be dispelled. JDSF has a wonderful story to tell, the shame is that story is not getting out. The new alternative does not deal with any meaningful education component. If there is not a serious effort to improve the educational outreach and public interaction with JDSF there is a very real likelihood the situation of the past 5-6 years will be the norm rather than an exception.

ECMC supports Alternative G, we believe forest scientists and forest professionals need
7 to be in the forefront making the management decisions. We further hope and expect that JDSF staff will get the specific direction needed, to get started now on a meaningful sales program for 2008.

Margie Handley

Margie Handley
ECMC Chair

Employers Council of Mendocino County ✦ 597B Main Street
Ukiah, CA 95482 ✦ (707) 462-5021 ✦ (fax) 462-0318
www.ecmconline.com ✦ ecmc@pacific.net

Mailed Letter GM-4

Response to Comment 1
The Board's direction for the Administrative Draft Final Forest Management Plan (ADFFMP) is for an average annual allowable cut of 20-25 million board feet (MMBF), not to exceed 35 MMBF. The Management Plan is designed to provide a wide range of forest conditions over space and time, thus providing opportunities for a wide range of research. Board policy requires that management plans be reviewed at least every five years to determine of any changes are needed. This periodic review process will allow the Board and department to make adjustments to plan direction over time if a need for change is identified.

Response to Comment 2
The Board is committed to ongoing interaction with the scientific community regarding management at JDSF and other forestry research issues. The Board is currently working to re-establish its long-dormant Committee on Research.

Response to Comment 3
The opposition to a local advisory entity is noted. The Board has provided direction to the department for the establishment of a JDSF advisory body "to include persons with knowledge of forest resource issues; be drawn from a variety of interests, including local and beyond, environmental, timber management, and recreational; have expertise in relevant scientific disciplines, e.g., forestry, botany, ecology, fish biology. The charter will specify the number of members. Members do not 'represent' particular interests – they are chosen for knowledge and are to represent the public interest." The advisory committee is to be just that, advisory. Decision making will remain in the hands of professionals.

Response to Comment 4
The proposed management plan is designed to provide a significant amount of flexibility in the management of JDSF. On reason for this flexibility is to ensure that a wide range of research and demonstration opportunities are available. While the advisory group will provide important input on forest management, on-the-ground management decisions will be made by professionals.

Response to Comment 5
The Board shares the commenter's interest in getting JDSF back in full operation as soon as possible. The new management plan provides an excellent framework for the management scenario described.

Response to Comment 6
The Board agrees that JDSF could do a better job in education and public outreach, and that it has "a wonderful story to tell." The Board will continue to work with the department to help strengthen the Forest's education and outreach programs and to help the Forest get the resources needed to do so. The Board is very interested in the potential education and outreach opportunities offered by the proposed Noyo Center for Science and Education.

Response to Comment 7
The support for Alternative G is noted. This is the management direction provided in the ADFFMP.

GM5

To: CDF, P.O. Box 944246, Sacramento, CA 94244-2460.
From: Mary Pjerrou, Greenwood Earth Alliance, P.O. Box 106, Elk, CA 95432
Date: June 17, 2007

1 The Jackson State Forest Plan includes so-called "even-age" management (clear-cutting) in as much as 40% of the forest, some of it for "research" purposes. Why is this research needed? The experiment of clear-cutting our forests has already been undertaken on a massive scale, by Georgia Pacific, Louisiana Pacific, Hawthorn Timber, Mendocino Redwood Company, and their predecessors, and the "scientific" results are well-established: massive erosion and sedimentation of rivers and streams; the near extirpation of the coho salmon and decline of the steelhead trout, with ruinous economic and ecological impacts; the near extirpation of the marbled murrelet and grave decline of the northern spotted owl; the massive loss of endangered species habitat;, the loss of 80% of timber volume on corporate-owned timber lands (a fifth of the county) in only 30 years time; devastating impacts of the pesticides used with clear-cutting on amphibians and other species; massive timber job loss and the closure of the coastal logging mills; and, finally, a worldwide crisis of deforestation, of which this corporate "experiment" conducted in Mendocino is but one tragic part--and a major cause of global warming, due to the loss of forests as the cleansers of our planet's fragile and highly impacted atmosphere.

2 What more "research" do you need? The verdict is in. Clear-cutting of ancient forests is a disaster of earth-killing proportions. It is unconscionable, whether for profit, or for this new scam called "research," whether on large areas, or in small, deceptive guises. We need every remnant of ancient forest and recovering logged forest to be preserved, other than minor management for stand health. We need every bit of green. We have none to spare. None!

3 This loophole through which many corporate logging trucks can be driven should be removed from the Jackson State Forest Plan. It hauntingly resembles the loophole of "scientific research" that is being used by Japan and Norway to slaughter some of the last whales in our dying oceans.

4 This state forest plan does not exist in vacuum. It exists in an immediate context of ravaged forest lands throughout the county, and throughout northern California, and in a larger context of similar impacts of industrial logging around the globe. Jackson State Forest contains rare and precious wildlife and fish habitat almost [illegible] of such habitat on tens of thousands of nearby acres. It also contains a critically important mass of greenery, essential to the survival of our planet. Corporate loggers have proven themselves to be irresponsible and uncontrollable, if given the slightest loophole that permits them to damage the environment in favor of profit. Please remove this and all loopholes that permit clear-cutting of any kind. Please bring this vast and terrible experiment in the impacts of "even-age" management to an end.

5 The World Wildlife Fund gives our planet 50 years, at present levels of pollution and consumption--that is, 50 years to the DEATH of the planet! What does it take to knock sense into peoples' heads? There is no time left for bureaucratic word games, sneaky loopholes and business-as usual. The goal should be to maximize forest volume as quickly as possible, and to maintain that volume, for the sake of all life on earth. No more loopholes!

Mary Pjerrou, Co-Director, GEA

Mary Pjerrou

Mailed Letter GM-5

Response to Comment 1
The commenter's estimate of area devoted to the use of future clearcutting is grossly overstated. As much as 26 percent of the Forest may be managed on an even-aged basis, and the use of clearcutting will be strictly limited to a small fraction of this amount. Although the practice of clearcutting is and has been wide-spread within the region, most of this cutting has been conducted on private timberlands and has not been studied in detail, nor have results been available for review by agencies, forest managers and the general public. In addition, the methods of forest management have developed steadily over the years in which these stand management practices have been utilized, presenting a dynamic set of conditions to study and evaluate. The scope of forest research has expanded considering wildlife, ecology and watershed subjects. Research results often provide information on the environmental effects of a specific management technique, both positive and negative. Limiting research on specific management techniques will narrow the information available to evaluate them

Significant advancements in road building, road maintenance, and timber yarding practices have occurred since the first stands were clearcut in the late 1800s. As recently as 1972, there was no significant environmental regulation in place for forest management operations. Equating modern forest practices to those of the past is inappropriate. Most of the forms of environmental damage stated by the commenter have little or no relationship to the future use of even-aged management within JDSF. The reader is referred to DEIR Sections VII and VIII for the assessment of potential impacts to the environment. Potential impacts to watershed resources, fish, wildlife, the economy, and global warming have been thoroughly considered.

Response to Comment 2
The management plan does not propose to clearcut ancient forest. The commenter does not explain or describe the reasoning for the statement; "We need every remnant of ancient forest and recovering logged forest to be preserved.....". The Board will not speculate as to the nature of the comment being made.

Response to Comment 3
Please see response to comment 1. The use of even-aged management does not produce a loophole. It is intended to create as an opportunity for research and demonstration, and to contribute to sustainable production and valuable habitat.

Response to Comment 4
Please see response to comment 1. The DEIR provides a detailed description of the environmental setting and of the assessment area.

Response to Comment 5
Please see DEIR Section VII.16 for the assessment of carbon sequestration and greenhouse gasses. JDSF is expected to provide a net benefit to world climate and environmental health by sequestering carbon and producing wood products, which has potential to reduce the consumption of oil, coal, and gas associated with the use of other building products, such as steel, cement, and aluminum

RECEIVED BY
JUN 20 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

GM7

June 22, 2007

Dear Board of Forestry,

My family and I appreciate that you have taken the time to restructure your management plan for Jackson Forest. The improved priority for research, restoration, ecology and public recreation make EIS Alternative 6 much more attractive. However, the allowance for clear cutting is anathema to all these improvements. We live in a time of alarming rates of forest diminishment all over the world. Please do all that you can to save every little bit that remains. Consider also that forests are one of the few truly effective carbon absorbers (and free!). With global warming still on the rise, we should cannot underestimate the value of our living forests. Thank you for your diligent consideration in this matter - the decisions and actions of today will have a significant impact for our future

Dorothea Bowman-Schmidt

Mailed Letter GM-7

Response to Comment 1
See General Response 10.

Response to Comment 2
See General Response 2 and 15.

Response to Comment 3
Refer to EC-42, Response to Comment 2 and E-116 (2005 DEIR) response.

Response to Comment 4
See General Response 15.

RECEIVED BY
JUN 21 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

GM 9

Brian Wilson
P.O. Box 14970, Santa Rosa, CA 95402
707 / 545-5798

June 17, 2007

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244

Re: Jackson State Forest Alternative G

Dear Members Board of Forestry,

I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment; however, I strongly oppose giving the forest managers an open-ended license to clearcut for unspecified "future research possibilities."

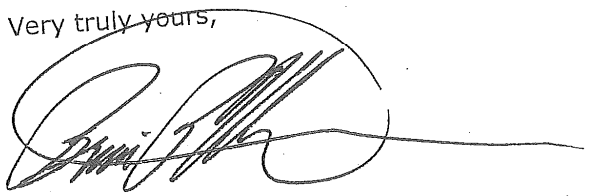
FL 9 I cannot support Alternative G in its present form: any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity.

All proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee to assure they are designed and chosen so as to keep open planning options for restoration and habitat to the maximum extent feasible.

1 Jackson State Forest is not a State Park – it was designated for forestry research and education; thus, recreational concerns need not be addressed. We need more research on restoring forests, not on destroying them.

Please make the requested changes in Alternative G.

Very truly yours,



Mailed Letter GM-9

See Response to Comment Form Letter 9

Response to Comment 1
Desire to eliminate consideration of recreation resources in the management direction of JDSF noted. While recreation will not be the primary focus of the management plan, the Board contends that recreation is a compatible use of the forest.

GM 12

Board of Forestry & Fire Protection.

1 STOP Clearcutting!

What is wrong with sustainable forestry without trashing the forest with clear cuts?

There is a long history of excellent examples using selective methods of harvesting. Nothing new will be learned from clearcutting & you know it!

2 This is not what the citizens of the county or state want! The same folks that supported DDT, overfishing & coal plants want clearcuts. The overwhelming majority of people don't! Good environmental decisions are good for business & the community.

Supplemental EIR for Jackson State Forest

RECEIVED BY
JUN 25 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

Sincerely.
Marvin Trotter MD.
PO Box 1467
Ukiah, CA 95482

Mailed Letter GM-12

Response to Comment 1
See General Response 10.

Response to Comment 2
The Board will not speculate on what the majority citizen's want. The Board and CDF are responsible for developing a management plan for JDSF that is consistent with existing legislation and supports the research and demonstration mandate of the state forest system. Timber harvesting, including the allocation of various silvicultural prescriptions, under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a diverse research and demonstration program. See also General Response 2 and 15.

GM 13

Sierra Club Lake Group
PO Box 1011 Kelseyville, CA 95451

RECEIVED BY
JUN 25 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

June 21, 2007

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Jackson State Forest Supplemental EIR

FL 9

Although Jackson State Forest lies a little way outside the Lake Group's boundaries, the welfare of this important neighboring public resource has been of concern to us for a number of years, and we are delighted to have this opportunity to congratulate the Board for its recently declared determination to manage the Forest for broad and varied values, which include wildlife habitat, public enjoyment, and scientific opportunities as well as timber production. We also applaud the designation, in Alternative G, of an interim management period during which a new public advisory committee is designated to work with professional foresters to develop a long-range management plan that incorporates all these complex goals.

On the other hand, we cannot support Alternative G's open-ended license for extensive clearcutting in the guise of unspecified "future research possibilities." An explicit research justification should *precede* any destructive harvest such as clearcutting, and the extent of such harvests should not exceed the minimum area required for scientific validity, as recommended by the Mendocino County working group. During the interim planning period, all proposed timber harvests should be reviewed by the Jackson Advisory Committee, which will provide a guarantee that they are chosen and implemented in a way that maximizes options for future forest restoration, and its present and future ecological health and recreational possibilities.

This long controversy is nearly at an end. By making these changes in Alternative G as we request, you will bring it to a truly triumphant conclusion.

Yours sincerely,

Victoria Brandon Form Letter

Victoria Brandon
Chair, Sierra Club Lake Group

Mailed Letter GM-13

Response to Comment
See Response to Comment Form Letter 9.

GM 16

Marilou Brewer, N.D.
Post Office Box 523
Mendocino, CA 95460-0523
17680 Redwood Springs Drive
Fort Bragg, CA 95437
(707) 964-9514 mlbrewer@mcn.org

RECEIVED BY
JUN 25 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

June 19, 2007

Members Board of Forestry
Post Office Box 944246
Sacramento, California 94244-2460

Re: Jackson State Forest Alternative G

Dear Members Board of Forestry,

Congratulations to the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment is especially important in this day of environmental degradation.

However, I adamantly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

FL 9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

Thank you for allowing the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

1 Every day I walk in Jackson State Forest with my dog. It is amazing the damage done by selective logging. Clearcutting would be abysmally damaging to all the plants and animals. Please do not make our Coastal Range look like Oregon with all its clearcuts. Those clearcuts are so obviously ugly, sad and thoughtless. It will take hundreds and hundreds of years for them to grow back. Please do not allow that to be done to California. Once the decision is made to clearcut there is no going back. Please do not allow clearcutting in Jackson State Forest.

FL We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,

Marilou Brewer

Marilou Brewer,N.D.
17680 Redwood Springs Dr.
Ft. Bragg, California 95437

Mailed Letter GM-16

See Response to Comment Form Letter 9

Response to Comment 1
The California Forest Practice Rules do not allow clearcutting on the scale that is utilized in Oregon. Large scale clearcutting on JDSF is not proposed (see General Response 10). Many of the current stands at JDSF are the result of large scale clearcutting prior to the designation of this land as a state demonstration forest and the implementation of the Forest Practice Rules.

The commenter does not provide specific information relating to the concern that logging will cause "damage" to resource values other than to aesthetic resources. A detailed discussion of Aesthetic Resources, including impacts, thresholds of significance, and mitigation measures can be found in section VII.2 and VIII.9 of the DEIR. Additional analysis of aesthetics, as related to recreation, can be found in DEIR section VII.14. Further analysis of potential impacts to aesthetic resources relating to Alternative G and the ADFFMP can be found in RDEIR section III.2 and III.14.

The Board recognizes that timber operations can lead to negative impacts on the aesthetics of an area, however determining specific "thresholds of significance" is highly personal and subjective (see General Response 6). Many of the potential impacts of logging are temporary and do not result significant impacts to associated resource values. Mitigation measures have been developed to reduce the potential aesthetic impacts of timber operations to less than significant. This includes implementation of restrictions on the use of even-aged silvicultural practices and timber operations adjacent to special concern areas. Current trends in forest management place greater emphasis on developing practices that provide increased protection to the non-timber resource values including, but not limited to, aquatic and wildlife habitat, aesthetics, and recreation. The management plan will provide for protection of aesthetic values, especially in areas of high public use, such as highway corridors, high-use recreational areas, and near rural residential neighborhoods. The management plan represents state of the art management practices and implementation of the plan is not expected to produce significant adverse environmental impacts (See General Response 2, 11, 12, and 14).

GM-17

California Native Plant Society

Dorothy King Young Chapter – P.O. Box 985 – Point Arena, CA 95468

June 7, 2007

George Gentry, Executive Officer
California State Board of Forestry Fax: 916-653-0989

Ruben Grijalva, Director
California Department of Forestry Fax: 916-653-4171

Re: Alternative G, Draft JDSF Management Plan

Dear Mr. Gentry and Mr. Grijalva:

(1) CNPS is very pleased that the Department of Forestry created a working group to make recommendations for a new management plan for the Jackson Demonstration State Forest (JDSF). The positive changes that came out of the working group sessions include:

- Focus on research, restoration, habitat, education, and recreation as primary values of the forest
- Establishment of an outside advisory committee to work with CDF on a long-range landscape plan and a revised short-term management plan
- Restriction of harvesting during the interim period when the new plans are being developed
- Recycling of timber profits from Jackson back into JDSF, and secondarily to other state forests.

CNPS still has the following concerns with Alternative G:

Research and Demonstration
Appendix 1 – Detailed Goals and Objectives for Alternative G

Goal #1 – Research and Demonstration

(2) Demonstration should specify the demonstration of conservation, restoration and timber production techniques that have not been previously demonstrated. The emphasis should be on new, innovative approaches.

(3) Rather than establish only a Forest Education Center, CDF should establish a research institution, in partnership with various academic and scientific entities.

(4) Strengthen the language about consulting and cooperating with other organizations to emphasize establishment of long-term research partnerships and geared toward meaningful scientific results.

(5) Parameters for research should be specified, including peer review and other standard features for scientific research projects.

Protection for Rare Plant Communities and Rare Plants
Part III – Resource Specific Analysis

(6) Impact 1 should be changed to "The project has the potential to reduce the amount of a rare plant community." Rare plant communities, as identified by the California Department of Fish and Game (DFG) that occur or have the potential to occur within JDSF should be specified in the plan.

(7) The plan should allow for the fact that DFG's Vegetation Program is still in the process of identifying and describing California's rare plant communities. The plan should specify that timber harvests and other projects within JDSF will be adjusted as new information becomes available from DFG.

(8) Impact 4: The project has the potential threaten to restrict the range of an endangered, rare or threatened species. This language should be broadened to include impacts to DFG species of concern. It should be more specific on control of invasive plant species should be included, especially in light of JDSF's poor track record in controlling weeds. Even when herbicides were widely allowed, weeds were rampant.

(9) The document should also reflect the fact that exotic, invasive plants cause problems beyond impacts to rare species. They can increase fire danger, degrade habitat quality and riparian corridors and interfere with visitors' recreational experiences. The plan needs specific measures for reducing the threats from invasive species in those situations.

Impact 6: Cumulative effects resulting in a reduction in the range of a species …

(10) JDSF really needs a baseline biological survey, to be completed before implementation of the new plan. Additional botanical surveys should be rather than species-targeted surveys. These surveys must include field survey forms turned in to DFG, and voucher collection for all rare or special plant taxa. The surveys should follow the CNPS Botanical Survey Guidelines or at least the DFG Guidelines.

(11) Further, the plan should specify qualifications for those conducting any biological surveys: Experience, knowledge of local species and ecology, participation in a CNPS/DFG-sponsored survey workshop.

(12) In general, CNPS would like to see provisions for protection and restoration of Mendocino Pygmy Cypress Forest, much of which exists on JDSF in degraded condition. Consultation with local experts will help identify restoration techniques that are cost-effective, yet control erosion, reduce soil disturbance and minimize hydrological disruption.

(13) **Silvicultural Methods**
Alternative G allows 26% of the forest for clearcutting and other even-age silvicultural methods. Another 15% is to be "managed" with group selection, which allows clearcuts of up to 2 ½ acres.

(14) Note that these percentages and silvicultural methods differ radically from the recommendations of the JDSF working group.

(15) The working group's recommendation was to incorporate clearcutting and other even-age techniques into "well-justified research projects and as necessary to promote stand health. The size and scope of these projects should be no larger than the minimum needed for scientific validity."

(16) CNPS asks that even-age techniques be used on a case-by-case basis, and only for clearly defined research projects that:

- Fall within the redefined mission of JDSF
- Are properly structured, science-based research projects
- Put limits on the size of the areas to which even-aged techniques will be applied
- Are designed to include peer review and public disclosure

(17) Alternative G currently allows even-age techniques to be applied without being part of scientifically valid, mission-oriented research projects. CNPS finds it unacceptable that clearcutting techniques are justified in terms of "possible future research opportunities."

(18) The plan needs language that establishes scientifically appropriate parameters for research projects, which would help ensure that JDSF is being responsive to its newly defined mission.

Improvements will result in a plan for JDSF that will meet the needs of its varied stakeholders.

Sincerely,

Lori Hibbart, Chapter President
CNPS – Dorothy King Young Chapter

Mailed Letter GM-17

Response to Comment 1
The Board notes the four items identified as positive and concerns with Alternative G.

Response to Comment 2
The comment states demonstrations should be limited to techniques that have not been previously demonstrated. Research at JDSF should not be limited to new management techniques, but should include new topics for investigation. For example topics such as floristic changes or nutrient cycling have not been fully explored. Research results often provide information on the environmental effects of a specific management technique, both positive and negative. Limiting research on specific management techniques will narrow the information available to evaluate them.

Plant communities can vary with the area's history, as well as abiotic factors such as slope or fog intrusion. Fortunately, JDSF provides a gradient of redwood sites from moderate to dry conditions. Research or demonstration results in one area may not be representative of the range of redwood forests. When appropriate, duplicating treatments across the range of conditions at JDSF will provide more useful results across of the redwood region.

Response to Comment 3
The exact nature of future education and research centers would depend on the interest of potential partners as well as local interest. For Goal #1, Alternative G, an objective is to: "Make the State Forest available to educational intuitions and other agencies for conducting research and demonstration projects." CAL FIRE will pursue various partnerships as part of that effort.

Response to Comment 4
Consultation and cooperation with other organizations will be a logical result of the emphasis on research and demonstration. Within Alternative G, Goal #3 includes a new objective is to "Work with partners to conduct research and demonstrations on the effectiveness of measures to protect watershed and ecological processes from potential management impacts." In addition, goal two contains objectives that include cooperation and working with a range of partners including; agencies, private conservation organizations, neighboring landowners including State Parks and the Conservation Fund.

The plans language regarding potential partnerships is sufficient. Given partnerships require the interest of organizations or intuitions outside of CAL FIRE, these entities are not directed by a CAL FIRE Management Plan. The Goals and objectives in the ADFFMP will result in greater outreach and partnerships.

Response to Comment 5
Specific parameters to limit research to peer review quality could become a barrier to science, education and management. Peer reviewed journal studies will continue to be an integral product of JDSF research. This year, two forestry related articles appeared in peer reviewed journals and the Redwood Symposium proceedings was published (31% of the research was associated with JDSF). JDSF has been the setting for many theses and dissertations conducted on subjects ranging from geology to forest ecology. JDSF serves an important role in providing a study site for university graduate students who typically complete their studies in two to five years. As detailed in the ADFFMP Chapter 4, the state forest system publishes a range of publications including state forest newsletter and notes. The latter can provide demonstrations and feasibility evaluations for new techniques. The range in types of research, education and demonstrations are one of the strengths of the state forest system. High quality research with appropriate replicates and controls will continue to be an integral component of the research and demonstration at JDSF.

Response to Comment 6
The comment letter is asking for changing the text in one of the Impact Statements for Determinations of Significance that has been present in various drafts of the EIR since 2002. This concern was not

identified in previous CNPS comment letters to those documents. The suggested phrasing changing "plant community" to "rare plant community" would have little effect as the analysis focuses on the rare plant communities (DEIR VIII.6.2.-25& 26) as a consequence of their status. Given the analysis would be the same, this change is not warranted.

The second part of the comment would change "threaten to eliminate a plant community" with "potential to reduce the amount of". This would establish a threshold that any loss of a rare plant community would be significant. Identifying a resource as "rare" typically highlights the need for careful analysis and mitigations; it does not require absolute prohibitions. The effects to a rare plant community are best addressed in the site specific CEQA document. For example site specific analysis may find that relocating a watershed damaging road may require some removal of rare plant community. The site specific project review would include evaluation of the impacts and creation mitigations as needed. The second change in the text of the Impact Statement would cloud the CEQA process without any insurance of improving conditions.

The DEIR recognizes the importance of protecting rare plant communities. The Management Plan, Chapter III, states that; "JDSF will maintain the current distribution and species of the plant community (pygmy forest) and protect it from harmful human disturbance…"

The REIR, III-38, finds that Alternative G would not result in a significant impact to plant communities, including rare plants in the discussion.

Response to Comment 7
New information is a constant in natural resource planning. If new information on rare plant communities becomes available it would be utilized in subsequent site specific analysis and could be incorporated in forest plan amendments if appropriate. Given the CEQA and THP requirements to use current information, the changes suggested by the commenter do not appear to be necessary.

Response to Comment 8
The comment letter asks for an addition to Impact Sentence 4 referencing one of multiple lists considered in identifying plants considered to be "rare". Alternative G builds on the analysis completed in the DEIR. The DEIR (V6.2-13 &16) describes the lists utilized to formulate the list of Plants of Special Concern. This list included the DFG Species of Special Concern which were queried using Rare Find. The CNDDB (DFG) status will be included in the list presented in the finalIized Forest Management Plan and in ongoing updates. The term "rare" is used generically in the impact statement for clarity and brevity. The addition of text is not necessary, nor would it enhance analysis.

The REIR III-39 lists three aspects of possible significant impacts to rare plants including; potential to reduce the numbers, potential for substantial adverse effects, and potential to restrict the range. Alternative G would not result in a significant impact to rare plants as described in the impact statements.

Response to Comment 9
Alternative G provides additional recognition of the importance of controlling invasive weeds in Goal #2's objective to "Restore conifer forest where early successional hardwoods or invasive plants have become established …." The alternative includes new limits to herbicide use as a result of public input. The public concern regarding specific treatment methods often results in limiting the control of invasive weeds. The plan will include specific direction intended to build trust and move the work on controlling invasive weeds forward.

> In an operational context, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks. JDSF staff will seek opportunities to reduce risk by

> selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions.

The DEIR and Draft management plan lists some potential control measures (DFMP page 65&66). Effective invasive weed management must be ecologically based reflecting the site conditions, environmental concerns, and species present. The best treatments appropriate for the range of conditions at JDSF are not fully established. The most long term effective program would be site specific, build on monitoring and adaptive management, not be limited to specific list.

Response to Comment 10
The concept of a full biological survey of the entire forest is a simple but problematic idea. Surveying almost 50,000 acres effectively for rare plants would require contracting for surveyors beyond JDSF staff or even knowledgeable local botanists. Rare plant information is dynamic, so the surveys would only have value for a limited period of time. Extending this effort to full biological surveys, including the multiple protocols for various species, would make the undertaking more complex. When examined, this concept of a full survey to a complex and dynamic forest would result in information of limited value with a sizable expenditure of funds.

The Board and CAL FIRE recognize the need to improve the biological information for JDSF. Alternative G, Goal 6 includes an objective for improving data collection and making baseline information available. Despite budget and staffing challenges JDSF has built information on rare plant occurrences in the last five years and has recently hired a Biologist. JDSF is compiling biological information incrementally while building expertise and understanding.

A full biological survey of the entire forest is not necessary for the Board to complete the CEQA process. Project specific surveys and the assessment of the potential for cumulative impacts insure rare plants will receive protection. The REIR (III-40) Alternative G found there would be not be a significant cumulative effects to plant species. The DEIR contains a more detailed explanation of the analysis.

Regarding the types of survey, the final plan moves the forest beyond species-targeted surveys. Alternative G changes the direction for botanical surveys to state:

> For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000). On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.

CAL FIRE will continue to provide voucher specimens when appropriate. The comment letter provides no basis for the comment that field survey forms should be turned in to DFG, so the Board is unable to address this comment.

Response to Comment 11
The plans commitment to follow DFG guidelines (see 10) would extend to the surveyor qualifications. The CDFG 2000 guidelines include the following requirements for individuals who conduct surveys:

a. Experience conducting floristic field surveys;
b. Knowledge of plant taxonomy and plant community ecology;
c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
e. Experience with analyzing impacts of development on native plant species and communities.

The surveys on JDSF would be conducted by individuals who have the knowledge of local species and ecology. JDSF staff and consultants have participated in CDFG and CNPS workshops and look forward to the opportunity to do so in the future.

Response to Comment 12
The Board and CAL FIRE recognizes CNPS and others interest and concern for the Pygmy (Cypress) forest. Please refer also to the responses to your February 10, 2006 letter items numbered 12-14, 19, 22-25, 38- 48 for specific concerns.

Response to Comment 13 – 15
Alternative G contains a strict limit on even-age management of 2,700 acres per decade. During the ten year duration of this plan, a maximum of 5.5% of the forest could receive even–aged silvicultural treatments. Selection harvests for uneven-age management vary from fine scale (individual tree removals) up to coarse scale (group openings). Given the radius of a circular 2.5 acre group opening is 186 feet, and that surrounding trees may be that tall, the regulatory designation reflects biotic conditions.

Alternative G includes the following which will additionally direct even-age management and reflect many elements of the working group's recommendations:

> In addition, consistent with the research-driven focus of Alternative G, the extent of the use of even-aged management, at both the project and Forest-wide level, (a) will be tied to the Forest condition it is intended to produce and (b) will be necessary and appropriate to accommodate research investigations either immediately or at a later time. The foregoing constraints do not apply to even-aged management where necessary to address forest health or problematic regeneration conditions. All proposed even-aged management will be presented to the appropriate advisory committee(s) for review and recommendation prior to implementation.

Response to Comment 16
One potential source of confusion regarding research is the understanding of how natural resource-wildland research is conducted. The Caspar Watershed Studies represents a long-term, well-funded study with pre and post-treatment measures, and statistical design with controls. Graduate study and emerging issues often necessitate research be conducted in a much shorter time frame. Meaningful research can be accomplished if a diverse range of stand structures and conditions are present on the forest. For example, floristic changes in even-age stands can be examined by comparing similar sites which received similar treatments at different times. The management plan provides for a diverse range of forest ages and conditions. This will expand opportunities to study the forest at multiple spatial and temporal scales.

The limits on even-age silviculture was addressed in comments 13-15. Sound statistical design often requires replicates or duplicate treatments. The size of the area sampled varies with the attribute measured. Small, immobile and relatively common organisms may be characterized with a few relatively small plots. More mobile organisms such as wildlife or less widely distributed plants would require more extensive areas to be sampled. When studying multiple interactions, the utility of arranging treatments in a landscape context, for example sub-watershed, gains value. Further limits on the amount of even-age silviculture could reduce research quality and quantity.

The EIR has evaluated a range of even and uneven-aged management proposals. The RERI (I-9) describes the finings of the DERI, "as mitigated, would not have the potential to result in significant adverse environmental impacts". It notes the changes from the Alternative G have resulted in a lesser potential for environmental impacts than C1, and in no case would greater impacts occur.

Response to Comment 17

The value of a diverse landscape for research has been described previously. Clearcutting remains permitted by regulation and is used by private timberland owners in the Redwood region and beyond. There is great research and demonstration value in providing for even-age silviculture, with limited clearcuts, along with uneven-age and older forest development treatments at JDSF. This will allow for long term studies in areas that are publicly accessible and logistically simple for to visit, to review and evaluate the range of treatments. With regards to clearcutting the plan limits are:

> Clearcutting is to be conducted only where strictly necessary for purposes of research, demonstration, addressing forest health, or addressing problematic conditions for regeneration; clearcutting for these four purposes is limited to a cumulative maximum of 100 acres (or 0.2 % of Forest area) per decade.

This direction would limit the clearcutting acreage for possible future research utilization. There is the possibility of additional clearcut acreage, but the management plan restricts this as described below.

> Up to an additional 400 acres (or 0.8 % of Forest area) may be clearcut per decade, but only for specific research purposes that cannot be reasonably met through any other method.

Response to Comment 18

The Management Plan has provided for a range of research and demonstration. Some are as simple as first examining the feasibility of new treatments and are documented in Forest Notes and or featured on field trips. This kind of assessment can help define benefits and drawbacks for focused future research. Others research efforts are complex or long term, resulting in peer reviewed journal articles. Demonstrations are important to the public, regulators, and others to further our understanding of forest management and restoration activities. The interaction with both State Forest Research and JDSF-specific advisory bodies will allow for further strengthening of JDSF value for research and demonstration.

GM 18

Mendocino County Farm Bureau

Affiliated with the California Farm Bureau Federation and the American Farm Bureau Federation
Peter S. Johnson, President
Carre J. Brown, Executive Administrator

June 27, 2007

RECEIVED
JUL 02 2007
BOARD OF FORESTRY

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Alternative G, Jackson Demonstration State Forest Management Plan

Dear Members of the Board,

The Mendocino County Farm Bureau (MCFB) is in the process of reviewing the new Alternative G and would like to submit the following comments.

1 MCFB is very interested in seeing Jackson Demonstration State Forest (JDSF) back under active management. After all the years of no operation we hope that the Board of Forestry gives the staff of the forest the necessary and timely guidance and direction to do all the preparatory work needed for a successful 2008 timber sales program. The moving target needs to stop and the staff needs explicit direction.

2 The MCFB is in favor of a local advisory group which will provide a perspective that is needed in management decisions. This group needs to be balanced with all sides equally represented and needs to give advice only. We feel strongly the management decisions need to stay in the hands of forestry professionals.

3 Our information indicates the JDSF grows about sixty million board feet of timber per year. The proposed harvest level in Alternative G is twenty million board feet per year. The Board of Forestry needs to take a serious look at this imbalance of growth and harvest and the resulting scenario over time to determine its potential impact on future research at JDSF.

4 A well supported education effort of public tours, outreach and research reports for the non-professionals can play an important role in the long term stability and public support of JDSF. Unfortunately we see very little emphasis on this in the new management plan and see this as being an important part of the legislative intent that is being ignored. This

303-C Talmage Rd. • Ukiah, CA 95482-6417 • (707) 462-6664 • Fax: (707) 462-6681 • mendofb@pacific.net

is not a problem that is unique to this management plan it is a situation that has existed for years and is in dire need of support and direction.

5 MCFB is supportive of preserving the remaining old growth trees on the forest, and providing good habitat for species of concern. We are not supportive of any attempts to make these the prime goal of forest management. We support the Fort Bragg City
6 Council with their desire to see JDSF produce high quality forest products from trees in the 100-120 year age classes. We feel this can be done with minimal impact to the public trust resources. Much of the concern over a lack of suitable habit in the vicinity should
7 have been eliminated with the acquisition of Lower Big River and its incorporation into park status.

8 Successful land management is predicated on flexibility, JDSF is no exception. MCFB supports giving staff as much flexibility as possible to manage the forest whether it be silvicultural methods or recreational opportunities.

9 MCFB supports getting JDSF back under management, and feels Alternative G is a reasonable place to start, the idea of returning JDSF to its preeminent place as a leader in forestry research has the total support of MCFB.

Sincerely,

Peter S. Johnson, President
Mendocino County Farm Bureau

Mailed Letter GM-18

Response to Comment 1
The Board shares the commenter's interest returning to active management at JDSF, including a 2008 timber sales program. The Board anticipates that necessary actions will be taken in fall 2007 to permit resumption of active management.

Response to Comment 2
The existence and composition of an advisory group does not per se address the potential for environmental impact from management of JDSF. The Administrative Draft Final Forest Management Plan based on Alternative G calls for a JDSF advisory body and establishes number of terms for it, including calling for it to be drawn from a variety of interests. It is not the intent of the Board or the Department that the advisory body will make management decisions, but that it will provide advice and recommendations to the Board and Department. The Board and Department are still completing the details of the development of the advisory body.

Response to Comment 3
The Alternative G annual average harvest level of 20-25 million board feet (MMBF) per year during the first planning period (10 years) does not establish a specific limit on harvesting, but is rather an estimate of how much harvesting is likely to occur, given the goals and constraints of that alternative and the timber stocking level on the Forest. The proposed Administrative Draft Final Forest Management Plan establishes that, given the various management constraints and goals of the Plan, the annual harvest is expected to be in the range of 20-25 MMBF per year and may not exceed 35 MMBF. This goal allows ample harvesting to ensure that JDSF's primary purpose of research and demonstration on forest management will not be thereby constrained.

Response to Comment 4
The Administrative Draft Final Forest Management Plan based on Alternative G places the primary management emphasis on research and demonstration, including for nonprofessionals such as the general public and small forest landowners:

> **Goal #1 - RESEARCH AND DEMONSTRATION:** Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers. (RDEIR Appendix 1, page 1)

Response to Comment 5
The Administrative Draft Final Forest Management Plan based on Alternative G places its primary emphasis on research and demonstration (see response to comment 4). The plan balances forest management and species/habitat protection concerns, as directed by Public Resources Code § 4639:

> "Management" means the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

Response to Comment 6
The Board anticipates that the management approach provided in Alternative G and in the proposed Administrative Draft Final Forest Management Plan, including provisions for managing over one-third of the Forest for older forest conditions, will result in increasing yields of mature timber being harvested over time on a sustainable basis.

Response to Comment 7
Alternative G and the Administrative Draft Final Forest Management Plan based on it contains a number of measures to provide suitable habitat, as enumerated in the DEIR (see section VII.6.6, Wildlife and Wildlife Habitat) and RDEIR (see section III.6.6, Wildlife and Wildlife Habitat). The role of the acquisition of the Big River Unit of Mendocino Headlands State Park in providing habitat over time was recognized in the DEIR. It also bears noting that the Conservation Foundation recently acquired 11,400 acres of the lower Big River watershed. The Conservation Foundation has indicated that it will manage this area similarly to its Garcia River tract, which is managed for a return to ecological and economic viability.

Response to Comment 8
The Board recognizes that CAL FIRE and JDSF managers must have flexibility to manage the Forest. The alternatives addressed in the DEIR and ADEIR are programmatic, not project-oriented, as is the Administrative Draft Final Forest Management Plan based on Alternative G. Hence, the management direction considered for JDSF has provided for substantial flexibility.

Response to Comment 9
The Board's Administrative Draft Final Forest Management Plan for JDSF is based on Alternative G. The Board strongly supports the creation of a world class forestry research program at JDSF.

7.10.07
GM-20

Mr. George Gentry
Executive Director
State Board of Forestry and Fire Protection

Gentlemen:

1 As a member of a coastal group of bicyclist, and as part of a coastal community that uses Jackson state forest for recreation, I urge the Department of Forestry to recognize and keep open our forest roads and trails. These named and unnamed trails are continuously used by hikers, walkers, joggers, birders, mushroom pickers, bicyclists, equestrians and pick nickers. We all value these trails greatly and consider them a very important part of our neighborhood. These roads give us access to great vistas, wonderful forest sanctuaries and hours of enjoyment.

The East Casper section of road 500 which travels some 8 miles south-easterly to connect to Little Lake Road 408 is the access point to roads 508,510,511,512, 513, 600 and consequently to roads 450 and 400 and the popular parallel paths along and around road 500. All of these roads see year round use.

Road 600, which drops into the Caspar Creek watershed with its beautiful stand of old growth redwoods, leads to roads 630 and 640 which both allow riders to climb up to toad 408 again and then south on 408 to the area called the Mendocino Woodlands.
The Woodlands is a network of hiking and biking paths; The Manley Canyon trail, the Forest History Trail, The Observatory trail all lead into the campground area and road 730. This area is heavily wooded and steep. We have worked routinely to keep the paths clear of fallen trees and
2 have installed many water bars and a few foot bridges. We are interested in working with C.D.F. in maintaining the integrity of these trails and keeping them open and not eroded. As a club we spent one day last summer rebuilding and redirecting the Camp -One Loop, at Camp-One.

The area around Camp One and the Egg-taking station and the day use activities of these area trails are also very important to the public. The camping areas are surrounded by roads and trails, from the Equestrian trail to the Camp-One Loop to roads 360,361,380,381,330,300 and up to Road 1000. Road 300 is an easy route form Fort Bragg to the Egg-taking station and road 330 will allow you to travel from the Egg-Taking station on to road 200 and the Chamberlain Creek day use area. Riding along road 330 will takes you past ancient redwoods and turn of the century railroad trestles, past Indian Springs, and along hillside meadows. One can easily ride safely from Chamberlain Creek to Fort Bragg in an afternoons time.

1 Cont.

The Chamberlain Creek area and its primary road 200 harbor many unnamed trails [Pepe-le-pew] and roads 240 and 250 gives access to many bike and equestrian trails. Also south of Hwy 20 lie roads 800 and 810 which will take one to the very limit of Jackson State Forest., and on to Two Rock and it's nest of falcons at 2700 feet.

3 All of these areas are much used on warm weekends and we encourage more. To have a 50,000 acre State Forest in our community with its dedicated public use is an advantage to our

community that few other communities have. I believe that having access to these trails and
3 keeping them maintained is a necessary part of our extending invitations to neighboring
communities to visit and use our State Forest. If tourism is to be realized by our community then
Jackson State Forest can play a leading role in helping to achieve that and we, as the Mendocino
Coast Cyclists, would like to assist C.D.F. in that purpose.

Sincerely yours

Stan Miklose

Mendocino Coast Cyclists

Mailed Letter GM-20

Response to Comment 1
The Board concurs that the management of the Forest should include a continued and expanded program for recreational trail development and maintenance. This is an element of the ADFFMP that the Board has approved.

It is likely that the trail system will be expanded, but also possible that some road or trail segments that represent a threat to watershed resources may be eliminated or bypassed in order to prevent significant impacts. This may have a minor and insignificant effect upon the overall availability of recreational trails.

The Board notes that most of the individual roads identified by number are open for recreational use, though one or two have been decommissioned and no longer have a running surface suitable for motorized vehicles and perhaps bicycles. Currently, all roads and trails open for foot traffic may also be utilized by cyclists and equestrians. No motor vehicles are allowed on trails, and unlicensed motor vehicles are not allowed within JDSF.

Response to Comment 2
The Board and Department support the idea of joint trail planning and maintenance. The Department will begin a process of meeting and consultation with local recreational user groups, including cyclists.

Response to Comment 3
The Board also supports an increase in recreational opportunities within the Forest.

GM-21

Marc Komer
17400 Shafer Ranch Rd.
Willits, CA 95490

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Limit clearcuts in Jackson State Forest

July 4, 2007

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them. Twenty-one million board feet per year of lumber production is unacceptable.

FL9 I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

1 Mendocino County Supervisors Pinches and Delbar publicly expressed disapproval of Measure G because of the proposed reduction of historic quantities of logging in Jackson Forest. I believe these supervisors do not represent current reality. In the past, Jackson Forest produced large numbers of logs because it was not sustainably logged, and is now depleted.

Now is the time to manage the forest for restoration, and perhaps in the future it can be re-harvested for production. In the meantime, the forest's best use is for research, recreation, demonstration and preservation.

Sincerely,

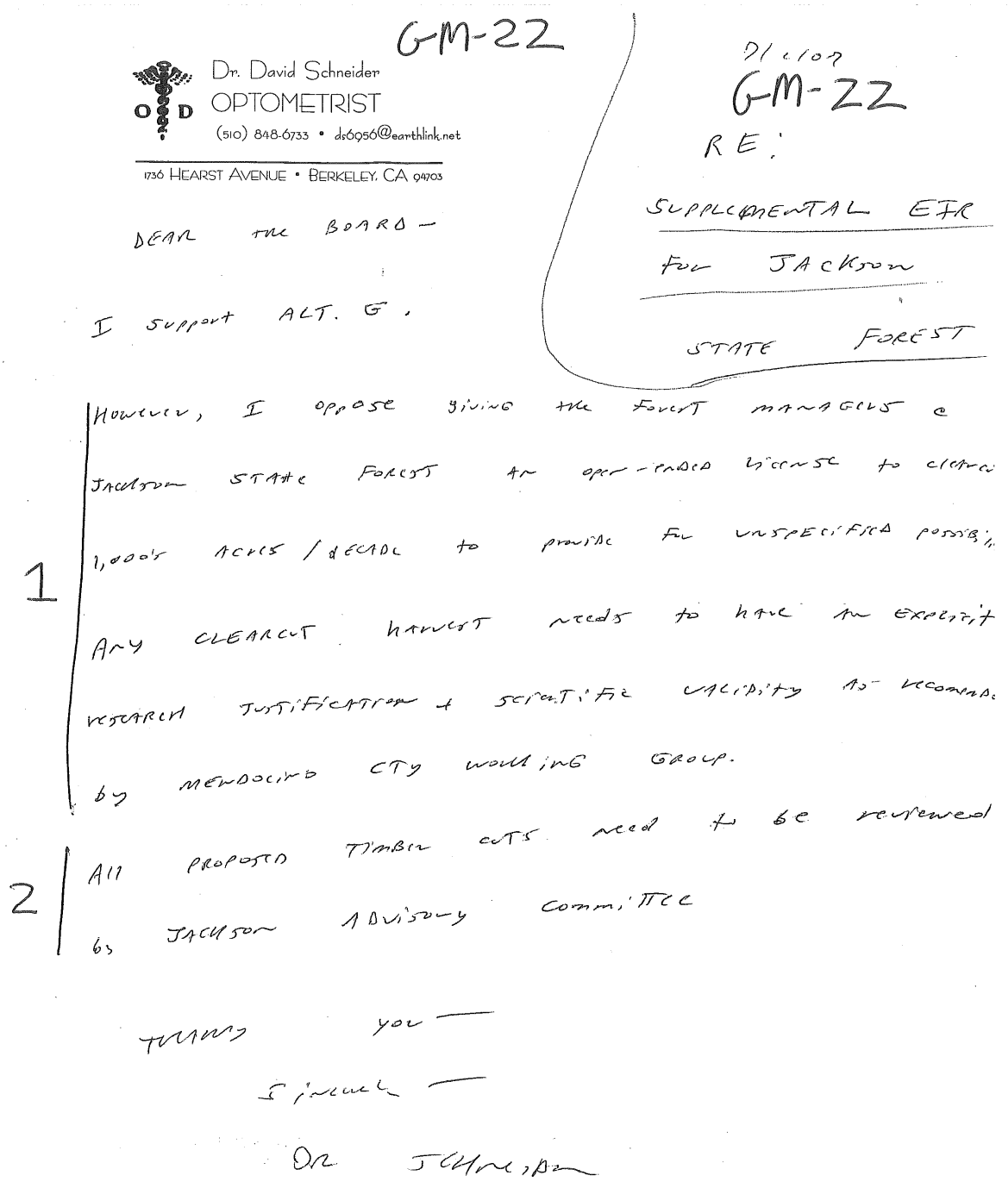
Marc Komer

Mailed Letter GM-21

An identical letter was received from Robin Goldner (GMF-5). The following serves to respond to both letters.

See Response to Comment Form Letter 9

Response to Comment 1
At the time of purchase JDSF was in a largely cut over condition with relatively low stocking. By practicing sustainable forestry and harvesting less than growth, the current standing inventory exceeds 40,000 board feet per acre. The comment that JDSF "is now depleted" is not supported. The estimated harvest level under the ADFFMP is 20 to 25 million board feet annually with a long term sustained yield (LTSY) of 56 million board feet annually (see RDEIR Table III.7).



GM-22

Dr. David Schneider
OPTOMETRIST
(510) 848-6733 • ds6956@earthlink.net
1736 HEARST AVENUE • BERKELEY, CA 94703

DEAR THE BOARD —

I support ALT. G,

However, I oppose giving the forest managers a Jackson state forest an open-ended license to clearcut 1,000's acres / decade to provide for unspecified possibly Any clearcut harvest needs to have an explicit research justification & scientific validity as recommended by Mendocino Cty working Group.

1

All proposed Timber cuts need to be reviewed by Jackson Advisory committee

2

Thanks you —

Sincerely —

Dr Schneider

GM-22

Dixon

RE:

SUPPLEMENTAL EIR

for JACKSON

STATE FOREST

Mailed Letter GM-22

Response to Comment 1
See General Response 10.

Response to Comment 2
See General Response 18.

about:blank

GM -23

June 27, 2007

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Subject:
Jackson State Forest Alternative G

Dear Members Board of Forestry,

1 I would like to urge you to not allow clear cutting in Jackson Forest at all unless it is done with a very specific plan and purpose that is approved by the advisory committee. When our children were young we spent very happy stays in the forest and loved the unspoiled redwoods that are the last remaining
2 truly large stand. It is the only such large forest left and these ancient trees should not be cut for fast
3 money from their wood. Please conserve this beautiful area as it is for future generations. As our population continues to grow we will need this oasis of wilderness more and more.

4 I have read that areas in cities that have trees are much less subject to crime and violence that areas that do not have trees. It is clearly of benefit for humans to have natural areas for health and sanity. We need to keep this forest as close to how it is as a very precious resource that is truly irreplaceable.

I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

FL 9 However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

Sincerely,

Ellie Gioumousis
992 Loma Verde Avenue
Palo Alto CA 94303

6/28/2007 4:35

Mailed Letter GM-23

See Response to Comment Form Letter 9

Response to Comment 1
See General Response 10 and 18.

Response to Comment 2
The ADFFMP does not propose cutting ancient trees. See General Response 8.

Response to Comment 3
See General Response 15.

Response to Comment 4
This comment is beyond the scope of the JDSF EIR process. See General Response 2.

1430 Cedar St., Fort Bragg, CA 95437...July 7, 2007

GM-24A

Board of Forestry
P. O. Box 944246
Sacramento, CA 94244

Dear Board members:

It's nearly impossible for the interested layperson to track the phases of EIRs for various public projects. But in response to the June 1, 2007 notice regarding Jackson Demonstration State Forest I will enclose a copy of my original letter of comment dated June 29, 2002.

I will also use this occasion to relate a relevant personal experience: Over the course of many seasons another retired volunteer and I eradicated with hand tools Pampas grass in the dunes secton of McKerricher State Park where we continue to follow up for seedlings. During that period we observed a paid crew attempting to control European dune grass which was said to threaten the snowy plover. European dune grass is a perennial which propagates via rhizones which draw moisture deep in the sand. Responding to opposition to the use of herbicides by a small group of vocal environmentalists only hand tools were employed. The last time I encountered the crew two years ago they said they were futilely digging the same areas for the 13th time. More recently I heard that during a local public meeting the park service belatedly announced after hundreds of thousands of dollars of wasted effort that herbicides were going to be employed on the dune grass. At that or at another meeting it was also announced that herbicides would be used on severe infestations of gorse in the Caspar area.

Is there a lesson here for JDSF? There is much evidence that in our so-called "democracy" public officials are reluctant to articulate the trade-offs involved until too late in many social and economic as well as environmental issues when rigid ideological groups may be aroused. This was covered in no-nonsense articles in the Mar-April '97, page 23, and June '03, page 73, Audubon magazine by the respected environmental writer, Ted Williams. As you must know, the California Invasive Plant Council, 1442-A Walnut St. #462, Berkeley, CA 94709, publishes a regular science based journal on the subject.

In haste,

Richard Van Alstyne

Richard Van Alstyne

(over)

1430 Cedar St., Fort Bragg, CA 95437...June 29, 02

Christopher Rowney, CDF
P. O. Box 944246
Sacramento, CA 94244

GM-24B

Dear Mr. Rowney:

In regard to the Jackson Demonstration State Forest EIR, I will confine my comments to the one important aspect of management where I have extensive experience.

I am most concerned with the proposal, if any, for control of so-called invasive exotic species. In my view, this should be given top priority. If you are knowledgeable about this subject you know that the rapid spread of exotics is considered by experts to be second only to human development activity on environmental degradation. An example for action, now belated at best, must be set by resolute public lands managers.

This position is offered without direct reading of the draft EIR but rather from considerable experience of dealing with public officials and voluntary work on public lands. Evidence of my participation is to be found in the enclosed papers.

I do not ask that a copy of the draft EIR be sent to me, but I would appreciate knowing the wording of the section, if any, which deals with exotic species control.

Very truly yours,

Richard Van Alstyne

Mailed Letters GM-24A and -24B

Response to Comments
Both letters focus on the importance of addressing invasive species in the management of JDSF.

The ADFFMP places a high priority on controlling invasive species and provides the flexibility needed for managers to address this issue. This includes the use of herbicides as part of an Integrated Weed Management program (see General Response 7). The Management Plan includes as part of Goal 2 the objective to minimize the influence of invasive exotic plants and animals. Jackson Demonstration State Forest is a partner in the Mendocino Coast Cooperative Weed Management along with State Parks and other concerned groups and agencies.

GM 25

CALIFORNIA LICENSED FORESTERS ASSOCIATION

P.O. Box 1516 Pioneer, CA 95666
phone· 209.293.7323 fax· 209.293.7544
email· clfa@volcano.net web· www.clfa.org

July 16, 2007

Mr. George D. Gentry
Executive Officer
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Reference: Comments on Jackson Demonstration State Forest DEIR Alternative G

Dear Mr. Gentry,

Jackson Demonstration State Forest (JDSF) in Mendocino County is of critical importance to the sustainable practice of forestry in our Golden State. CLFA has reviewed the *Recirculated Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan Alternative G (Recirculated Draft).*

1 In a letter dated January 28th, 2006, we commented on the earlier *Jackson Demonstration State Forest DEIR (DEIR)*, which included Alternatives A through F. We encouraged the Board to select Alternative C1. Our 1/26/06 correspondence made substantive points with regard to JDSF and we believe those points remain fully valid and compelling. The letter is posted on our website at http://www.clfa.org/whats_new.htm, and a copy is also attached.

2 Although we still support Alternative C1, we believe that some features of the new Alternative G deserve favorable consideration, while others do not.

The following analysis of Alternative G is additive to our previous comments. We hope these combined letters will be helpful to the Board as it weighs final decisions and acts to set JDSF on course for a more productive and socially beneficial future.

Alternative G, Areas of Conceptual Agreement

3 CLFA sees merit in portions of Alternative G. These include its emphasis on "Management with a Research-Driven Mission." We also support the concept of an advisory committee focusing its efforts exclusively on JDSF, although we have specific concerns about this which are expressed below.

4 CLFA also supports the establishment of an Older Forest Structure Zone, as proposed. We believe that this provision has potential research benefits and represents a compromise land allocation that may reassure past opponents of JDSF forest management that their voices have been heard in the current planning process. In endorsing this new land allocation, CLFA recognizes that the annual harvest level projected under Alternative C1 will need to be adjusted downward, but we do not see the level declining by greater than 4 MMBF (Million Board Feet).

Alternative G, Areas of Possible Concern

5 1. **Reversal of Priority Ranking:** CLFA strongly opposes placing "Forest Restoration" above "Timber Management" as goals proposed by Alternative G[1]. We recognize, however, that both terms have value and can be compatible objectives on the ground.

6 **2. Advisory Committee:** While supporting the JDSF Advisory Committee in concept, CLFA requests that the Board exert diligent oversight, including explicitly requiring its consent for all Committee appointments. In addition, we caution against any implicit endorsement for a "home or local rule" concept, as JDSF is a state forest and state-level research and demonstration objectives are paramount.

7 **3. Annual Harvest Level:** Alternative G projects an 11 MMBF harvest reduction when compared to Alternative C-1. The *Recirculated Draft* blandly states, "A reduction in annual harvest is also expected to result in a modest reduction in forest products, jobs, taxes, and revenue."[2] This statement contradicts the *DEIR's* own analysis[3], which estimates that a harvest reduction of 10 MMBF would have direct and indirect impacts to wage earners, local and state government of ***$9.6 million***. Therefore, an 11 MMBF reduction can be expected to forgo ***$10.5 million, every year.*** *Is that a "**modest reduction**"?*

8 JDSF is estimated to be growing 60 MMBF of wood fiber annually[4]. Harvesting only 33% of growth does not strike a responsible balance between JDSF's statutory scheme, its expressed mission and important environmental constraints. The more that sustainable timber harvest is suppressed at JDSF, the smaller the pool of resources that will be available to maintain and restore local and regional infrastructure, staffing, research and numerous other potential public benefits.

9 As previously stated, we accept that the harvest level called for by Alternative C-1 should be modestly adjusted downward. However, we believe this should be nowhere near the 35% harvest decline specified under Alternative G.

10 **4. Interim Harvest Limitations:** Under this provision, the Board is asked to sanction a harvest resumption scheme that postpones any final resolution of the controversy which has crippled JDSF for many years. In fact, given the intractability exhibited in the past by some JDSF opponents, it just may not be "in the cards" that a 100% consensus management approach is possible.

CLFA invites the Board to weigh carefully its direction with regard to this proposal. Management must not be allowed to resume at JDSF only to be disrupted once again in two or three years if the interim arrangement fails to deliver the promised transition.

---

[1] See *Recirculated Draft,* Pgs I-3&4.
[2] *Recirculated Draft,* Page II-16.
[3] See Table III.13 Employment and Revenue Effects of Various Timber Harvest Levels, *Draft Environmental Impact Report for the Jackson Demonstration State Forest Management Plan, Volume 1A,* December, 2005, Page III-55. Of particular interest is a comparison of a 20 MMBF with a 30 MMBF harvest level.
[4] Statement of Dr. Helge Eng, CAL FIRE, before the Board on July 11, 2007.

We also note that none of the proposed interim THPs utilize an even-age silvicultural system and that even group selection is excluded during the initial implementation period. Also, trees greater than 30 inches in diameter are given a special
11 status, when in fact young growth redwood trees may attain such dimensions on Site II land in just a few decades. Alternative C-1 with the addition of the Older Forest Structure Zone provides high levels of protection for old growth and late seral values. The ecological benefits, if any, of additional protections based on tree diameter or so-called "older young growth" are outweighed by their economic and social costs.

5. **Carbon Sequestration:** The *Recirculated Draft* estimates that Alternative G will sequester more carbon dioxide than Alternative C1[5]. CLFA is concerned that in the
12 current political climate, this estimate could be given more weight than it deserves. We encourage the Board or other interested parties to analyze the data that went into these estimates, recognizing that the science of estimating forest carbon sequestration is relatively new, unsettled and evolving.

Thank you for the opportunity to provide additional professional perspective on
13 the future of JDSF. CLFA hopes that our contributions are helpful as you deliberate and decide upon an exciting new direction for this unique and extremely valuable public asset.

Sincerely yours,

Chantz Joyce

Chantz Joyce, RPF #2753
President

Cc: Mr. Stan Dixon, Board Chairman and Members.
CLFA Board of Directors.

Enclosure: CLFA JDSF DEIR Comment Letter dated January 28, 2006.

The California Licensed Foresters Association, with a membership responsible for the sustained management of millions of acres of California forestland, represents the common interests of California Registered Professional Foresters. The Association provides opportunities for continuing education and public outreach to its membership, which includes professionals affiliated with government agencies, private timber companies, consultants, the public, and the academic community. Governed by an elected Board of Directors, CLFA was established in 1980 after the passage of the landmark California Professional Foresters Law.

[5] *Recirculated Draft*, Page III-160.

Mailed Letter GM-25

See also Response to Comment Mailed Letter P-6

Response to Comment 1
Please see the separate response to this letter of comment (comment letter P 6) on the 2005 DEIR.

Response to Comment 2
Comment noted.

Response to Comment 3
Comment noted.

Response to Comment 4
The Board agrees that the Older Forest Structure Zone (OFSZ) offers important research benefits at the same time as it offers benefits of protecting existing old-growth groves and restoring an extensive, connected area of older forest conditions.

The RDEIR (Table II.4, p. II-28) estimates that Alternative G would result in an anticipated annual average harvest of 20-25 million board feet (MMBF) per year during the first 10-year planning period. This reduction in estimated harvest, as compared to Alternative C1, is a result of a number of factors, including: creation of the OFSZ, designation of an additional 1,549 acres for late seral forest development to recruit Marbled Murrelet habitat in the Russian Gulch/Lower Big River area of JDSF, limitations on the use of even-aged management. This range represents an estimate that might be subject to change with direct experience in implementation of Alternative G.

The proposed Administrative Draft Final Forest Management Plan (ADFFMP) establishes that, given the various management constraints and goals of the Plan, the annual harvest is expected to be in the range of 20-25 MMBF per year and may not exceed 35 MMBF.

Response to Comment 5
The Board believes that the ADFFMP based on Alternative G provides an appropriate balance between restoration and management activities, as directed in the Public Resources Code, as well as the articulation of the Goals and Objectives for the Plan.

The Public Resources Code (section 4639) provides the following direction on management of the Demonstration State Forests, including JDSF:

> "Management" means the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

The first Goal established in Alternative G and the ADFFMP based on it, “Research and Demonstration,” includes “economic forest and timber management” as a key element (see RDEIR Appendix 1). Goal #2, Forest Restoration, recognizes that active management is to be used to achieve the restoration goal and objectives and that forest productivity is to be promoted and enhanced.

The Board has significant discretion in balancing forest management and timber production with “values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.” The Board believes that the ADFFMP provides an appropriate balance between these elements. Based on the analysis contained in the DEIR, RDEIR, and FEIR, the proposed management of JDSF would provide substantial protection of and benefits to recreation, watershed, wildlife, fisheries, aesthetic enjoyment, research, and demonstration, while at the same time including significant levels of timber management and harvest.

Response to Comment 6
The existence and composition of an advisory group is not per se related to the potential for environmental impact from management of JDSF. The ADFFMP provides partial direction for the establishment of a JDSF advisory body. The Board and Department are committed to establishing an advisory group and are currently taking steps to do so. The Board recognizes that the appointment process for the advisory group and its oversight are both very important to the group's success. The Board concurs that the composition of the advisory group must reflect that fact that JDSF is a State forest that must serve state-level research and demonstration needs.

Response to Comment 7
The RDEIR (Table II.4, p. II-28) estimates that Alternative G would result in an anticipated annual average harvest of 20-25 million board feet (MMBF) per year during the first 10-year planning period, or a reduction of 6-11 MMBF/year as compared to Alternative C1. A key purpose of the CEQA process is to compare the differences in potential outcomes of the various alternatives examined. Alternative G's reduction of 6-11 MBF/year from Alternative C1 is modest in comparison to the estimated reduction of 23 MMBF/year under Alternative E.

The proposed Administrative Draft Final Forest Management Plan establishes that, given the various management constraints and goals of the Plan, the annual harvest is expected to be in the range of 20-25 MMBF per year and may not exceed 35 MMBF.

Response to Comment 8
See responses to Comments 4 and 5. As noted above, in the proposed ADFFMP, the annual harvest is expected to be in the range of 20-25 MMBF per year and may not exceed 35 MMBF. This range of potential annual harvest represents a range of 36 to 63% of the anticipated long-term sustained yield of 57 MMBF/year under the proposed Plan.

Response to Comment 9
See responses to comments 4, 5 and 8.

Response to Comment 10
The ADFFMP under consideration by the Board does include the initial implementation period limitations. The Board and Department are committed to ensure that the proposed advisory body and other process elements of the initial implementation period result in a smooth return to active management at JDSF, as well as a smooth transition from the initial implementation period to on-going long-term management.

Response to Comment 11
The ADFFMP allows for evenaged management research projects on the Caspar Creek experimental watershed. Section 2 of the short-term harvest schedule (see Table 9 in the ADFFMP) allows for group selection, provided there is review by appropriate advisory bodies.

Response to Comment 12
Carbon sequestration potential is just one of the many important factors that the Board has considered in providing management plan direction for JDSF. The Board recognizes the great potential for research at JDSF to help further the science and resolve uncertainties regarding forest management and carbon sequestration.

Response to Comment 13
Comment noted.

GM-27

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Members of the Board,

We of the Napa Sierra Group would like to extend our congratulations to the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. We along with Sierra Club Redwood Chapter and other regional Sierra Club groups support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment. FL9

However, we are in agreement in strongly opposing giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

The November 2006 report from the Jackson Forest Working Group, is a model of collaboration and consensus recommendations. The JFWG presented a working plan to be implemented in a few phases, which would ensure a healthy and protected forest. Vince Taylor, who was a member of the working group recently wrote and quoted that the working group recommended that clearcutting and other even-age management be limited to, ***"well justified research projects and as necessary to promote stand health. The size and scope of these projects should be no larger than the minimum needed for scientific validity."*** 1

We therefore cannot support Alternative G as it is currently presented. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group.

The introduction of a public advisory committee who will work alongside the forest managers during this interim period of Alternate G is a welcomed aspect in truly developing a long-range landscape and management plan. FL9

To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

It appears that after years of conflict over this public forest a mutually agreed process and plan are close to being achieved. In order to continue the fine working relationship that the Mendocino Group started, please make the requested changes to Alternate G. This was one of their key intents. Thank you for your support.

On behalf of Napa Sierra Club.

Marc Pandone
Executive Committee

Mailed Letter GM-27

See Response to Comment Form Letter 9

Response to Comment 1
While the recommendations of the Mendocino working group have been carefully considered by the Board, the management plan is not based solely on their recommendations.

GM-28

Public Comment from: The Old Growth Organization
P. O. Box 4225
Arcata, Ca. 95518

To: Board of Forestry and Fire Protection
P. O. Box 944246
Sacramento, Ca. 94244-2460

Concerning: Jackson State Forest
DEIR of June 1, 2007

Please, file this letter for public comment concerning Jackson State Forest and the DEIR of 6/01/2007.

Dear Sir or Madam:

I am writing you because of my concern about Jackson State Demonstration Forest, (JSDF), and the proposed DEIR of June 1, 2007. Please, consider my opinion, which is shared by hundreds of other environmentalists, concerned citizens, scientists, Congressional Representatives, educators and local residents living within Mendocino and Humboldt County.

1 The DEIR of 6/01/2007 is unacceptable, in its present form, because it does not develop or incorporate any of the alternatives, suggestions or recommendations made by environmentalists, which were made during periods allocated for public comment, over the last several years.

These suggestions have included that Jackson State Forest be developed to demonstrate additional uses for the forest, along with the development of alternative forest products, to allow a shift towards sustainable, long-term forest management, with a goal of conservation and protection of our precious natural resources and wildlife, to preserve them for our future.

2 The only alternative developed by the DEIR of 6/01/2007 is Alternative G. The "Notice of Availability, Recirculated Draft Environmental Impact Report" which accompanies this DEIR clearly states that, "This Recirculated DEIR addresses only the incorporation of another alternative to the original DEIR." Therefore, this DEIR is unacceptable, because it does not incorporate any of the suggestions and recommendations made by the public, if they were from an environmentalist's perspective. Alternatives besides Alternative G need to be developed, described and incorporated fully by the DEIR of 6/01/2007, or it should be considered deficient. The public needs to know the estimated environmental impacts of these various alternatives, before a meaningful decision can be made. Therefore, an acceptable DEIR should contain several fully developed alternatives which incorporate the suggestions of

3 thousands of environmentalists, including: 1. A ban on clearcutting, 2. Protections for

3 ct'd areas of the forest, to allow the forest to mature into a cathedral rainforest, complete with an intact canopy and thousands of Old Growth trees of various species, 3. Protections for the watersheds of the forest, to allow them to recover from the damage and destruction caused them by over a hundred years of clear cut logging, including both steam donkey logging, (which made skid rows of many of the forest's creeks and streambeds in the dry summer times of decades past) and tractor logging, (during which bull dozers pushed debris into creeks and streambeds, making roads across the creeks and streambeds at will, and destroying much of the priceless salmon habitat of the forest), and 4. Protections for the endangered species which make their habitats within the forest.

4 Additionally, the following main points should be included into any DEIR which is approved and developed into the future management plan for Jackson State Forest. Thus, the DEIR should be rewritten, to incorporate as many of the features, suggestions or recommendations, made by the public, as is possible, including all of the following:

5 1.) Long-term management and conservation measures should be incorporated into the DEIR for JSDF, which include the development of more ways to demonstrate educational, fire protection and research uses of the forest. More recreational uses for the forest should also be developed, with improved camping and hiking trails developed within the next few years. New camp grounds, showers, fire pits, parking and other recreational facilities should be developed, and these plans should be included as additional uses for JSDF.

6. 2.) The new DEIR should be long-term and comprehensive in its perspective, and be designed to achieve conservation goals for JSDF, over the long-term. A comprehensive DEIR should contain many of the features suggested by the concerned citizens and environmentalists of this area which should be fully detailed and described in the DEIR, complete with maps, tables and other relevant information needed for the consideration of the various proposals for the forest's future.

7. 3.) A large area of the forest should be set aside as a protected area, perhaps 9,000 acres or more, allowing it to develop into a fully mature, cathedral forest, complete with a high intact canopy which will protect the forest floor from erosion, which will in turn protect the tributaries and aquifers of the forest from siltation and sedimentation. This large protected area could be used by educators, environmental scientists, researchers, and fire prevention experts, to demonstrate their theories. Climate change could be effectively managed over the long-term, utilizing this method of providing environmental protections for large areas of the forest, while prohibiting clearcutting throughout the forest.

8 4.) Other areas of Jackson State Forest could be designated as demonstration areas for the development of new forest products which could be harvested sustainably from the forest. These new forest

2

products include pulp, firewood, poles, green mulch, dry mulch, along with the development of a mushroom harvest, hunting areas and fishing areas.

9 5.) Clearcutting should not be allowed in JSDF. It is extremely important to protect Jackson State Forest and allow it to recover from over a hundred years of environmental exploitation, degradation, and destruction. Therefore, all clearcutting should be banned from JSDF, to protect its critically important watersheds and its dependent endangered species.

10 6.) Additional, long-term wildlife and forest management plans need to be developed, which will protect the valuable natural resources and endangered species which live in, or are located within, Jackson State Forest.

11 7.) Fire protection measures should be developed for JSDF, including the systematic removal of combustible materials from the forest, which could include a tree thinning harvest, along with the removal of undergrowth. Fire prevention measures could also include the construction of "watch towers" and water reservoirs throughout the Mendocino Coastal Range, wherever they are needed. These fire prevention activities could be managed from and centered around Jackson State Forest and its firefighters, who are composed of both CDF Firefighters and CDC inmates. This labor force could be used to demonstrate both the implementation of fire prevention measures and the sustainable harvesting of at least two new crops, green pulp and poles, thereby generating revenue for the state.

12 8.) The new DEIR should include plans for the acquisition of further lands. Additional lands which lie adjacent to JSDF will become available at unknown dates in the future, and many of these adjacent lands are important for the management of the forest, along with the restoration of critical aquifers and watersheds which lie within the forest. For example, there may be adjacent lands which should be acquired so that the watershed for James Creek would lie wholly within the boundaries of the JSDF.

13 9.) Additionally, the boundaries of the forest need to be properly surveyed and marked, to protect the integrity of the forest, while also protecting the valuable natural resources which lie within the boundaries of the forest.

In conclusion, please refer the DEIR of 6/01/2007 to be rewritten, to include additional supplements, recommendations and suggestions made by the many concerned citizens of this area who made public comment, including

3

environmental scientists, educators and some of the most prestigious Congressional Representatives from our state. In its present form, the DEIR of 6/01/2007, including the development of Alternative G, is unacceptable.

Thank you,

Sincerely,

James D. Smith
Founder, The Old growth Organization

7/13/2007

4

Mailed Letter GM-28

This response also serves to respond to RDEIR comment e-mail EC-94 which contained the comments on the same issues.

Response to Comment 1
The Board has received public input from hundreds of individuals over the course of the past several years. The alternatives considered cover a broad range and combination of forest management, resource protection, and restoration, including many management aspects that have been suggested or supported by individuals and organizations concerned about environmental protection.

Each of the alternatives considered, including Alternative G, include the demonstration of a wide variety of forest uses, including a range of forest products, and long-term sustainable forest management. One of the primary goals for forest management, as stated in the RDEIR, is protection and restoration of forest resources and native wildlife species and their habitats, both now and in the future.

Response to Comment 2
The DEIR included consideration of several alternatives. The RDEIR incorporated an additional alternative (Alternative G), which includes provisions and ideas taken from several of the other alternatives. This has been an appropriate and legal assessment process. The potential environmental effects associated with the alternatives have been considered and disclosed.

Response to Comment 3
Mr. Smith states than an "acceptable" DEIR should include a ban on clearcutting, protection for areas of the forest to allow old forest to mature, protection of watersheds, and protection for endangered species. As provided by Alternative G, no significant impacts are expected to occur. Although Mr. Smith has not indicated a specific environmental concern related to the use of clearcutting, clearcutting will be minimal, primarily associated with research. Additionally, a significant portion of the Forest will be managed to produce forest with late seral characteristics (RDEIR Table II.1). Over one-third of the Forest will be included in either a watercourse and lake protection zone, an old-growth grove, older forest structure zone, or late seral development area. These areas will be managed to produce large trees and a high level of canopy, consisting of trees of many species. The management of the Forest will incorporate provisions for protection and restoration of watersheds, partially in recognition of damages that resulted from historic logging operations (DEIR Sections VII.10 and VIII.4).

Another important provision of the EIR is long-term protection of endanged species and their habitats, including provisions for development of habitat for species that are associated with old forest (DEIR Section VII.6.6 and RDEIR Alternative G).

Response to Comment 4
The writer requests that the DEIR include several provisions (see responses below), but does not express an environmental concern in many cases.

Response to Comment 5
The writer requests that long-term management and conservation measures be incorporated into the DEIR. The DEIR is intended to consider the potential environmental effects of long-term management. The management plan incorporates long-term management and conservation measures. The writer requests that the DEIR include more ways to demonstrate educational, fire protection and research uses of the forest. This request is acknowledged. The management plan is dynamic, and can be adjusted or amended to include many educational, fire protection, and research uses of the forest, as long as the potential environmental effects of these practices are considered. The management plan and EIR may be amended in the future, should management measures with potential environmental effects be considered for incorporation. The Board acknowledges the writer's

request for more recreational uses of the forest, many of which are currently proposed (DEIR Section VII.14).

Response to Comment 6
The writer states that the DEIR should be long-term and comprehensive, designed to achieve conservation goals over the long-term. In fact, the EIR is both long-term and comprehensive, and is intended to achieve long-term management and restoration goals (DEIR Section VII.6 and 10). The writer states that the DEIR should include maps, tables, and other relevant information. These are elements of the current document (see DEIR Appendices for examples).

Response to Comment 7
The writer proposes that 9,000 acres or more of the forest be set aside as a protected area to provide protection of the forest floor and other watershed resources. The forest floor and watershed resources will be protected through implementation of the management plan, and no significant impacts are expected to occur (DEIR Section VII.10). The writer further states that climate change would be effectively managed. While the later concern is unclear, the potential impacts of forest management upon carbon sequestration and greenhouse gas production has been considered (DEIR Section VII.16). Climate change cannot be effectively managed alone through forest management or an absence thereof.

Response to Comment 8
The writer proposes that areas of JDSF be designated as demonstration areas for the development of new forest products that could be harvested sustainably. The products listed by the writer include pulp, firewood, poles, green mulch, dry mulch, and development of mushroom, hunting, and fishing areas. The Forest currently demonstrates sustainable use of many of these products. Fishing is regulated by the Department of Fish and Game. Currently, no fishing is allowed within JDSF, due to the presence of juvenile salmon and steelhead, and due to the fact that most JDSF streams are considered to be important spawning and rearing habitat for these species. The writer's suggestions are acknowledged.

Response to Comment 9
The writer states that clearcutting should not be allowed, and infers that clearcutting would prevent recovery of watersheds and endangered species. Significant impacts associated with clearcutting are not expected to occur. Clearcutting will be restricted to a small acreage each decade (RDEIR Alternative G, Page II-9). Where utilized, a number of measures and provisions will apply in order to protect watershed and wildlife resources. For example, streams will be protected by broad protection zones. Harvesting on steep slopes will be conducted by cable yarding machines, which prevents excavation and retains abundant soil cover. Clearcut unit sizes are limited by the Forest Practice Rules. Prior to implementation of harvesting, potential habitat for endangered species will be surveyed (e.g. marbled murrelet, northern spotted owl, endangered plants). If endangered species are found, harvesting is either deferred or modified to prevent significant impacts to those species. Please see DEIR Sections VII.6.6 and 10 for the assessment of potential impacts to wildlife and watersheds resources associated with harvesting.

Response to Comment 10
The writer suggests that additional wildlife and forest management plans need to be developed. The current planning process includes the development of a forest management plan and assessment of potential environmental effects associated with the management plan.

Response to Comment 11
The writer suggests that various fire protection measures be developed and demonstrated for JDSF, to include revenue generated from sustainable harvesting of green pulp and poles. These suggestions are acknowledged. Similar measures have and will be considered during management of the Forest. Please see DEIR Section (cite) for a discussion of fire prevention.

Response to Comment 12
The writer states that the DEIR should include plans for acquisition of additional land. This suggestion is acknowledged.

Response to Comment 13
The writer states that the boundaries of the Forest should be surveyed and marked in order to protect the integrity of the forest and it's natural resources. In fact, most of the Forest boundary has been surveyed, and survey monuments exist along the borders. The borders lines are periodically refreshed by both the Department and adjacent landowners when management activities are implemented that approach the property lines. The Forest Practice Rules include a notice requirement when timber operations are proposed in proximity to property lines. The incidence of cross-border encroachment or incidental damage to JDSF by adjacent landowners is extremely infrequent. Significant impacts associated with survey and property line marking are not expected to occur.

GM-30

RECEIVED BY
JUL 16 2007
BOARD OF FORESTRY
AND FIRE PROTECTION

July 7 2007

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Alternatives to Jackson Demonstration State Forest Management Plan

Dear Board Member:

I am a life long forester, a fifty year member of the Society of American Foresters, a graduate of Oregon State University in Forest Management, an ex employee of the U.S. Forest Service and private forest industry, a forest land owner, and at one time a purchase and operator, for my employer, of J.D.S.F. timber sales.

My forest experience goes from the rough and tumble resource recovery at all costs days of the 40's and 50's to the structured sustainable resource protection and recovery harvest processes practiced now in our forests.

I was disappointed to see that a new alternative G has surfaced as I believe that alternative C-1 should have satisfied all concerned except for the most radical preservationist who opposed alternative C-1 for specious reasons.

1 J.D.S.F. was sold by Casper Lumber Co. and acquired by the State of California for the purpose of research and demonstration and long term productive sustainable forest management, not for the slow erosion of these goal into its conversion into a park.

I have supported alternative C-1 for the following reasons:

2 1. The plan lists and answers the legitimate concerns of the previous citizens advisory committee.

3 2. Clear cutting, though allowed on a limited basis, would be carried out only for scientific reasons. Though the term "clear cutting" triggers negative reactions with the general public, it may be scientifically necessary to find where it works best for the environment in the long run.

4 3. Each harvest is to be planned around a specific harvest regime or demonstration to further the demonstration goals of the Forest.

5 4. Legislation regarding the Calif. Forest Practice Rules and relative to the Forest is quoted and followed in the E.I.R. And the C-1 Plan.

6 5. J.D.S.F. personnel have for decades recognized environmental concerns and been at the forefront in improving forest harvesting practices and the protection of streams and wildlife resources. Their one shortcoming has been in their inability to distribute to forest land owners and the general public the results of the myriad harvesting and other studies that have taken place on the Forest.

7 6. A timely approval of the E.I.R. and Plan C-1 would allow the return of management to the Forest and adequate funding, incentives, and direction to the J.D.S.F. staff so that the roads and other resources can be maintained along with an increased level of harvesting and scientific studies.

8 7. About half of the land here on the north coast is in coniferous forest. Demonstration harvest operations are needed which can show the private forest land owner how to cope economically with regulations and at the same time leave the forest in a productive state. J.D.S.F. can provide this information for both the industrial and non industrial forest land owners. State Forest Practice Rules, Fish and Game Department concerns, Water Quality Board Rules, and other agencies, constantly changing approach to timber harvesting presents challenges to the forest industry. The proper management of J.D.S.F. can be a tool to help the private forest landowner stay in business.
I had hoped the return from a selective harvest on our own tree farm would sustain us as my wife and I reach our 70's and 80's but my tree farm is currently in escrow at about 10 times what could be expected from a normal selective harvest. This is the result of the lack of local markets, risk of failure of the expensive permit process, and the fact that the value of small forest ownerships for weekend retreats far exceeds the lands economic harvestability without the risk.

9 8. The remaining mill capacity and harvesting operators on the north coast need the regular timber sales program the Forest provided in the past. A regular sales program helps maintain operational stability, the ability to capitalize equipment etc., and maintain a stable, capable work force.

10 9. We all recognize the acute housing needs in California. The proposed harvest volume of Plan C-1 provides the fiber needed to build upwards of 3000 single family dwellings per year rather than import this wood from outside the state as we do for most of our wood needs.

11 10. When California and Mendocino County are struggling to meet their budgetary needs J.D.S.F., if it can resume harvesting, can help in both areas. The last yield tax return from a full season of harvesting was in the neighborhood of $350,000. The income to the State from the Plan C-1 volume harvest level at current prices would be about $15,000,000 which should be used to support the management of the forest as provided in Plan C-1.

The E.I.R.projections of 240 timber jobs producing $7,600,000 in wages and 240 support jobs producing $4,700,000 in wages is too low an estimate. Though this figure, for our small county is impressive, the figures should be much higher as forest jobs generally produce about three or more support jobs. The E.I.R. also lists sales taxes from these wages as $162,000 so this figure which would be much higher to the benefit of our county.

12 11. We are facing increasing water and fire concerns here and elsewhere. Scientific harvest regimes to determine how transpiration and other tree processes effect stream flow and its timing are an example of one thing that is a point of argument with not much hard data available. The study of nutrient cycles under various cutting regimes is another example of the myriad of scientific studies that are possible. Then there is what I call the "faucet syndrome This is what the public does when they get water from faucet, when they get electricity from a wall plug or lumber from a lumber yard, etc. J.D.S.F. should develop a regular public tour system to enlighten at least a part of the public that trees can and need to be cut to provide a renewable resource supply for California instead of continuing our present environmental imperialism where we import from other states and countries. Also J.D.S.F. need to be able to distribute information relative to projects and results so that this material is available to private forest land owners and the public. All these possibilities take dollars. Alternative Plan C-1 will provide considerably more annual income to do a proper job. The immediate start up under Plan C-1 will get things going again.

13 Right now Mendocino county is California's Appalachia with few productive jobs available for our young people. All my children and grandchildren have left for other parts of California and the nation. We are known here in Mendoland as the place where we produce marijuana and meth rather than forest products, a commodity that none of us want to be without.
The five year hiatus in the timber sale program has not been helpful with this situation. What has been the real cost to Mendocino County and its citizens of this extended hiatus in the management of J.D.S.F.? We have lost jobs, small businesses, taxes and income from the shut down of the Forest

Now you as Board Members of the Board of Forestry can be a part of the solution rather than part of the problem. We need you to make a decision that will be a positive both environmentally and economically.

Sincerely

William F. Smith

275 Mendocino Place
Ukiah, California 95482

Mailed Letter GM-30

Response to Comment 1
The Board agrees with this statement.

Response to Comment 2
Support for Alternative C1 is noted. The May 2002 DRAFT management plan includes many provisions for long-term management. Many of the concerns of the former Citizen's Advisory Committee are addressed by the plan, either directly or indirectly. However, the Board cannot determine the degree to which these concerns were answered by the plan. This is not a significant environmental issue.

Response to Comment 3
Support for Alternative C1 is noted. The Board generally agrees with this statement. Clearcutting may occur under Alternative G, but on a limited basis.

Response to Comment 4
The Board generally agrees with this statement. This is similar to Alternative G, which emphasizes research and demonstration.

Response to Comment 5
The Board agrees that Alternative C1 is in compliance with legislation and the Forest Practice Rules.

Response to Comment 6
The Board is in general agreement with this statement. This is not a signficant environmental issue with respect to the current management planning process.

Response to Comment 7
The Board agrees that timely review and approval of the management plan is desirable.

Response to Comment 8
The Board agrees concerning the value of demonstration to private landowners.

Response to Comment 9
The Board generally agrees with this statement, and considers approval of the management plan to be a significant issue for the local economy.

Response to Comment 10
Each of the management alternatives considered will provide a significant level of timber production from JDSF, with the exception of Alternatives B and F. While Alternative G is expected to produce a somewhat lesser volume of timber in the coming decade, the long term sustained yield level is expected to be somewhat higher than Alternative C1, thus providing an increasing level of production over the coming decades. Significant impacts related to the level of production are not expected to occur.

Response to Comment 11
The EIR made use of appropriate and resource-specific economic analysis methods in estimation of jobs and wages, but the Board notes that other methods of estimation may be equally valid. Please see the economic analysis for a description of methods (DEIR Section III.5).

Response to Comment 12
The Board agrees with the writer's concerns regarding public education, tours, and dissemination of study results. The ADFFMP includes provisions to increase and improve these processes, and the anticipated revenue is capable of fully funding this activity. The Board anticipates that revenue will be sufficient to fully fund these activities, though the Board is not responsible for annual budgeting of Forest operations.

Response to Comment 13
The Board agrees that the years without normal management have come at a cost to the local economy. The Board and the Department have worked hard to return the Forest to full operation.

GM-33

PAUL V. CARROLL
Attorney at Law
5 Manor Place
Menlo Park, California 94025
telephone (650) 322-5652
facsimile (same)

July 16, 2007

George Gentry, Executive Director
California Board of Forestry
1416 9th Street
Sacramento, CA 95814

Re: Draft EIR for Jackson Demonstration State Forest Draft Management Plan and Alternative G

Dear Mr. Gentry and Members of the Board:

I write on behalf of Dharma Cloud Charitable Trust Foundation, The Campaign to Restore Jackson Redwood State Forest, and the public they represent regarding the Jackson Demonstration State Forest Management Plan, its draft EIR, and the recently circulated alternative G.

1 Under the California Environmental Quality Act (CEQA), the Board is obligated to consider the project's greenhouse gas (GHG) emissions in both the draft EIR and the recent alternative G. Unfortunately, neither document addresses the
2 project's cumulative contributions to GHG emissions, or mitigations and alternatives to reduce them.

Background

3 The Intergovernmental Panel on Climate Change of the United Nations has concluded based on overwhelming evidence that global warming is occurring and is caused by human activity. The California Climate Change Center estimates that temperatures within the State will rise by 4.7 to 10.5 degrees Fahrenheit by 2100.

4 According to the California Climate Action Registry Forest Protocols Overview, the forest sector is the second-largest global source of anthropogenic GHG emissions, contributing roughly 23% of total emissions. The Climate Action Team Report to Governor Schwarzenegger and the Legislature, estimates that the forest and agriculture sector contributes 8% of GHG emissions in California.

The forest sector produces GHG emissions in a variety of ways. When trees are cut down, they become a source of CO2 emissions. Although wood products may continue to store carbon for a time, large quantities of GHG emissions are also released to the atmosphere "immediately through the disturbance of forest soils, and over time through the decomposition of leaves, branches, and other detritus of timber production." (*Recognizing Forest's Role in Climate Change*, Union of Concerned Scientists (http://www.ucsusa.org/global_warming/solutions/recognizing-forests-role-in-climate-change.html).) "One study found that even when storage of carbon in timber products is considered, the conversion of 5 million hectares of mature forest plantations in the Pacific Northwest over the last 100 years resulted in a net increase of over 1.5 billion tons of carbon to the atmosphere." (*Ibid.*, citing Harmon, M.E., W.K. Ferrell and J.K. Franklin. 1990. Effects on carbon storage of conversion of old-growth forests to young forests. *Science* 247: 699-702.)

5

Besides release of GHG emissions from logging itself, there is another major source of emissions, namely equipment operations and facilities management. As the draft EIR recognizes, CDF's equipment and facilities contribute so many GHG emissions that they "are likely to substantially offset any sequestration credits." (Draft EIR, p. VII.16-2.)

6

After public comment closed on the draft EIR, the Governor signed the historic California Global Warming Solutions Act of 2006, codified at Health and Safety Code, section 38500 et seq. (AB 32.) The new law requires reduction of the State's GHG emissions to 1990 levels by 2020.[1]

The Draft and Alternative G Fail to Consider the Project's GHG Impacts

CEQA requires consideration of cumulative impacts. A project's GHG emissions, especially a project as large as the management of JDSF, are a quintessential cumulative impact. This is not a novel theory. Recently, the State, represented by the Attorney General, criticized the Sacramento Area Council of Governments' draft EIR for the Metropolitan Transportation Plan for 2035, because it failed to consider the cumulative impacts of GHG emissions, and alternatives and mitigations addressing them.

7

The same criticism applies here. The draft EIR and alternative G do not

---

[1] Since AB 32, California's historic legislation acknowledging the anthropogenic cause of climate change was not enacted until after the close of comment on the draft EIR, it constitutes new information under CEQA, allowing comment on the draft EIR now.

8 The same criticism applies here. The draft EIR and alternative G do not acknowledge that the project will increase California's GHG emissions, making it more difficult to comply with AB 32, let alone do they discuss mitigations or alternatives to offset the impact.

Instead, the two documents merely observe that the different alternatives sequester different amounts of carbon. But this is not the issue. Even the environmentally superior alternative involving the least amount of logging and sequestering the most carbon will still cause a cumulative impact by producing a net increase in GHG emissions.

9 Although it is not for the public to mitigate the Board's project, many mitigations and alternatives suggest themselves. Obviously, an alternative aimed at restoring the forest to its old-growth condition with minimal logging would have the best sequestration to emissions ratio. A mitigation banning clearcuts would reduce emissions. And surely there are numerous energy-saving strategies CDF can apply to its facilities and equipment operations.

10 If the Board insists on approving the EIR without mitigating GHG emissions to a level of insignificance, it must provide a statement of overriding considerations.

11 In short, the draft EIR and alternative G are flawed under CEQA. They wholly fail to evaluate the project's contribution to the most significant environmental issue facing California and ways to mitigate it.

Very truly yours,

Paul V. Carroll

Mailed Letter GM-33

Response to Comment 1
The Board agrees that greenhouse gas (GHG) emissions and more generally, climate change, should be considered under CEQA. Anthropogenic contributions to climate change through GHG emissions have the potential to be a significant environmental effect either on a project basis or cumulatively.

Response to Comment 2
Both the DEIR (section VII.16) and RDEIR (section III.16) address greenhouse gas and climate change issues related to management of JDSF. Column 8 of Table II.19 in the RDEIR identifies net carbon dioxide sequestration for the eight alternatives over a 100-year analysis horizon. This analysis shows substantial positive carbon sequestration benefits for all of the alternatives. The RDEIR also discusses how the changes that Alternative G [or the Administrative Draft Final Forest Management Plan (ADFFMP)] would make to Alternative C1 would increase net carbon sequestration. This result is reflected in Table II.19, which shows that G would sequester a net CO_2 equivalent of 7,280 thousand (M) tons of carbon at the end of 100 years, versus 6,044 M tons for Alternative C1, or a 20 percent increase.

A more detailed analysis also would include an emissions accounting from the forest including vehicles and buildings that are owned by the Department and are associated with management, and emissions from harvesting and manufacturing. We chose to do the downstream accounting, although this will be the most conservative accounting approach because we are not including the negative substitution effect that occurs when alternative higher-GHG-impact building materials such as steel and concrete are used instead of wood products.

Emissions from vehicles and buildings are estimated as follows:

Vehicles: 0.10 thousand (M) tons per year x 100-year planning horizon = 10.1 M tons
Building: 0.00003 M tons per year x 100-year planning horizon = 0.003 M tons

This is a total of 10.103 M tons for the 100-year planning horizon.

Harvesting emissions include in-woods emissions from equipment and vehicles and transportation to a mill. Mill emissions estimates from processing are included because long-term storage of wood products is included in the EIR and this is a consistent approach. Mill emissions include sawing, drying, energy generation, and planning. Also, transport to final destination is included. The entire life cycle for green-dried lumber is included (Puettmann and Wilson 2005). This is a total emission estimate of 0.13 metric tons CO_2 equivalent per thousand board feet (MBF).

An examination of Table III.19 in the RDEIR shows the minimum harvest at 0 (Alternative A) and the maximum harvest at 4,259 MMBF (Alternative B), 3,789 MMBF (Alternative C1), and 2,049 MMBF (Alternative G) over the 100-year planning horizon. This equates to zero, 554 M tons, 493 M tons, and 266 M tons of CO_2 equivalent from harvesting emissions respectively, using the above-noted factor from Puettmann and Wilson (2005). Including vehicle and building emissions, the total figures are 10 M tons, 564 M tons, 503 M tons, and 276 M tons of CO_2 equivalents for Alternatives A, B, C1, and G, respectively. As a percentage of the total carbon sequestered by the four alternatives, per column 8 in Table III.9, the emissions including full life-cycle of wood, vehicle, and building emissions, the range is 0.1%, 9.1%, 8.3% and 3.8% respectively. Thus, emissions as a percent of net carbon sequestered are quite small, particularly for Alternatives A and G.

Given the general levels of uncertainty in the analysis and the relatively small proportion of emissions from full life cycle and overhead from forest management, this additional information does not alter the comparative information contained in Table III.19, or the general conclusions of the DEIR or RDEIR regarding carbon sequestration and JDSF management.

Since the net amount of carbon that would be sequestered by any of the alternatives, including C1 and G, or the ADFFMP, is greatly higher than the amount of carbon that will be released by Forest management, there are no significant adverse cumulative impacts to be mitigated. In fact, significant beneficial impacts of net carbon sequestration will occur.

Response to Comment 3
As a point of clarification, your letter states that the Intergovernmental Panel on Climate Change (IPCC) "… has concluded based on overwhelming evidence that global warming is occurring and is caused by human activity." The actual language used by the IPCC is somewhat more cautious. The following is from the IPCC policy summary (IPCC 2007).

> Most of the observed increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic greenhouse gas concentrations. This is an advance since the TAR's conclusion that "most of the observed warming over the last 50 years is *likely* to have been due to the increase in greenhouse gas concentrations."
> [Emphasis in original.]

Response to Comment 4
The Board and Department are familiar with both the California Climate Change Center (CCCC) and the California Climate Action Registry (CCAR). In particular, please note that the State Forests Research Coordinator is listed as one of the researchers in the CCCC summary document (CCCC 2006) and is serving as the Department's representative in training and oversight of the third party certifiers for the CCAR Forestry Protocols. This is another example of how expertise acquired through work on the Demonstration State Forests is helping to manage programs statewide.

The 23% of emissions attributed to the forest sector is global and primarily attributed to the tropics (Denman et al. 2007). The Climate Action Team estimate cited can be misleading with respect to the forestry sector, because it also includes the agriculture sector, which is massive in California.

A more detailed inventory of California GHG emissions than the cited Climate Action Team Report is the California Air Resources Board's Draft California Greenhouse Gas Inventory (California Air Resources Board -- Draft Updated Greenhouse Gas Emissions Estimates - Full Detail, August 22, 2007; posted on the Internet at http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm;). Note that these figures are under review and are subject to revision. The 2004 (most recent information available) gross emissions figures for the specific categories and subcategories related to California's forest products industry and forestlands are as follows:

IPCC Category Related to Forest Products Production and Forest Land	2004 Gross Emissions (million metric tonnes of CO_2 equivalent)	% of Total Gross CA Emissions
1A2 Manufacturing Industries and Construction		
1A2d Pulp, Paper, and Print	1.086	0.22%
1A2j Wood and Wood Products	0.106	0.02%
3B1 Forest Land	0.164	0.03%
Total	1.356	0.27%

At the same website as above, the Air Resources Board presents draft figures on net CO_2 flux for Land Use, Land Use Change, and Forestry. These figures include carbon fluxes related to forests, rangeland, and agriculture and cannot be fully disaggregated to capture forests only. However, even the most cautious analysis of these numbers from a forestry perspective indicates that there is a net negative CO_2 flux from forestry. That is, forest land use in California results in a net *decrease* in atmospheric carbon, not an increase. Again, we note that these draft numbers are under review and are subject to change.

Response to Comment 5
The harvesting of trees does cause emissions of CO_2, which we analyzed in our climate change sections of the DEIR (p. VII.16-1 to -5) and RDEIR (p. III-157 to -160). In all scenarios there was a net negative emission of GHGs. This was because more biomass was being conserved than destroyed. In other words, we are proposing to harvest less biomass (and to emit less CO_2) than growth.

Average redwood forest carbon pools, as a percentage of standing carbon, were estimated as follows (EPA 2000): 4.4% in understory, 9.7% in down dead wood, and 60.0% for soil and forest floor. The estimates provided in the DEIR analysis assume a long-term steady-state condition for non-merchantable portions of the carbon pools. The long-term steady-state approach utilized accounts for the short-term emissions such as soil disturbance and leaf and branch decomposition that are not explicitly addressed in RDEIR Table II.19. Also, forest practices to protect the soil resource are applied on JDSF. Intensive practices, such as litter raking, which had detrimental effects in some European forests, do not occur and are not planned for JDSF.

The cited study by Harmon et al. (1990) focused on the conversion of natural old-growth forests—not the "mature plantations" quoted—to young growth forests. JDSF is today predominantly a young growth forest, with only 650 acres of old-growth groves remaining. These groves would be protected under all alternatives. The proposed management would only treat non-old-growth areas of the Forest.

Response to Comment 6
Sources of JDSF management related emissions besides harvest are equipment operations and facilities management. When considering these sources of emissions directly related to the management of the state forest, they are small compared to the amount sequestered (please see response to Comment 2).

The Department as a whole is quite large and manages a vehicle and aircraft fleet that is the third largest fire department in the Country. While we are tracking Department-wide emissions as a monitoring tool to meet targets for GHG reduction, expecting to wholly offset Department-wide emissions using JDSF is impractical. As indicated in RDEIR Table II.19, the alternative with the greatest potential to sequester carbon on JDSF is Alternative A. However, this alternative provides for almost no management activity on the Forest and would not comply with the direction of existing statutes and Board policies for the management of JDSF. Further, Alternative G or the ADFFMP would sequester only 6% less net CO_2 than Alternative A would sequester, per column 8 of Table II.19.

The Department is a member of CCAR and does follow the reporting criteria for entity reporting, including the state forests. CCAR is recognized by AB32 and the registry procedures and protocols are anticipated to be incorporated by the new regulatory structure. The Board and the Department are actively working with the California Air Resources Board, the lead agency for addressing climate change and greenhouse gases, to identify address GHG emission and climate change issues related to forest management. The Department will comply with all relevant regulatory outcomes of AB 32.

Response to Comment 7
As indicated in the response to Comment 2, all of the alternatives, as well as the ADFFMP, would result in a net sequestration of carbon when carbon released from forest management activities is compared to the carbon sequestered in tree growth and long-lived forest products. Thus, there would be no negative GHG environmental impact from JDSF to combine with GHG emissions from other sources to potentially result in a significant adverse cumulative effect.

The Sacramento Area Council of Governments draft EIR example cited is with respect to a significant cumulative emission over time from many small sources (motor vehicles). In a similar issue to the one cited, the Attorney General sued the County of San Bernardino (San Bernardino County Superior Court Case No. CIVSS 700329). This case was recently settled with the County agreeing to a thirty-month public process to reduce GHGs attributable to land use decisions and County government

operations. Land use planning (e.g., a change in land use or zoning) is not a consideration for this EIR. Second, the proposed JDSF management would result in net carbon sequestration, not the likely net carbon emission of the cited county planning cases. Thus, these cases are not directly applicable.

However, operations of JDSF and the Department coincide with the general requirements of this settlement: inventory of current and past emissions. This inventory is required by the Department's membership in CCAR and will be reviewed by a third party certifier.

Response to Comment 8
Specifically, the author is incorrect, this project will not increase California's GHG emissions and therefore no mitigation is warranted. See response to Comment 2. Also, the discussion of Alternative G in the RDEIR specifically identifies how Alternative G, relative to Alternative C1, incorporates six measures that provide increased opportunities for carbon sequestration at JDSF (RDEIR at p. III-158).

Response to Comment 9
The Department does follow procedures that are mandated for all state agencies to assist in reducing emissions to meet state targets. This includes telecommuting policies, carpooling incentives, mass transit reimbursements to employees, flexible fuel vehicles, energy conservation programs at facilities, etc. This does not have a direct bearing, however, to this project, as no significant negative environmental effect has been identified. See also the response to Comment 8.

The proposed mitigation of managing JDSF to restore the entire forest to old-growth conditions, with minimal logging, would not be consistent with existing statutory and Board policy direction for the Forest, which require an active and diverse timber management program. While not banning it completely, Alternative G and the ADFFMP include significant limitations on the use of clearcutting on JDSF.

Response to Comment 10
Since no significant adverse environmental effect is present, therefore no overriding consideration statement is necessary.

Response to Comment 11
See response to above comments.

Sequestration of carbon is one facet of climate change and forests. Another is adaptation to climate change. As the premier research forest in the *Sequoia sempervirens* ecotype, we have a responsibility to promote research into forecasting the likely effects of climate change on the forest and to make management recommendations to conserve this uniquely Californian resource.

References

CCCC, 2006. Our Changing Climate, Assessing the Risks to California: A Summary Report from the California Climate Change Center.
http://www.climatechange.ca.gov/biennial_reports/2006report/index.html

Denman, K.L., G. Brasseur, A. Chidthaisong, P. Ciais, P.M. Cox, R.E. Dickinson, D. Hauglustaine, C. Heinze, E. Holland, D. Jacob, U. Lohmann, S Ramachandran, P.L. da Silva Dias, S.C. Wofsy and X. Zhang, 2007: Couplings Between Changes in the Climate System and Biogeochemistry. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

EPA. 2000. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2000, Annex N, Methodology for Estimating Net Changes in Forest Carbon Stocks. United States Environmental Protection Agency, Washington, D.C. 8p.

Harmon, M.E., W,K. Ferrel, and J.K. Franklin. 1990. Effects on carbon storage of conversion of old-growth forests to young forests. Science 247:699-702.

IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Puettmann, M.E. and J.B. Wilson. 2005. Life-cycle analysis of wood products: Cradle-to-Gate LCI of residential wood building materials. Wood and Fiber Science. 37. Corrim Special Issue: 18-29.

GM-36

Northern California
SOCIETY OF AMERICAN FORESTERS 1900

NorCal SAF Office – P.O. Box 339, Camptonville, CA 95922 - www.norcalsaf.org

July 16, 2007

Mr. Stan Dixon, Chair
California Board of Forestry
and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Recirculated Draft EIR for Jackson Demonstration State Forest Management Plan

Dear Mr. Dixon,

The Northern California Society of American Foresters applauds the efforts that have been made to update the Jackson Demonstration State Forest Management Plan (JDSF Plan) and support efforts to return the forest to a productive status. We especially applaud the direction to increase research into uneven-aged management in the forest types of coastal Northern California as this has received less attention in the past than other types of management. We do, however, have concerns about portions of proposed Alternative G for the JDSF Plan. Those concerns include:

1

- ***Alternative G limits even-aged management without explaining the need for this limitation.*** The alternative proposes to limit even-aged management to not more than 100 acres per decade unless there is a special and justified research need for that type of management, which will then make an additional 400 acres available per decade. Also, decisions on whether the proposed even-aged silviculture is appropriate are placed in the hands of an advisory committee, whose make-up is yet to be determined. Silviculture decisions should be made by professional foresters based on site-specific conditions as needed for stand and ecosystem health. To have an "advisory committee" make silviculture decisions risks the potential, in theory and possibly in fact, of that committee practicing forestry without a license.

2

- ***Alternative G limits the use of herbicides.*** As has been well documented on the north coast, as well as throughout California, noxious weeds are an increasing problem in forested landscapes. The severe restriction, and potential elimination, of this tool does not seem to be a wise or forward thinking direction. Given the restrictions on use already provided in California law and the required licensing of those individuals directing application of those chemicals, the appropriate use of herbicides is a well considered and necessary tool to improve forest health throughout California. It has been argued that other mechanical means

including use of goats or humans to browse and/or mechanically remove noxious weeds is a better methodology. However, the extensive nature of the weed problem combined with the availability and willingness of people to volunteer for this activity makes this a not particularly effective method of control. With grazing animals, it is also difficult to tell them which plants to eat and which to leave alone. Herbicides can effectively and economically be used to control noxious weeds in a safe and prudent manner.

3 • ***Alternative G promotes conversion of much of the forest into a late-seral condition, which may not be appropriate.*** Table II.2 in *Alternative G, Part II Alternative* indicates that the alternative proposed to recruit more than 1/3 of the forest into a late-seral condition for the benefit of the marbled murrelet. While this is a worthy consideration, this designation may come at the expense of other species that may require a greater variety of habitats. Also, one of the purposes of the state forest system is to demonstrate management techniques that are appropriate on private timberlands throughout the applicable region.. Given that most private lands are not managed to this extent for late-seral conditions, it would seem appropriate to limit the recruitment of this habitat type in favor of habitats that are more often found on private forest lands in order to find ways in which those private lands can support a greater diversity of wildlife species and their habitats.

4 • ***Alternative G reduces the level of harvest available from the forest.*** The goal of forest management in California is to produce high quality forest products in a sustainable manner over the long term. This alternative proposes to harvest approximately 45% of the growth and 0.9% of the inventory in the first decade, with the harvest volume representing a decreasing portion of the standing timber. If growth and health are to be managed at sustainable levels, the amount of harvest will need to be *increased* over time.

We fully support the return of Jackson Demonstration State Forest to productive management and support the efforts of the Board in this direction. However, Alternative G seems to do a poor job of meeting some the listed goals for this management plan. We believe that Alternative C1, while flawed, better meets the needs of the Jackson Demonstration State Forest.

Sincerely,

Michael de Lasaux, Chair
Northern California Society of American Foresters

The Northern California Society of American Foresters (NorCal SAF) represents over 600 professionally trained foresters in Northern California. It is the mission of the Society of American Foresters to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

NorCal SAF is comprised of eleven chapters. Founded in 1900 by Gifford Pinchot, the Society of American Foresters is the national organization representing the forestry profession in the United States. One of Society's core values is the sustainable management of forests for the benefit of wildlife, landowners, and society.

OUR JOB IS GROWING

❖ STEWARDSHIP HOT LINE 1 (800) 738-TREE ❖

Mailed Letter GM-36

Response to Comment 1
The limitation is necessitated by public opinion and strong sentiment against clearcutting by the general public. The comment does not correctly portray the proposed Management Plan. The management limits clearcutting, i.e. the even-aged regeneration harvest step with no residual stocking left on site, to less than 500 acres per decade. Table 2 in the proposed Management Plan shows that even-aged silvicultural systems including various forms of residual leave tree retention systems, can potentially occur on up to 12,788 acres or 26 percent of the Forest. Regeneration harvests under these systems is not limited to 500 acres per decade.

It is expected that the advisory committee will make recommendations, not decisions, on general management direction. On-the-ground implementation decisions will be made by registered professional foresters.

Response to Comment 2
The comment is noted. Limitations on herbicide use are necessitated by public opinion and strong sentiment against their use by the general public.

Response to Comment 3
The Board recognizes that the primary purpose of JDSF is to demonstrate management techniques that are appropriate on private timberlands, private timberlands are generally not managed to a great extent for late seral conditions, and JDSF needs to maintain forest structures reasonably typical of private timberlands in order to be able to deliver relevant research and demonstration project. At the same time, a large segment of the public wants to see JDSF produce other resource values such as recreation, habitat and recovery habitat for endangered species. Table 1 in the proposed Management Plan is viewed as the optimal set of desired future conditions given JDSF's management situation.

Response to Comment 4
The Board recognizes that the generally mandated legal and Board policy goals of JDSF include maximum sustained production of high quality forest products (MSP). The actual level of maximum sustained production that can be realized however, will depend on the emphasis that is placed on protection of other resource values. On a private ownership where there are few if any restrictions on timber production from other resource values, MSP will probably be close the biological growth of the forest. On a public research forest like JDSF, with additional management goals other than timer production and a large number of restrictions on timber management from public trust resource values, MSP will predictably be less than growth.

Campaign to Restore Jackson
State Redwood Forest
43151 Little Lake Road
Mendocino, CA 95460

GM 37

July 16, 2007

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460
JDSFPublicComment@fire.ca.gov

Re: *Recirculated Draft Environmental Impact Report Sch # 2004022025 – JDSF*

Dear Members of the Board of Forestry:

1 I want to take this opportunity to address you frankly. Alternative G represents a great stride forward towards resolving the controversy that has shut down operations in Jackson State Forest since 2001. But, as published, it fails in important respects to provide a workable solution to restoring operations in the forest. I believe that the board and the department share my desire to see operations resume. My comments are aimed at assisting the board to make the modifications necessary to allow all parties to move forward cooperatively.

Incorporating the Recommendations of the Mendocino Working Group in Alternative G

2 The Mendocino Working Group provided a set of consensus recommendations to the Board of Forestry on November 30, 2006. The group re-emphasized certain points relating to the advisory committee, evenage management, and review of interim harvest plans in its letters of February 28, 2007 and June 20, 2007, but **all of the recommendations in its November 30, 2006 statement of principles constitute an inseparable whole of the group's consensus agreement. It is the consensus as a whole that provides the basis for avoiding further conflicts and delays in the resumption of operations in Jackson Forest. All parties compromised to reach a workable agreement. Deviating from this agreement risks a breakdown of the entire agreement.** As issued, Alternative G fails to fully reflect the working group's consensus recommendations. Alternative G should be revised include **all** of the group's recommendations.

I note that Mendocino Board of Supervisors unanimously voted to support Alternative G, with the modifications recommended by the Mendocino Working Group.

Research and Future Conditions

3 I concur with listing research and demonstration as the first goal for the forest. However, it needs to be clearly stated that R&D activities will be chosen and implemented in the context of the second and third goals for the forest: Forest Restoration and Ecological and Watershed Processes.

Do any of you doubt that the major research and demonstration need is on how to restore the ecological health of cutover forest lands?

4 We have had ample demonstrations of large-scale clearcutting and evaluation of their impacts. We don't need any more demonstrations of evenage management in redwood

Tel: 707 937-3001 restore@jacksonforest.com www.jacksonforest.com

4 forests. We need to develop better understanding of how to manage forests in ways that are economically viable and reverse the negative ecological and aesthetic impacts of previous industrial logging on coastal redwood lands.

With the above in mind, the first Objective under *Goal #1 – Research and Demonstration* should be:

> Improve understanding of how to manage coastal redwood forests in ways that improve forest and watershed ecological health and opportunities for human enjoyment, and that are economically viable.

5 The current first "Objective" should be deleted:

> ~~Maintain a diverse, dynamic matrix of forest habitats and seral stages to provide broad range of forest conditions available for research and demonstration.~~

This is not an objective of the research and demonstration program. Rather it relates to developing goals for future conditions of the forest, and these goals for future conditions need to be developed in the context of all of the goals for the forest: research, restoration, ecological and watershed processes, timber management, and recreation and human enjoyment. The inclusion of the above objective is particularly objectionable because it is used, without any justification, in the section on future conditions as the primary guiding principle.

The current fourth "Objective" should be modified:

> Design a range of demonstrations and comparisons on **ecologically beneficial forest management practices** to serve a broad set of clients such as conservation-oriented, restoration-oriented, small landowner, and ~~intensive production approaches to forest management~~ industrial timber companies.

6 All research and demonstrations should be done within the context of improving understanding and adoption of ecologically beneficial management practices. "Intensive production approaches" should not be included for their own sake, but only if they serve the primary purpose of furthering ecologically beneficial forest management.

Evenage Management

7 Alternative G proposes performing substantial even-age and group-selection management solely to provide "a broad range of forest conditions for research and demonstration." This is incompatible with the goals of restoration and ecological and watershed processes, unnecessary, and illogical.

8 There is no role for evenage management in ecologically beneficial management of redwood forests; thus there should be no need to do any research involving this management method. If research requires evenage stands as controls, there are plenty already available in Jackson Forest and even more on lands now under the control of conservation organizations.

9 In its letter of June 20, 2007 to the Board of Forestry, the Mendocino Working Group recommended a process for determining the extent of evenage management that could be justified for future research. This recommendation should be incorporated in Alternative G.

10 Group selection may have a role in ecological forest management, but it should not simply be used as a matter of course to create "future research opportunities." The Mendocino Working Group proposed that:

10 Group selection plots will be the minimum size consistent with wildlife concerns and obtaining regeneration, they will only be used when justified as the most ecologically beneficial way to obtain needed regeneration and or habitat.

This principle needs to be explicitly incorporated in Alternative G.

Forest Structure Goals

The forest structure goals, as described on pages II-6 through II-8, need to be revised to reflect the preceding discussion. Even within the context of Alternative G as written, the operative statement on page II-6 is clearly unsupportable:

> *The major purpose of the forest structure condition goals is to provide forest stand conditions and management histories in the Forest suitable to a wide range of research investigations and demonstration opportunities, as well as a broad range of valuable habitats.*

11 The second and third goals listed are forest restoration and ecological and watershed processes. These should be the primary determining goals for future conditions. As argued above, appropriate research and demonstration activities would be complementary to and not antagonistic to these goals. Alternative G needs to be revised to reflect these understandings. The above cited sentence should be replaced by:

> Forest structure condition goals should be determined primarily by the goals for forest restoration, ecological and watershed health, wildlife habitat, and recreation and human enjoyment. Research and demonstration activities should generally be complementary to these goals. Where research requires activities that are antagonistic to these goals, these activities should be explicitly justified, be of minimum size for scientific validity, and be reviewed by the advisory committee.

Tables II.1 and II.2 need to be revised to reflect the change in goals for future conditions. The best way to do this is to provide the following footnote to each table:

12 The numbers in this table are subject to review and revision in cooperation with the forest advisory committee during the initial implementation period.

Initial Implementation Period

An initial implementation period is discussed beginning on page II-12. Changes in this section are essential to bring this in line with the consensus recommendations of the 13 Mendocino Working Group. I incorporate in my comments by reference the letters and attachments from this group to the Board of Forestry, dated November 30, 2006, February 28, 2007, and June 20, 2007.

The group re-emphasized certain points relating to the advisory committee, evenage management, and review of interim harvest plans in its letters of February 28, 2007 and 14 June 20, 2007, but **all of the recommendations in its November 30, 2006 statement of principles constitute an inseparable whole of the group's consensus agreement. It is the consensus as a whole that provides the basis for avoiding further conflicts and delays in the resumption of operations in Jackson Forest.** Alternative G should be revised include all of the group's recommendations.

Interim Period Length: An important recommendation, emphasized in the letter of February 28, 2007, should not be overlooked:

15 The MWG is concerned with the language suggesting the initial period will sunset no more than 36 months after approval of the Forest Management Plan by the

15

> Board. We agree that 3 years should be more than adequate to bring this to resolution, but we don't feel a specific ending time for the initial period should be set. ... The initial period should continue until the revised plan is submitted to and approved by the Board of Forestry.

A fixed deadline could create perverse incentives to delay the development of a revised management plan. Please amend Alternative G as above.

16

Interim Period Harvest Limitations: The Working Group proposed and reemphasized in its letter of February 28, 2007 that interim harvest should be limited to generating the amount of revenue needed:

> to restore and enhance staffing, remedy the more significant environmental problems on the forest, initiate a wildlife inventory, a botanical inventory and generate a reviewed and verifiable forest inventory...

Alternative G does not contain any reference to limiting harvest during the interim as recommended. This limitation on harvest amount is a key part of the group's consensus agreement and should be explicitly stated within Alternative G.

17

Interim Harvests: The working group restated its understanding of the kind of harvesting that should occur in the interim period in its letter of February 28, 2007:

> Our proposal for this initial period envisioned low impact harvesting in non-controversial areas.

Not all of the proposed harvest plans in Table II.3 are in non-controversial areas. All potentially controversial plans should be mandated to be reviewed by an advisory entity, preferably the advisory committee for Jackson Forest, as proposed by the working group in its letter of June 20, 2007.

In Conclusion

18

Jackson Forest has been subject to increasing controversy for over a decade and had its timber operations shut down since 2001. All parties are close to agreement on a plan and process for resuming operations and minimizing controversy. I urge the board to use its authority to make the few but essential changes needed to move forward cooperatively.

Sincerely,

Vince Taylor, Ph.D.
Executive Director.

Mailed Letter GM-37

Comment 1
Comment noted. The Board is indeed interested in seeing operations resume at JDSF.

Comment 2
Alternative G contains many provisions in direct or close alignment with the recommendations of the Mendocino Working Group. The Board acknowledges that not all of the Mendocino Working Group's recommendations are fully incorporated into Alternative G or in the Administrative Draft Final Forest Management Plan based on Alternative G. The Board has received a letter from the Mendocino County Board of Supervisors indicating their support of the Mendocino Working Group's recommendations.

Comment 3
Comment noted. The Board believes that it is critical that any individual element of Alternative G's Goals and Objectives for the management of JDSF, as presented in Appendix 1 of the 2007 RDEIR, be read in the context of all the Goals and Objectives, as well as the specific management actions that are provided by the alternative. Forest restoration, ecology, and watershed process are among the management subjects proposed for demonstration and research, though some research and demonstration will involve other aspects of forest management.

Comment 4
Neither Alternative G nor the Administrative Draft Final Forest Management Plan based on Alternative G proposes large scale clearcutting for demonstration or any other purpose. The Board believes that some very minor level of clearcutting will continue to be appropriate for demonstration purposes, as well as purposes such as research, securing regeneration under certain stand conditions, and addressing forest health problems. Alternative G and the Administrative Draft Final Forest Management Plan based on Alternative G reflect this consideration. A considerable amount of even-aged management, including clearcutting, occurs on private timberlands within the redwood region. Even-aged management is considered a viable form of redwood forest management. The potential effects of this broad form of management should be studied in greater detail, and much remains to be learned about securing the positive effects and avoiding the potentially negative effects associated with even-aged management.

The Board agrees that "We need to develop better understanding of how to manage forests in ways that are economically viable and reverse the negative impacts of previous industrial logging on coastal redwood lands," and believes that Alternative G or the Administrative Draft Final Forest Management Plan based on Alternative G would provide ample direction and opportunity to contribute to this understanding. See Goals #1-4 (Appendix 1) and, for example, the direction for establishment of the Older Forest Structure Zone and late seral development areas (pages II-6 to II-10) in the RDEIR.

The Board also notes that JDSF is not exclusively composed of coastal redwood forest, though this is the principle forest type present (DEIR Section VII.6.2-2). Other forest types present include various forms of redwood/Douglas-fir/hardwood association, and the red alder, pygmy cypress, and bishop pine series. Vegetation communities include Mendocino pygmy forest, sphagnum bog, wetlands, and grassy openings.

Comment 5
See response to comment 3. Maintaining "a diverse, dynamic matrix of forest habitats and seral stages to provide a broad range of forest conditions available for research and demonstration" is an appropriate objective under the expressed broader goal statement for Goal #1 Research and Demonstration.

The Board has received comments from a number of university-affiliated faculty and staff that emphasize the importance of the availability of a diverse mix of forest stand conditions for research and demonstration.

Comment 6
See response to comment 3. It should be noted that Alternative G and the Administrative Draft Final Forest Management Plan based on Alternative G establish research and demonstration as the primary purpose of JDSF management, not "furthering ecologically beneficial forest management." However, a theme of ecologically beneficial forest management plays throughout the Goals and Objectives and the various specific management practices directed for JDSF. See, e.g., Goal #2 Forest Restoration, Goal #3 Watershed and Ecological Processes, and the direction for establishment of the Older Forest Structure Zone and late seral development areas (pages II-6 to II-10) in the RDEIR.

Comment 7
Evenaged management and group selection are not limited "solely to provide a broad range of forest conditions for research and demonstration" by Alternative G and the Administrative Draft Final Forest Management Plan based on Alternative G. Rather, these documents establish broad goals and objectives for timber management (see Goal #4 Timber Management and its Objectives). Alternative G and the Administrative Draft Final Forest Management Plan permit the use of evenaged management for addressing forest health and problematic regeneration conditions (RDEIR p. II-9; Chapter 3 in the Administrative Draft Final Forest Management Plan). The forest structure goals for JDSF are achieved though the application of a broad range of silvicultural methods, including evenaged management and group selection. The RDEIR (p. II-6) and the Administrative Draft Final Forest Management Plan (Chapter 3) indicate that the achievement of "a broad range of valuable habitats" also is a purpose of forest structure goals.

Comment 8
While very important, ecologic benefit is not the sole determinant of actions under the proposed management of JDSF under Alternative G or the Administrative Draft Final Forest Management Plan based on Alternative G. Goal #2 Forest Restoration and Goal #3 Watershed and Ecological Processes are very importance goals, as indicated by their ranking. However, they are not the primary goal—i.e., Goal #1 Research and Demonstration—nor are they or any other goals exclusive. See response to comment 3, above. The potential effects of various forms of even-aged management upon habitat development, in particular, are not well understood, and would benefit from further demonstration and investigation. For example, the Northern Spotted Owl appears to benefit from the forest edge that is produced along the borders of even-aged management units, due to the production of prey for the species that occurs in or near this edge. Other species, such as the Purple Martin and the Vaux's Swift, appear to benefit from the presence of large nesting structures present in forest openings. A host of other, more common species, benefits from the new vegetation that regenerates within even-aged management units.

Comment 9
Comment noted.

Comment 10
See response to comment 7. The group selection silvicultural system is widely used, due to the benefits that the system provides, not just from the standpoint of timber production, but also due to habitat, watershed, and aesthetic considerations. Group selection results in a diverse set of forest conditions available for wildlife, by creating a mix of age classes across the landscape, while coincidentally maintaining canopy cover at the broad scale. Group selection is beneficial for successful regeneration and subsequent growth of tree species that are relatively intolerant of heavy shade. The system also produces small even-aged groups of trees, much like those that are created through natural disturbance processes in the wild (Smith, David M., 1986. The Practice of Silviculture, 8th Edition, John Wiley and Sons, p. 432.). Potential watershed effects are mitigated by the fact that a large proportion of canopy and ground cover are generally retained at the stand level.

Comment 11
The quoted RDEIR language on forest structure goals is consistent with the primary emphasis placed on research and demonstration (e.g., see Goal #1 Research and Demonstration in RDEIR Appendix 1) by Alternative G and the Administrative Draft Final Forest Management Plan based on Alternative G. See also the response to comment 3, above.

Comment 12
The text of the RDEIR (p. I-8) already indicates this:

> During this initial implementation period, the department and the Board will seek further input on management direction from these advisory entities, including long-term forest structure goals for the Forest and silvicultural treatments to be applied (e.g., forms and amounts of even-aged and uneven-aged management).

Comment 13
Comment noted. The Board has reviewed and considered the referenced three letters from the Mendocino Working Group. Many of their recommendations are reflected in Alternative G and the Administrative Draft Final Forest Management Plan. The three referenced letters speak to desired management goals, approaches, and processes. They do not specifically identify any potential significant potential environmental impacts that have not been mitigated through the EIR process.

Comment 14
Comment noted. See also response to comment 2, above.

Comment 15
The existence and activities of a JDSF advisory body is not per se related to the potential for environmental impact from management of JDSF.

Alternative G and the Administrative Draft Final Forest Management Plan establish a deadline of three years to provide the advisory group an incentive to complete its work in developing its management plan recommendations. Absent a specific deadline for this product, management of JDSF would have to continue under the burdensome initial implementation period management restrictions for an indefinite period if the advisory were to fail to complete its responsibilities in a timely fashion. Given the contentious environment that has surrounded the management of JDSF for some time, the Board can easily envision an advisory body taking a very long time to complete its work, absent a fixed deadline. In any case, the Board and Department will seek to manage the advisory group management plan review process in such a way as to arrive at a set of recommendations from the group as expeditiously as possible.

Comment 16
Harvest volumes during the initial implementation period under Alternative G are inherently limited to a great extent by the substantial harvesting restrictions imposed during this period (see RDEIR p. II-12 or the Administrative Draft Final Forest Management Plan Chapter 3).

Comment 17
The Board recognizes that there may be controversy associated with proposals to manage stands within specific areas of JDSF. In fact, any proposal to conduct timber operations may be controversial to some individuals. The management plan and EIR consider the potential for environmental effects to occur, and also provide for measures that that are intended to substantially reduce potential controversy. It is not the Board's intention to necessarily avoid all controversy, but to manage the Forest in compliance with the legislative mandate and existing policies, while avoiding significant environmental effects.

The Mendocino Working Group, as a whole, and some members of that group individually, have expressed concern over short-term operations within the majority of JDSF (stands regenerated prior

to 1925 and those areas depicted on RDEIR Map Figure 2 with an average of ten trees or more per acre greater than 30 inches in diameter). The Mendocino Working Group, and some individual members of the group, propose that harvest be limited to less mature stands, such as the majority of those proposed for the initial period within RDEIR Table II.3. With the exception of the two currently enjoined harvests (Brandon and Camp Three), the short-term harvest schedule for Alternative G (Table II.3 in the RDEIR) proposes a few timber harvests, located in areas defined as controversial by the Working Group, that are intended to go forward during the initial implementation period without review by an advisory body. These are harvests for which a substantial amount of timber harvesting plan preparation has already occurred and which are essential to effective management of the Forest, including revenue production to support the forest management and research program. Harvesting on these stands will be constrained to retain approximately 70% of the preharvest stand basal area and to maintain stand mean stem diameter approximately equal to or greater than the preharvest level. The Board believes that these very significant harvest restrictions will substantially address the Working Group's concerns about not taking actions during the initial implementation period that would limit future management options.

Comment 18
Comment noted.

GM-38

Staub Forestry & Environmental Consulting

STAUB

July 16, 2007

Mr. Stan Dixon, Chairman
STATE BOARD OF FORESTRY AND FIRE PROTECTION
P.O. BOX 944246
SACRAMENTO, CA 94244-2460

Dear Chairman Dixon and Members of the Board,

As a Registered Professional Forester with more than 30 years experience managing coastal redwood forests and a member of committees associated with the State Forest system, I am emailing this last minute letter to underscore my concerns about several provisions of Alternative G in spite of my support for most of the objectives and management policies and measures presented in that alternative. My points can be summarized as follows:

1

1. I believe the emphasis on late seral or old growth and older forest structure zones in Alternative G is excessive and should probably not exceed roughly 30% of JDSF's timberland acreage. The State Forest mandate is to research and demonstrate management for the private timberlands of California and that requires flexibility of approach and more active management than is apparently envisioned in Alt G where such type would cover from 25% to 45% of the forest's area.

2

2. I can find no reason to support interim or initial and short-term harvest limitations and schedules. The FMP and EIR have presented an extraordinary amount of highly detailed and complex information quite capably and responsibly. It is time to start the process of research and demonstration that have been held in abeyance these last years and have those measures occur over a long enough period that there will be some hope of obtaining useful information. The FMP and EIR process recurs at least every 10 years with provisions for 5 year review. The Board can review anything about JDSF at any time if and when the need arises. Adopt and implement the plan you choose. Do not add another layer of procedure and potential obstruction.

3

3. I support your adoption of an alternative that increases allowable harvest to something closer to alternative C1. Maximum sustained production is partially defined by economics and a harvest target of at least 50% of forest growth seems like a minimum target.

4

4. I oppose any new restrictions of herbicide use on JDSF. I have recently worked with CNPS members and State Parks ecologists to prevent unnecessary restrictions on intelligent use of heribicides in our efforts to save native flora from the threats of invasive plants.

5

5. Advisory committee composition and roles should reflect JDSF's status as a statewide resource while recognizing the value of local input that deals with site specifically local issues.

Thank you for consideration of my comments.

Sincerely,

Stephen R. Staub, RPF #1911

6010 Highway 9, Suite 6 Felton CA 95018 Phone 831. 335.1452 Fax 831. 335.1462 staubtre@pacbell.net
Stephen R. Staub, Registered Professional Forester License No. 1911
Cassady Bill Vaughan, Registered Professional Forester License No. 2685
Chevenne Borello, Registered Professional Forester License No. 2784

Mailed Letter GM-38

Response to Comment 1
The Board agrees that a mandate for the state forest is research and demonstration of management for the private timberlands of California. Forest ownership in California is quite diverse, and there is growing recognition of management that considers a range of objectives. As such, the Board believes that JDSF should reflect the range of forest conditions and management objectives that exist within the region. This will provide a working laboratory with a dynamic matrix of forest conditions available for research and demonstration. Please note that the proposed portion of JDSF designated for any given condition represents a range that is expected to vary through time, due to new information, management, ecological, societal, and policy-related adjustments.

Response to Comment 2
The intent of the interim harvest limitations is to allow the Board and the various advisory entities an opportunity to examine JDSF management and planning in detail, while precluding operational management that would limit long-term options. This is not a significant environmental issue.

Response to Comment 3
The allowable cut estimate is not an exact limitation, but an estimate of what will be produced, given the management objectives and constraints. A more exact estimate will result from the Option "a" process for estimating long-term sustained yield (LTSY). At the present time, while the annual allowable cut may be somewhat less than that for Alternative C1, the LTSY estimate is higher under Alternative G.

Response to Comment 4
Alternative G does not impose new restrictions on the use of herbicides for control of invasive species. However, it does increase the level of consideration, including that of alternative treatments, prior to using herbicides.

Response to Comment 5
The Board generally agrees with this statement. The committees are intended to be purely advisory.

IV.16 Individual RDEIR Mailed Comments GM-39 to GM-40

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Mailed comment submissions with multiple copies of a single letter format will be addressed in one sample from each type of form letter. Those with additional comments added will be addressed individually if the comment is substantive and thus warrants a separate response.

There will not be comment letters for every number within the series because some letters dropped if they were duplicates or if they were found to be form letters. Form letters are responded to in their own section of the FEIR.

JULY 12th, 2007

GM-39

BRUCE CAMPBELL
1158 26th ST. #883
SANTA MONICA, CA 90403

BOARD of FORESTRY and FIRE PROTECTION
P.O. BOX 944246
SACRAMENTO, CA 94244-2460

RE: COMMENTS on RECIRCULATED DRAFT EIR for the DRAFT JACKSON DEMONSTRATION STATE FOREST MANAGEMENT PLAN

DEAR BOARD OF FORESTRY and to whom it may concern:

1. It is highly disturbing to see that under new Alternative G in the Recirculated Draft EIR that the Caspar Creek and Jughandle Creek watersheds are not included in the Marbled Murrelet recovery zones for the Jackson forest. Seeing that murrelets currently inhabit Russian Gulch State Park just over the hill from the so-called "CONTROL" watershed of the South Fork of Caspar Creek, it is preposterous not to protect the old-growth and mature stands and trees in not only the South Fork of Caspar Creek, but in the whole Caspar Creek and Jughandle Creek watersheds as well. There must also be no more clearcutting / even-aged management in these watersheds to help make up for the disastrous out-of-control clearcut logging of the North Fork of Caspar Creek in the 1980s.

2. Also related to possible recovery of the Northern Spotted Owl and Marbled Murrelet in Mendocino County is the disturbing fact about the Recirculated Draft EIR that there is inadequate acreage for late-seral development. A couple key reasons I see related to this are that many of the trees in the mature stands under the Recirculated Draft for Jackson DSF will not be allowed to reach late-seral and old-growth stages. Clearly, the importance of old-growth and late-seral forest in the coast redwood region of Mendocino County to the Marbled Murrelet and other ancient forest-dependent species is not adequately considered in the Recirculated Draft for the Jackson forest.

3. Areas with mature stands and mature trees should be removed from areas where clearcut / even-aged management variations are allowed under the Recirculated Draft's Alternative G. Though if some mature stands remain within the area where clearcut / even-aged logging is allowed under new Alternative G, then I call for two strict qualifiers. Those are:

   A- any even-aged management must be for important and scientifically valid research purposes; and

   B. there should be a strict maximum of 50 acres of mature stands (at Jackson DSF) which can undergo even-aged management in any 10-year period -- and these areas must not only meet the criteria under "A", but must not hurt watercourses, connectivity, or recovery chances for the Marbled Murrelet.

4. When considering what areas can undergo intensive management at Jackson DSF, consider the 100% probability (according to some biological researchers) that murrelets will be extent in Mendocino County by the middle of the 21st century.

Lastly, I am including slight variations of my more than 28 pages of comments on the Draft EIR for the Draft JACKSON Demonstration State Forest Management Plan. Unfortunately, most of my concerns from the old Alternative C1 also apply to new Alternative G from the Recirculated Draft for the Jackson forest.

SINCERELY,

Bruce Campbell

BRUCE CAMPBELL

February 24th, 2006 through July 12th, 2007

Bruce Campbell
[redacted] 1158 26th St. #883
[redacted] Santa Monica, CA 90403

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Comments on Draft Environmental Impact Report for the Draft Jackson Demonstration State Forest Management Plan and on the Recirculated Draft EIR for the Draft Jackson D.S.F.M.P.

Dear Board of Forestry and to whom it may concern:

The Proposed Alternative known as C1 must be emphatically rejected because:

5 a substantial amount of Mature Trees can be logged (even including clearcutting variations in mature stands) under new Alt. G at Jackson DSF and [redacted] mature stands are a unique aesthetic resource that will become good habitat for old-growth dependent species -- *logging them would result in fragmentation and thus more edge effects, while it is likely that such logging will increase the amount of sediment in streams as well as raise the temperature of the watercourses which could imperil listed native salmonid species and amphibians;*

2. the document largely pretends that mature trees do not exist at Jackson DSF, and, to my knowledge, the Draft EIR for the Draft JDSF Management Plan never mentions the largest mature stands in coastal Mendocino County in the Brandon Gulch, nor the sizable mature stands at West Chamberlain Creek;

3. it hurts old-growth dependent species and makes it difficult for them to recover in the Mendocino County redwood region;

6 4. there is considerable wiggle room / leeway under C1 to log large and even old-growth residual trees; do you believe that there is such leeway under new Alternative G as well?

5. forest management focusing on removing older trees and stands to plant younger tree plantations is a fire hazard;

6. such intensive management activities are an aesthetic nightmare;

7. there is an inadequate road plan;

8. it would bring increased sedimentation of watercourses and increase their temperatures;

9. it would hurt rather than encourage recreational activities;

10. it would add toxic materials to land which also impacts watercourses and species;

11. the invasive plant control plan does not consider preventative measures;

1.

12. it hurts habitat for many species by removing too many snags; (pg. VII.6.6-121 admits that "some key habitat elements, such as snags, depending on their location, could be at risk." Page VI-35 admits that Alternative E would provide "vastly expanded opportunity for snag development".

13. it is too vague as to what the plans really are and there is no indication in the documents about the location to which one should send comments;

14. the Preferred Alternative C1 would count on commercial logging proceeds to supposedly carry out more ecosytem protection activities, though overall the ecosystem would be clearly better if the larger trees were left where they are, rather than exploiting them to feed bureaucratic pressures to expand activities. While new Alternative G has an improved principle in this regards, yet I am concerned that clearcutting variations at JDSF may fuel other clearcut variations with the theory and reality of so-called "forest health" getting lost in the shuffle.

7

Related to the second point above, Page 4 of Appendix 4 in the Notice of Preparation shows this deception as to what age stands comprise the JDSF. It says that, "The majority of this area is now forested by young stands of redwood and Douglas-fir, but there are a few remnant stands of old growth forest." Excuse me, but is there anything in between? No mention of sizable mature stands. That same page says that, "Substantial core areas would be established to preserve old-growth forest stands and to provide for the development of late-seral habitat conditions." But, a total of 783 acres of late-seral habitat augmentation under Alternative C1 (allowing cutting quite a number of trees even in the buffer area around the small old-growth stands) split between various stands, along with the admittedly narrow riparian areas which have significant edge effects, in no way forms a biologically healthy "core" area in any conservation biology sense of the word. But, continued growth without timber-cutting disruptions in the sizable mature stands (along with nearby smaller ancient stands) can form important core habitat, but these mature stands must be protected rather than logged!

****

I would like to point out that I found no mention in about 1500 pages in 3 volumes in regards to what address (or fax or e-mail) to which one should send comments on the Draft EIR for the JDSF Management Plan. This is entirely unacceptable, and this fact alone should necessitate the preparation of at least a Draft Supplemental document. In most such major (or minor) documents, such information is given often on the first or first few pages, or at least on the first or first few pages following the Table of Contents. Even better than a Draft Supplemental document would be, for this and a number of reasons, for the Board of Forestry should reject the whole Draft EIR and Draft Management Plan, and prepare thorough new draft documents with better alternatives, with it clearly stated where to send comments on those draft documents (through various modes), and with more updated specifics addressed -- some of these topics needing updating and specifics I will mention toward the end of these comments.

When I was seeking the Jackson documents a few weeks ago, I called the Board of Forestry who did not know where I should send it officially, but said I could order a CD of the documents. I did get an e-mail address and a fax number from an officeworker who was trying to be helpful, but these locations to send the comments were not the official ones -- and I know that some lawyers would be happy to not adequately respond to points raised in the draft if something was a little askew such as sending to an unofficial address. I was further appalled that I believe it was Mr. Gentry that called me back when I was insisting on a paper version of the documents, and informed me that it would cost $200 !!!!! Clearly, the state agencies are not interested in thorough public review of the documents (though at least the comment period was extended somewhat) and for this and some bogus claims in the document that many damaging activities are less than significant after

2.

mitigation, I do not believe the legal requirements have been met to adopt the plan -- let alone the damaging alternative C or the damaging Alternative G unless there are severe restrictions on clearcutting variations including in mature stands at JDSF. 8

Appendix 5 Page 21 says that JDSF in 1982 was 50,505 acres. Why is it now claimed to be 48,652 acres? What accounts for this serious discrepancy in acreage totals?

REJECT THE DRAFT EIR for the DRAFT JDSF MANAGEMENT PLAN

I urge outright rejection of the Draft EIR for the Draft JDSF Management Plan. One of its main faults is the logging of the vast majority of the oldest second-growth forest stands at Jackson. These 10,000 to 12,000 acres of valuable forest stands are very unique for the region, yet except for mentioning some mature stands toward the extreme western part of the forest (as well as some at Lower Big River) on a mere two pages of print (plus a map), the mature / older second-growth stands were barely mentioned in the lengthy documents -- clearly by design! Adding the acreage of the mature stands mentioned in the aforementioned areas at Jackson, it totalled about 3500 acres, a number which is likely a little less than a third of the mature stands left at Jackson DSF. Why not admit where the other mature stands are in the forest, and what the various alternatives offered would do as far as protecting or pillaging them? I note that page VI-19 says under Alternative F, "Approximately 12,000 acres that have not been entered in the past 80 years shall be managed to address the regional scarcity of that age class".

Other very serious problems with the Jackson documents are the plans for massive clearcutting -- with the amazing claim that with few exceptions 29% of the forest could be clearcut for "research purposes." There are other very damaging not quite clearcuts proposed in many other areas of the forest. There is also way too much wiggle room about how even old-growth residual trees may be logged if one determines that they do not have the proper structural characteristics, and I'm sure even more sizable mature trees even in the few areas mentioned for special treatment would be logged due to questionable excuses (with the prime reason to get the cut out to help the fund flow for the bureaucracy at JDSF). Other serious problems with the draft Jackson documents are the inadequate protection for stream temperatures which support native salmonid species, not paying adequate attention to accomodating recreational visitors in the northern and some other parts of the forest, and the proposed use of five identified and some unidentified herbicides (including even leaving the option open for aerial herbicide use). The other main problem with the documents were the inadequate alternatives. Surely, those who like the protective portions and working toward late seral stages in Alternative E would be champions for not just an aggressive inventory examining which of the 500 miles of roads should be decommissioned on the forest, but also would back funding the decommissioning of many roads at JDSF, as well as funding active stream restoration to improve native salmon and steelhead habitat. Though I do not believe that Alternative E or even F are being seriously considered as a possible choice to guide management at JDSF, yet at least Page VI-8 admits in regards to the 7 alternatives that, "These alternatives have been determined generally feasible, consistent with the basic project purpose, goals and objectives and consistent with the CEQA concept that alternatives avoid or lessen a project's environmental effects."

****

PROPOSED HERBICIDE USE

I will start with the serious matter of herbicides, and will make short points / paragraphs often asking questions, so that the "response" won't put a number by a big paragraph and act like a simple sentence adequately answers a number of very serious complex questions.

3.

There is inadequate analysis and discussion about proposed herbicide (and other possible pesticide) use at JDSF in the Draft EIR / Draft Management Plan. Appendix 13 admits that, "These herbicide summaries are not intended to be exhaustive reviews of the herbicides that may be used at JDSF." That is an understatement!

1. Page VII.8-10 and 8-11 says that, "When management activity levels on the Forest increase following the implementation of the DFMP, herbicide use levels may increase above those of the past several years. However, it is not anticipated that herbicide use will increase to the levels of the early to mid 1990s." What were the herbicide use levels in the early to mid 1990s? What is the amount of anticipated annual herbicide use at JDSF? If another EIR / Management Plan mentions an anticipated level of herbicide use, is there anything preventing JDSF managers from ignoring that theoretical anticipated use level and applying more herbicides than stated?

2. It is so vague that no herbicide, herbicide formulation, herbicide combination, active ingredient, inert ingredient, or surfactant (be they currently approved, yet-to-be approved, or perhaps even banned herbicides) are forbidden from use at Jackson forest.

3. Even aerial application is not forbidden, due to this sentence likely written by a lawyer, "CDF does not anticipate any aerial application." (App. 13, page 1) Just because something is not anticipated does not mean it cannot be done unless specifically stated. Was the last sentence correct in this assumption(?), or will the next EIR / FMP forbid aerially spraying of herbicides at JDSF?

4. While admitting that CDF anticipates possible use of 5 proposed herbicides (plus an unknown number of current and future herbicides) "for invasive weed control and reforestation purposes", there is no indication how much (if any) might be used in bodies of water targetting aquatic plants or in riparian zones.

5. If 1500 pages can be spewed to justify essentially the same damaging stale plan halted by the court in mid-2003, surely you can present the basic "specific label and Material Safety Data Sheet" mentioned in the first sentence of the second paragraph of App. 13, page 1 in regards to herbicides proposed for use at JDSF.

6. How many of the 5 herbicides (or others being considered for use at Jackson) have had a complete set of Toxicological Profile tests completed and documented? Will you delay or ban use of such herbicides that do not have such a complete Toxicological Profile? If they are completed for certain herbicides, what results from the profile would prompt a decision to not use these materials?

7. What are the active ingredients, inert ingredients, surfactants, adjuvants, carriers, diluents, binders, dispersants, stabilizers, neutralizers, antifoamers, buffers, and degradation products for the 5 mentioned herbicides and for any other herbicide that may be used by CDF or worker at JDSF?

8. Will you allow the use of any herbicide at JDSF which was approved due to testing by Industrial Bio-Test which was a firm with a number of labs which had some executives jailed due to falsified, sloppy, and inaccurate chemical testing work?

9. Seeing that the majority of the pesticides in the western United States are sprayed / applied by Spanish-speaking workers, will all who might apply herbicides be able to read the warning label and Material Safety Data Sheet (whether or not the Toxicological Profile) in Spanish? Do such exist in Spanish in Mendocino County, in Sacramento, or beyond?

4.

10. Seeing that App. 13 page 1 says, "in the future, there may be additions or deletions to the list of herbicides considered for use at JDSF", then I'd like to propose deleting the 5 proposed herbicides and all others from consideration for use at JDSF.

11. Has it ever occurred to CDF / BOF that JDSF could be a demonstration center for non-chemical ways of controlling unwanted vegetation, and that you could partner with universities to develop innovative tools and other non-chemical alternatives, plus have unemployed forestry and other workers, youth, prisoners, and others assist with the task?

12. Has JDSF considered the fact that clearcut logging (and other severely disturbing logging practices) as well as related vehicular traffic (and otherwise) are the prime factors spreading invasive plants as well as lead to pioneer brush which chemical addicts determine need to be poisoned?

13. Will any studies regarding volatilization of herbicide residues (through brown-and-burn operations or due to wildfire following herbicide application) and might they have any effect on herbicide use decisions at Jackson?

14. Have the 5 herbicides, or any future use of other herbicides, consider studies relating to herbicides and formulations disrupting immune and/or hormonal systems, or in regards to their genetic, teratogenic, or fetotoxic effects?

15. I see no mention of likelihood of these 5 herbicides and others which may be used to reach groundwater (or their degradation products). Has CDF / BOF examined the studies or summaries about why contamination of groundwater resulted in the banning of Roundup / glyphosate in Denmark. (A couple articles on this matter are at <www.organicconsumers.org/foodsafety/glyphosate051503.cfm> <www.organicconsumers.org/ge/monsanto_roundup_banned.cfm>. I believe that due to very effect p.r. by Monsanto claiming that glyphosate biodegrades so quickly, that those testing groundwater for pesticides do not even consider testing for this widespread active ingredient whose formulation is always more toxic than the active ingredient glyphosate alone.

16. Might an herbicide which necessarily contains dioxin contaminants be considered for use at JDSF? Might any herbicide which sometimes contains 2,3,7,8 tetrachlorodibenzo-p-dioxin or 1,2,3,7,8-pentachlorodibenzo-p-dioxin be considered for use at Jackson forest?

17. Page VII.8-9 says, "In addition to pesticides, other regulated potentially hazardous materials that are anticipated to be used on JDSF include:" -- then the last bullet point says, "other pesticides, such as insecticides, fungicides, rodenticides (no use in DFMP)". So, other pesticides are "anticipated to be used on JDSF", yet it claims "no use in DFMP". This is bait-and-switch -- obviously written documents / CDs which is "the plan" does not entail use of such, but apparently on the ground use at JDSF is anticipated. Please clarify these contradictory claims.

18. Under "8.2 Regional and Project Setting for Hazardous Materials" on Page VII.8-10, it says that, "JDSF maintains a chemical storage facility, which contains herbicides, located near the Mendocino Woodlands Forest Fire Station (Personal communication, Walt Decker)." Is there anything besides herbicides and related spray equipment in this facility? Are there any herbicides / chemicals other than the 5 listed in the Draft EIR / DFMP in this chemical storage facility? Why

5.

was there no analysis of dangers from possible incidents regarding this, likely the largest concentration of toxic materials at JDSF? (By the way, the one sentence saying that there are requirements for "the transport, storage, handling, and disposal of the hazardous materials that might be used at JDSF are established and enforced by the NCRWQCB, Department of Pesticide Regulation, and County Agricultural Commissioner" means virtually nothing on the ground since these are generally office bureaucrats who have some written regulations on a computer or in a filing cabinet. The public wants to know what could happen in the real world on the ground (with some likelihood of impacting air and water pathways and living organisms, not some rosy theory that there is no need for concern since there are regulations. Will the herbicide storage matter be analyzed for the next EIR / DFMP at JDSF?

19. In regards to the Washington Toxics Coalition lawsuit which forced EPA to study the impact of 55 pesticides on salmon, I note on page VII.8-18 that, "As of June 30th, 2004, the EPA had reviewed over half of the 55 pesticides subject to this litigation." How did the 5 herbicides anticipated for use at JDSF in this Draft EIR / FMP fare in these studies? Please elaborate on EPA's findings pertaining to the herbicides which your documents listed as anticipated for use at JDSF.

20. Have you considered the impact on the aquatic food chain from the "eutrophication" effect of herbicides on waterways (whether applied onto aquatic plants or from herbicides washed into watercourses after being applied on land)? If so, please present these findings.

21. Clopyralid was banned for lawn uses in California in 2002 because of its persistence in compost. Would vegetation killed by clopyralid be burned or be hauled to a municipal dump or compost heap, or what would be the specific fate of this vegetation? (It is also been found to be "highly soluble in water" and is considered a "Hazard to Humans and Domestic Animals".

Page 4-91 of the Bureau of Land Management's Vegetation Treatment on BLM Lands in Western U.S. Draft Programmatic Environmental Review says, "Aquatic herbicides with the greatest likelihood of affecting special status amphibian species during normal application to an aquatic habitat are diquat and some formulations of glyphosate."

Excellent compilations of important points from studies regarding the impact of pesticides on salmon can be obtained from the Northwest Coalition for Alternatives to Pesticides based in Eugene, Oregon. The Executive Summary of the report Diminishing Returns: Salmon Decline and Pesticides can be found at <www.pesticide.org/salpestx.pdf>, while the Full Report can be found at <www.pesticide.org/salpest.pdf>. The report called Poisoned Waters (Protecting Pacific Salmon) can be found at <www.pesticide.org/PoisonedWaters.pdf>. Various articles on the subject are compiled at <www.pesticide.org/CleanWaterSalmon.html>. Please include these reports and articles, and research and give their references in your next EIR / FMP documents.

I am appalled by the wide range of uses of herbicides planned by William Baxter mentioned on Page VII.8-12 of the DEIR / DFMP, "Herbicide use may occur in the following situations:" "Controlling invasive species in order to maintain native plant communities, promote conifer habitat, and prevent the establishment and spread of new exotics." "Control roadside vegetation, primarily invasive species such as pampas grass, broom, and gorse that easily spread via roadways, but also native plant species that vigorously grow in these conditions and hamper road use and maintenance. *"For use, following broadcast burns and wildfires, to facilitate successful establishment and growth of planted conifer seedlings by reducing brush competition. * To inhibit

6.

the regrowth of hardwoods and maintain high conifer occupancy in harvest areas." Controlling Tasmanian blue gum infestation (plantation) at Caspar Creek watershed is also mentioned.

Virtually all excuses for use of herbicides is included in that quote, including reasons where one could make an argument to conduct aerial spraying of herbicides. One could spray all 500 miles of roadsides at JDSF. One can spray to kill invasive plants admittedly largely spread by the excessive road system. One can spray following wildfires and broadcast burns. And one can spray after logging to control brush and hardwood regrowth, and then again to assist conifer plantations by killing the so-called competition of brush and hardwoods which dare to try to maintain some botanical diversity on our publicly-owned state forest.

I will briefly touch on herbicides later in these comments when discussing fire dangers.

USE of OTHER CHEMICALS at JDSF

a. In relation to other hazardous material in those bullet points on pages VII.8-9 and 8-10, where are these materials stored at JDSF?

b. What substances comprise the "chemical treatments on Forest roads for dust abatement"? (Page VII.8-10). Are these analyzed in this Draft EIR / DFMP? Will they be analyzed in the next EIR / FMP? Are these the same or different chemicals as will be used as "chemical stabilizers" to control soil erosion? If different, of what materials do these chemical stabilizers consist?

The next EIR / FMP (be it another Draft, a Supplemental Draft, or the Final) must consider possible cumulative impacts of purposeful use and accidental spills and their impact on workers, recreational users (including children and pregnant women), specific sites, sensitive plants, aquatic areas, and the food chain in the watersheds at JDSF. Synergistic and cumulative effects from different herbicide formulations, and impacts of combinations of ingredients and breakdown products of different herbicides along with fire retardants (if used at JDSF), spilled fuel and other lubricants, and "proper" or improper use of "chemical soil stabilizers" and road dust-abating chemicals -- and their impacts on soil, watercourses, spawning gravels, groundwater, various listed and other sensitive species (and their food chain) must be carefully examined.

GENETICALLY MODIFIED TREES, GRASSES, and MULCH

1. Will the Board of Forestry or the California Department of Forestry plant, or allow to be planted, any genetically modified (using recombinant DNA technology to cross the trans-species barrier) trees, grasses, or other plants at JDSF? Seeing that there is an ordinance in Mendocino County prohibiting these crops, I hope such are not planned for Jackson. Also, I like that JDSF uses tree species from local genetic stock, which should preclude genetically modified trees, grasses, turf, and other plants from becoming an issue -- which should also make the likelihood of these threatening plants at Jackson a remote possibility.

2. Will land managers at Jackson take any steps to try to discourage mulch used at the forest from being from remnants of genetically modified crops? Will any of these steps also apply to the type of feed which horse and other riders may bring to JDSF to feed their horse or other animal? If the commercialization of genetically modified alfalfa goes through (which is being proposed in the past several months), could people bring genetically modified alfalfa to Jackson to feed their horses or other animals despite the likelihood of some seed escaping and taking hold on what is supposed to

7.

be a forest with just genetic stock vegetation (besides the invasive weed and eucalyptus problems)? (I will discuss mulch further when primarily discussing the impact of roads and management activities on the spread of invasive plant species at JDSF.
****

I call for the rejection of the Draft Management Plan for JDSF due to the logging of the oldest second-growth mature forest stands (between 80 and 120 years old), due to plans for widespread clearcutting and other commercial logging, due to inadequate protection for streams from warmer temperatures and sedimentation which can harm or kill native salmonids, due to plans to use herbicides, and due to some other reasons enumerated above.

Also, there are no plans to accomodate more recreation in the area, while much of the mature forest at key current recreational sites such as Brandon Gulch and West Chamberlain Creek areas will be logged, while leaving just small "facade" buffer areas near trails and campgrounds -- and some logging can even occur within these "facade" buffer areas! I even object to the so-called management or treatment to achieve late seral forests in mature stands especially in the West Chamberlain and Brandon Gulch areas, as well as in the few areas identified as notable habitat proximate to marbled murrelets at the western side of Jackson forest (as well as at the Lower Big River mature stand). I note on page VIII-36 that 40.4% of the Brandon Gulch CWE assessment area and 21.6% of the Chamberlain CWE assessment area are on the chopping block within the next decade.

The best alternative presented is Alternative E which would manage the forest for a return to late-seral forest conditions. However, even that alternative is lacking because it does not allot funds for the decommissioning of hundreds of miles of roads which wreak havoc on stream habitat or the active restoration of salmon habitat in streams. Thus, the Proposed Alternative C1, and the Draft JDSF plan in general, should be rejected as should new Alternative G unless there are severe restrictions on clearcutting variations.
9 **********

AESTHETICS

10 The Proposed Alternative C1 would substantially degrade the existing visual character and quality of many sites at Jackson Demonstration State Forest; as would new ALTERNATIVE G unless nearly all clearcutting and even-aged management is eliminated and what is carried out is not in mature or old-growth areas and is not adjacent to a state park and has a clear research purpose.

a. aesthetic mitigations under C1 are clearly inadequate -- not only is the 29% of the forest planned for clearcutting / even-aged management clearly not mitigatable, but other widespread commercial logging (including of mature stands) cannot be mitigated. Amazingly, on page VI-10, the Draft EIR has the nerve to say that in relation to Alt. C1, "With limited exception, clearcutting is permitted only for research purposes." Give it up! JDSF has had a massive amount of these so-called "experiments" already, and they are harmful aesthetically, to streamcourses and rivers, to aquatic and amphibian life, and to old-growth forest dependent species. And seeing that you mentioned it, what parts of the forest would be the "exceptions" where clearcutting would be allowed other than for "research purposes." Also, what precisely are the research purposes for the extensive clearcuts planned for the Berry Gulch watershed assessment area, as well as for other watershed assessment areas at Jackson forest?

b. Page VII.2-12 "Thresholds of Concern" points out that the proposed project would have a significant impact on aesthetics if it "substantially degrades the existing visual character or quality of the site and its surroundings" -- and mentions that the guidance as to what is considered significant is based on the California Environmental Quality Act (PRC Section 21001 and CEQA

8

Guidelines). The documents act like one need not be concerned with aesthetics other than from a panoramic vista along a main road or trail. But, Webster's New World Dictionary 1975 defines "site" as "location or scene". There are many locations at JDSF, and most of these are not panoramic vistas (a number of which also show the scars form excessively intensive timber and road management activities).

c. It is wrong to have a Registered Professional Forester as the point person making determinations as to whether a certain management activity has a significant impact on aesthetics.

d. In relation to the Alternatives presented in the Draft Forest Management Plan, page VII.2-19 says, "Alternatives C2 through F contain more provisions than C1 for aesthetic considerations. Alternatives D through F include little or no clearcutting or other evenaged management and provide for greater levels of late seral forest development. These alternatives would have a less than significant impact on the visual character or quality of the site and its surroundings."

e. The terms "visual character" as well as "site and its surroundings" certainly include more areas than what one can see from a major road or trail at Jackson forest or near a state park or Special Concerns Area -- and even most of these buffers can have a certain amount of management activities / logging! (Thus, the Draft Forest Management Plan for Jackson acts like less intensive logging in buffer areas, as well as treating logging slash within 50 feet of major corridors, is sufficient to declare that "Timber harvests and related activities" would not "substantially degrade the existing visual character or quality" of the Special Treatment Areas and buffer areas, yet acts like there is no need to be concerned about visual impacts on the vast majority of our state forest.)

f. Page VII.2-18 admits that "comments made through the public Scoping process expressed the sentiment that the buffers were not necessarily sufficient to mitigate aesthetic impacts." Page VII.2-24 says that "The public scoping for this document clearly indicated a strong desire by some citizens and organizations for the State Forest to place increased importance on recreational and aesthetic resource values."

OVERLAP BETWEEN AESTHETICS and MATURE FORESTS at JDSF

Please note that AESTHETICS "d." above mentions the more aesthetically-pleasing alternatives and mentions the plus for aesthetics in providing "for greater levels of late seral forest development". Of course, not only is managing -- and sometimes non-managing -- for future late seral development helpful for aesthetics as well as for a number of species, but if a forest is currently mature, then it is clearly aesthetically pleasing. One doesn't need to log trees and leave stumps and slash around to try to accelerate some eventually pleasing aesthetics because the mature forest stands -- so rare especially in the Coast Ranges of central or southern Mendocino County -- are already aesthetically positive and will naturally become more so.

The following points are also related to the importance of the overlap of the importance of the mature forest stands at JDSF with the topic and legal requirement to not significantly impact the currently pleasant aesthetics in these stands:

, immediately following,

a. Pages VII.2-24 and 2-25 admit only that there is an aesthetic problem related to PG&E transmission lines which the State Forest has no control over, and claim that "all other visual cumulative impacts within the boundaries of the State Forest to be less than significant is supported by the following findings:". The third bullet point is "The State Forest maintains a high proportion

9.

of area devoted to continuous forest cover in managed stands of medium to large trees, and maintains the highest standing timber inventory of any large forest ownership in the coastal watersheds of Mendocino County." Since the eleven ancient groves (totalling 459 acres, and ranging from 5 to 101 acres in size) cannot be considered managed (except by nature), then this last quoted sentence must be referring to the 10,000 to 12,000 acres of mature forests (with a few scattered residual old-growth) at Jackson forest. (See the section on Mature Forests immediately following, because it is precisely the"medium to large trees" that allegedly make the current visual cumulative effects at Jackson "less than significant" which are the primary trees which are targetted for widespread logging as soon as JDSF managers can undertake it!)

b. The second bullet point in regards to criteria to help in determining whether physical changes significantly affect aesthetics on page VII.2-12 is "The integrity and uniqueness of the existing aesthetic resource." The first sentence under that point says that, "The magnitude of change necessary to create a significant impact to aesthetics is greater in a disturbed or non-unique environment than in a pristine or rare environment." (This also can apply to the Mature Forests section because substantial tracts of mature forests are comparatively pristine and extremely rare in coastal Mendocino County other than the 10,000 to12,000 acres at Jackson forest.)

c. I do like the admission on page VI-41 that under Alternative E, "Reduction in forest management activity expected to provide increase in aesthetic values."

MATURE FORESTS

Under "Scenic Attractiveness" on pages VII.2-3 and 2-4, it says that "Distinctive landscapes on JDSF with a high scenic attractiveness are:" -- the fifth bullet point is, "forested areas dominated by a high level of stocking of relatively large trees (The high levels of forest stocking and higher percentages of relatively mature timber stands, as compared to commercial industrial forest ownerships within Mendocino County, provide aesthetic values for forest visitors who desire to recreate or travel within JDSF)". (Clearly, this quote also applies to the Aesthetics topic.)

Page VI-8 says that, "JDSF is not typical of other large forestland holdings in its maturing second-growth timber conditions, its ongoing research activities such as the Caspar Creek Study, its old growth redwood and Douglas-fir groves, and its special facilities such as conservation camps."

In relation to relatively rare habitat types and a forested mosaic, page V-11 says, "Maintaining a forest mosaic that helps support the many species in the region is a goal for both forest management and private forest demonstration. Habitat protection and restoration of relatively rare habitat types is also an important element of forest management." Clearly, old-growth forests which are predominately redwood, some residual old-growth with mature redwood forest, and also mature redwood forests are all "relatively rare habitat types". That same page mentions that, "It can be assumed that most of the redwood forest in this region was once dominated by old-growth".
moderately intensive
For the Proposed Alternative C1 (under "Forest Management Special Concern Areas and Woodlands Special Treatment Areas) on page VI-20, it says that only 780 acres at JDSF is devoted to "old-growth augmentation (late seral development)". This is clearly inadequate to protect this relatively rare habitat type, while even what JDSF managers may declare timber harvest for habitat restoration may well look like at least moderately intensive forest management which other than in young plantation areas would look to recreationists as well as some old-growth dependent species like you were eliminating canopy and sizable trees which can serve as murrelet social activity

10.

habitat and work into at least marginal nesting habitat within several decades. Not that I support even what this plan purports to be management to achieve late seral forest stage especially in the older and larger mature stands, but your denial of the importance of the mature stands even to the point of not proposing at least lighter thinning in those areas is appalling and biologically ignorant as well as an aesthetic disgrace from the perspective of recreationists.

It is quite disturbing to read on page VII.2-15 that, "Even-aged prescriptions are proposed in the central and eastern portions of the JDSF". It is also disturbing that such a high percentage of Berry Gulch, which is adjacent to the Mendocino Woodlands area and the Lower Big River mature stands the document discusses the importance of when discussing the marbled murrelet, is scheduled not only for logging, but for clearcutting / evenaged management.

WESTERN PART of JACKSON FOREST

Despite the stupidity of having a special "clearcutting experiment" on the Caspar Creek watershed in the latitudinal middle of the western portion of the Jackson forest (and the existence of a eucalyptus plantation in the area), still this portion of JDSF is quite important. In the western portion, MANAGEMENT ACTIVITIES SHOULD BE MINIMIZED and recreation should not be encouraged because:

a. rare plants at Jackson are especially concentrated here -- these include: Pygmy Cypress, Pygmy Manzanita, Leafy-Stemmed Mitrewort, Bolander's Beach Pine, Swamp Harebell, Coast Lily, and California Sedge.

b. some mature forests exist here (plus some old-growth residuals are in the Russian Gulch watershed in the state forest, besides more substantial old-growth groves in the state park further west);

c. the special clearcutting area at Caspar Creek has already caused enough damage in the west, and apparently this area cannot be guided by the managment plan;

d. there should only be an increase in campgrounds in this area if some campgrounds at adjoining state park land are closed to try to avoid disturbing marbled murrelet nests nearby -- and if campgrounds are located, JDSF personnel should educate campers not to leave food scraps which attract corvid bird species which also consumes marbled murrelet chicks and eggs.

Management activities such as logging should be minimized in the western portion (as well as in Lower Big River, Brandon Gulch, West Chamberlain Creek watershed, east side of mainstem of Chamberlain Creek, and other areas), while road-related activities should generally pertain to decommissioning damaging and unneeded roads. I object to the intensive nature of JDSF's so-called "management for late seral forest", and definitely object to more logging activities in these mostly mature stands adjacent to state parks before the specific assessment of habitat for the marbled murrelet is completed. Off-road vehicles must be halted from damaging riparian and other areas, plus should be controlled to stop the spread of invasive plants and so as not to run over and damage the aforementioned rare plant species which especially favor the western part of the Jackson forest. And due to this area being adjacent to murrelet nesting habitat (while hopefully being allowed to mature further to accomodate some murrelet nests in the future), hunting must be prohibited at least in this part of JDSF.

11.

COAST REDWOOD ECOSYSTEM and MARBLED MURRELET RECOVERY

The draft documents try to downplay the role which Jackson Demonstration State Forest can play in recovering old-growth forest dependent species. This area is quite vital due to it being the largest contiguous publicly-owned land in coastal Mendocino County -- a county and part of the county devastated by corporate timberland clearcutting. Also, the 459 acres of unentered or residual old-growth areas are a start, and the 10,000 to12,000 acres of mature forests are quite unique in the county and vital for recovery of watersheds and various species in this region.

Page V-12 of the Draft JDSF Management Plan says, "JDSF and the surrounding forestland area provides habitat for a number of listed and sensitive fish and wildlife species, including the Northern Spotted Owl, coho salmon, and steelhead. In addition, JDSF currently provides or may provide in the future, habitat for several listed or sensitive species that are not currently known to occur on the forest. These species include the Marbled Murrelet, Pacific fisher, and Humboldt marten. As such, the large block of publicly owned forestland that is JDSF, in conjunction with other parcels of public land in central Mendocino County, represents a valuable resource of potential reoccupancy and sustainability for at-risk wildlife species."

On a disturbing note which should mobilize us (and managers at JDSF and overseers at BOF) to action is that the 5-Year Murrelet Status review (McShane et al. 2004) assessed the status and trends of Marbled Murrelet populations within each of U.S. Fish and Wildlife Service's 6 Recovery Zones. Page VII-6.6-74 says, "The Zone Model projected an extirpation probability of 100% within 40 years for Recovery Zones 5 and 6 with a 2% annual migration rate into the zone." That means that murrelets will be entirely gone from the Humboldt / Mendocino County line all the way down to the southern extent of their habitat in Monterey County by the year 2044!

We need the agency managing the largest publicly-owned contiguous block of land in coastal Mendocino County to step up to the plate big-time, and do all that they can to provide extensive habitat for the Marbled Murrelet (and other old-growth forest dependent species). So-called mitigations to help murrelet habitat under the plan are a dismal sham when they plan to log the bulk of mature trees at JDSF within the next five to ten years. The marbled murrelet, which is federally-listed as threatened and state-listed as endangered, needs our help immediately (or even sooner!). A decent start at this late date would be to emphatically reject the Jackson Demonstration State Forest Management Plan.

I noticed on pages VI-5 and VI-6 that rejected from consideration as an alternative was a "Regional Watershed and Conservation Planning" approach using JDSF as a "mitigation bank" or "mitigation site" for wildlife connectivity partly with other public lands in the county. While it makes sense to dismiss this as an alternative because it may be difficult to mandate participation of neighboring timber companies (though it makes some sense for neighbors developing Habitat Conservation Plans to work with this approach), yet it is incredibly logical biologically. It is disingenuous to say that, "The use of JDSF as a mitigation site could allow more intense timber management activities elsewhere likely resulting in a full range of significant indirect impacts that would not otherwise occur as a result of this project." Just because you are obsessed with board-feet does not mean that if you take better care of a certain area, that it would necessitate more-than-planned intensive timber activities (beyond what was already planned) elsewhere in the watershed having significant indirect effects. Using that so-called logic, why protect any forest area since people will get just forest products from somewhere else? You mention regarding the

12.

aforementioned suggested alternative which you dismiss as not needing analysis that, "Components of this alternative have been incorporated into Alternatives C2, D, E and F to the extent that they meet the project purpose, goals and objectives, and reduce environmental impacts." This indicates that the Proposed Alternative C1 does not consider and incorporate into it the regional significance which the JDSF area could play in regional wildlife connectivity and as a prime area for recovery of habitat for old-growth redwood ecosystem dependent species, while new Alternative G with its emphasis on clearcutting and even-aged management clearly is not concerned about species recovery or regional wildlife connectivity seeing that the massive fragmentation that would be perpetrated under new Alt. G would not assist recovery or connectivity. 11

So, on the one hand you dismiss the role of Jackson as a possible key recovery area for old-growth dependent species in the watershed and regional setting, yet on the other hand you use portions of somewhat "coarse" studies to act like the Jackson area is not in the highest priorities for restoration as far as redwood ecosystem conservation. If you are going to use extrapolations from Strittholt's "coarse" work and snippets from other studies to argue that the JDSF area is not vital for recovery of the coast redwood ecosystem, you cannot simultaneously argue that it is beyond your scope to analyze JDSF as a key component in watershed and regional recovery habitat for the redwood ecosystem and for a number of species dependent upon it.

I note that Page V-1 says that, "About half of the total area of redwood forest is located to the north of JDSF and about half to the south. With 542,000 acres of redwood forest, Mendocino County encompasses more redwood forest area than any other county in California (Fire and Resource Assessment Program 2002)." This fact that Jackson has similar amounts of redwood ecosystem to its north and to its south, and the fact that the Jackson DSF is the largest contiguous publicly-owned acreage in coastal Mendocino County, should give one a hint about how significant a role this area could play in "demonstrating" that we should care about managing this vital area to help in watershed, regional, and ecosystem recovery for the health of its watersheds and to prevent extirpation of species (for instance) from murrelet Recovery Zone 5. But since you do not seem to take watershed, regional, or ecosystem conservation and recovery seriously, I do not believe your statement on page V-11 that, "Habitat protection and restoration of relatively rare habitat types is also an important element of forest management." This EIR / FMP admits that there would be substantial edge effects in the streamside buffer areas -- thus they could certainly not develop to be anything but very marginal murrelet nesting habitat even centuries from now.

Need I remind you all that murrelets have been spotted near or in JDSF by such folks as Cota and Papke (1994), Ralph et al. (1994), Georgia-Pacific Sustained Yield Plan (G-P 1997), Camp Three Timber Harvest Plan (Jameson 1999), M. Jameson (personal communication 2002), and by others reporting sightings or giving interviews about such. Page VII.6.6-54 says that there are indications that "murrelets are likely nesting in Mendocino County and in the vicinity of JDSF (K. Nelson pers. comm. March 11, 2004)."

MARBLED MURRELET BIOLOGY

Here are some key quotes about the murrelet from the document. Though they are in the EIR / FMP, it does not seem like many of these points were considered in the development of the proposed alternative's management activities at Jackson. Page 6.6-53 says, "Current breeding populations are discontinuous and generally concentrated at sea in areas adjacent to remaining late-successional coniferous forests near the coast (Nelson, 1997a)." "A 300-mile gap occurs in the southern portion of the marbled murrelet's breeding range, between Humboldt and Del Norte Counties in the north and San Mateo and Santa Cruz Counties in the south. Marbled murrelets likely occurred in this gap prior to extensive logging of redwood forests (USFWS, 1997ae). Moderate numbers of murrelets have been observed along the coast of Mendocino, Sonoma, and

13.

Marin counties (Paton & Ralph 1988, 1990)." I would say that the term ":moderate" is optimistic here. Page 6.6-73 says, "A major gap in the at-sea distribution of murrelets is found between Humboldt and San Mateo Counties. Murrelets have recently been found to breed in small patches of nesting habitat still extant in Mendocino County. A moderate to low density (1.8 - 3.9 birds per square mile) was recorded from Loleta, Humboldt County to Albion, Mendocino County to Half Moon Bay in San Mateo County."

Page 6-75 says, "According to Ralph and Miller (1995), the most important factor in indicating occupied stands was density of old-growth canopy cover. Occupied stands had a greater percentage of old-growth canopy cover than stands with only murrelet presence or no detections (Ralph and Miller 1995)."

One key point from my 17 years of research regarding the marbled murrelet which I did not see mentioned in the Jackson Draft EIR / FMP is that to successfully nest in California, murrelets need not only to be on a large mossy horizontal conifer branch (which need not necessarily be redwood), but also need ancient redwood canopy above the nest in order to help protect them from the gaze of corvid bird species. It is admitted on page 6-75 that, "Nests were typically located in the top third of the dominant tree canopy layer and usually had good overhead protection. Such locations seem to allow easy access to the exterior of the forest and provide shelter from potential predators." Yet, this does not admit what some key researchers believe to be biological fact in California, which is that murrelets need old-growth REDWOOD canopy above their nest to have a chance for nesting success. Thus, the sentence on page VII.6.6-75 telling of Ralph and Miller's findings that "the most important factor in indicating occupied stands was density of old-growth canopy cover" -- in California, that should be clarified to say "old-growth redwood canopy cover". I note that page VII.6.6-168 under "Alternative C1 Project Alternative --Inside JDSF" says, "model outputs for Alternative C1 within JDSF indicate a decrease in acreage of large size and multistoried canopy condition in Redwood (RDW6)" -- thus even the most classic ancient forest type will have a canopy reduction which hurts species dependent upon interior forest conditions with mostly closed canopy. Page VII.6.6-170 in regards to habitat changes within the first period (2004 through 2030), says that, "Potential Marbled Murrelet habitat capability is expected to decline in the first period (-7%) given reduction in extent of Redwood 6." This is unacceptable in an era where murrelets may be facing extirpation from Zone 5 and possibly Zone 6 as well!

Page 6-76, in reference to studies by Meyer (1999) and fide Raphael et al.(2002), "In that study, patch size and isolation were important attributes of sites occupied by murrelets; at a broader scale, proximity of habitat patches to each other and amount of habitat in the largest patch predicted murrelet densities in adjacent offshore areas." Thus, since mature forests are at least half way there to being old-growth, and seeing that there are substantial mature stands especially at Brandon Gulch CWE assessment area, in part of Chamberlain CWE, and elsewhere, these stands should remain intact which could develop into at least as good a murrelet habitat area as those nearer the coast mature stands which unfortunately are facing excessive timber management ironically in the name of "late seral" development. The sizable mature stands especially adjacent to ancient stands are especially important, and the proposed alternative's plan for timber activities even within so-called buffers near old-growth areas does not help the recovery of old-growth dependent species. McShane et al. 2004 concluded that (pg. VII.6.6-77), "Increased levels of nest site predation as a result of forest fragmentation and increased amounts of edge are considered the most significant cause of nest failure (corvids being the principal predator)."

14.

I did find it interesting that a study in Washington state concluded that, since there is somewhat more uniformity in a mature stand than in a multi-layer ancient stand, when mature stands meet ancient stands or aggregations (as in the Brandon Gulch and Chamberlain cumulative watershed effects assessment areas as well as at mature stands at the western part of Jackson adjacent to state parks which contain ancient forest elements), that it is superior murrelet nesting habitat since these areas would tend to have less corvids (unless recreationists in the state parks leave considerable food scraps around anyway). Here is most of that interesting paragraph, "General landscape condition may influence the degree to which Marbled Murrelets nest in an area. In Washington, detections of murrelets increased when old-growth/mature forests comprised more than 30% of the landscape. Raphael et al. (1995) found that the percentage of old-growth forest and large sawtimber was significantly greater within 0.5 miles of sites that were occupied by murrelets than at sites where they were not detected. Raphael et al. (1995) suggested sites with 35 percent old-growth and large sawtimber in the landscape are more likely to be occupied. However, Raphael et al. (2002) found that murrelet numbers on the Olympic Peninsula, Washington, increased as the amount of core area of late-seral forest and proximity of patches increased, and decreased with increasing amounts of edge of late-seral patches." Thus, rather than log nearly all of the mature trees which comprise about 20-24% of JDSF -- which sometimes are adjacent to the scatterings of old-growth groves which are almost 1% of the Jackson acreage, let that substantial amount of sawtimber remain vertical and allow other areas to grow larger trees as well so that the percentage of good-sized trees in good-sized patches can be over 25% and climb from there. In the Meyer (1999) and fide Raphael et al. 2002 studies regarding murrelet habitat in California, page VII.6.6-76 explains that, "proximity of habitat patches to each other and amount of habitat in the largest patch predicted murrelet densities in adjacent offshore areas." Thus, protect especially the substantial patches of mature trees which are of extra value if adjacent or in relative proximity to remaining old-growth stands and residual, partially to reduce the number of avian nest predators on murrelet chicks and eggs as will be elaborated upon in the following paragraph.

On a similar note, Page VII.6.6-77 discusses the findings of Marzloff et al. (2000) by saying, "In their study area (western side of the Olympic peninsula of Washington State) providing landscapes that include mixtures of simple-structured mature, mature forest, and old-growth forest likely to be occupied by murrelets could increase nest success and productivity relative to landscapes of pure old-growth because those portions of the landscape with mature stands of relatively simpler structure would hold fewer avian nest predators."

I find it disturbing that page VII.6.6-83 says that, "Outside of stochastic events like the Biscuit fire, the greatest loss of suitable habitat is attributed to consultations on individual harvest units, individual trees, and suitable habitat harvest through Habitat Conservation Plans (McShane et al. 2004)." Thus, this shows that the wildlife agencies are not serious about protecting murrelet habitat (let alone the forest managers) even in areas that have been declared "critical habitat" for the federally-threatened and state-endangered marbled murrelet. Not only do biologists need to do more than token consultation and perhaps suggest a minor mitigation modification for habitat, but they and others need to realize that where you have both designated critical habitat as well as a large contiguous publicly-owned forest in a region which has largely had its older trees butchered, it is time to get serious about providing substantial areas for murrelet recovery -- and what better an area than one with substantial mature stands (sometimes adjoining ancient remnants and groves) on publicly-owned land designated critical habitat in the heart of the redwood region not only of Mendocino County, but of California as well.

15.

The Jackson management plan cannot have it both ways. Page VII.6.6-127 says that, "Marbled Murrelet habitat value within current old-growth groves on JDSF and late seral forest conditions associated with WLPZs are discounted under the DFMP due to distance from the coast reduced likelihood of certain nest site conditions given that distance and in the case of the latter, increased edge effect and potential for nest site predation." So, the near-term plans are to do intensive logging of mature stands especially where there are most extensive (and which also adjoin some ancient stands like at Brandon and Chamberlain areas), yet it is admitted that "increased edge effect and potential for nest site predation" are problems. Substantial mature forests are becoming murrelet social activity and flyway areas and will become at least marginal murrelet nesting habitat within several decades, so do not log them which would ruin chances for future nesting habitat in the mature stands and which would make any murrelets who may wish to attempt nesting at the ancient stands in these area be more prone to edge effects including corvid predation! The aforementioned page continues, "Harvest of certain forest conditions under the DFMP could reduce the effective future recruitment of potential Marbled Murrelet habitat that by virtue of its location would have a higher probability of occupancy." Thus, both the mature stands adjacent to state park and Mendocino Woodlands areas, and the sizable mature stands at Brandon and West Chamberlain areas, should not only be logged en masse as is planned for nearly all of the larger mature stands, but also should not have substantial treatment to allegedly achieve late seral characterisitics because taking over half of the sizable trees out (which would not occur in more considerate practices of late seral stage development, for instance by the Institute for Sustainable Forestry or by a landowner at Deer Creek, Josephine County, OR) would also increase edge effect and predation of murrelet nests.

Thus, it is preposterous to make the claim (obviously urged by lawyers rather than reputable biologists) on page VII.6.6-121 that "Substantial adverse effect, either directly or through habitat modifications" of sensitive species, or "Reduce the number or restrict the range of a rare or endangered animal" is claimed to be "Less than Significant with Mitigation". Some generic impacts from management activities which do not kill a species outright but which impact their habitat is mentioned on pages VII.6.6-122 (and 123), "Indirect impacts may include, but are not limited to, the reduction of suitable nesting habitat or nest sites, habitat connectivity and dispersal corridors, canopy cover, and key habitat elements (hardwoods, snags, LWD, and trees with cavities). Many of these impacts affect habitat quality and/or suitability and, ultimately, can adversely affect reproduction and the continued persistence of a species in a given area." Obviously, the writer of the following sentence conveniently overlooked the fact that JDSF contains the most substantial mature forests in coastal Mendocino County (which is a "rare habitat" in the region and will become another rare habitat within decades -- an old-growth habitat), "The proposed action does not propose the modification or removal of rare habitats." I believe that the Proposed Alternative calls for wholesale removal of the rare mature forest habitat with the potential to be the largest block eventually supporting marbled murrelet nesting in Mendocino County.

Though some elements of the Interior Dept. are now claiming that one need not list the murrelet in California, Oregon, and Washington because there are plenty of murrelets in Alaska, is ignoring info such as is mentioned by McShane et al. 2004 and others about not only different genetics among murrelets south of Alaska, but even the difference in murrelet genetics in different recovery zones in California: "Loss of Genetic Variation Among Populations. Given that there are at least 3 genetically distinct populations of Marbled Murrelets, loss of any of these populations would reduce the species' genetic resources and compromise its long-term viability." "The probability for extirpation is especially prominent for Marbled Murrelets in Zones 5 and 6." In regards to the greater murrelet range, page VII.6.6-86 says, "Estimates of the distribution of neutral genetic variation in Marbled Murrelets indicate that population loss in California, British

16.

Columbia/mainland Alaska, or the Aleutians would however compromise long-term viability of the species and adaptive variation."

Page VII.6.6-89 says, "JDSF was included in the critical habitat designation (USFWS 1996b). Criteria for critical habitat include the presence of suitable nesting habitat, presence of murrelets, and proximity to foraging habitat. Critical habitat also was designated in zones of current low use by murrelets. These areas are intended to support the USFWS goal to reduce gaps in the species nesting distribution, and help buffer the species from future catastrophic events such as oil spills and forest fires. JDSF is the largest contiguous parcel of public land on the Mendocino County coast. In California, 175,000 acres (71,040 ha) of state lands were designated as critical habitat, of which JDSF constitutes about 29 percent." "Jackson Demonstration State Forest falls within the Mendocino Zone (Zone 5) that extends from the southern boundary of Humboldt County California, to the mouth of San Francisco Bay." This zone extends from 1.2 miles at sea to up to 25 miles inland. "Conservation measures here could still benefit the species. Murrelets along the coast of Mendocino, Sonoma and Marin Counties are considered important to future reconnection of murrelet populations in northern and central California. Recovery efforts in Zone 5 may improve survival and recovery in adjacent zones by reducing the current geographical gap in breeding distribution. Given that the population of murrelets in this zone is so small, longer-term recovery efforts geared toward the development of new habitat may be most important (USFWS 1997)." However, this does not mean that what is now suitable social activity and marginal nesting habitat for the murrelet should be exposed to greater edge effects and corvid predation due to the intensive
12 management activities proposed under Alternative C1 simply because of claims that buffer strips and new Alternative G
and riparian areas will have some old-growth over a century from now. Substantial chunks of good habitat are needed, and the best chance for this is to protect the mature stands at JDSF, especially when they are larger and when they are bordering ancient stands either at JDSF or in adjacent state parks or the Mendocino Woodlands area.

I notice that page VII.6.6-89 mentions "actions that will contribute to population stabilization and eventual recovery of the species" which could be "potentially implemented at JDSF" -- point #2 is "provide for the maintenance and recruitment of suitable, high-quality habitat over the long-term (50-100 years)". Seeking to have young-growth grow to be old-growth murrelet habitat just will not happen in that length of time. But if the JDSF mature stands are protected, they will provide good social activity and flyway habitat in the very near future, and will provide at least marginal nesting habitat in the length of time where some studies conclude the murrelet will be extirpated from south of the Humboldt County line -- extirpation predicted to be 100% by 2044 in Zones 5 and 6. Thus, protect the mature stands to provide just enough habitat for the murrelet to possibly survive in the recovery zone until the middle of the century, and keep protecting the mature stands so that it can provide good murrelet nesting habitat by late this century.

MURRELET, MENDOCINO COUNTY, and REDWOOD ECOSYSTEM RECOVERY including addressing the "coarse" STRITTHOLT Study

Some areas of Mendocino (with a couple in northwestern Sonoma County) in which murrelets have been detected in recent years include Ten Mile Creek, Big River, Navarro River, Chadbourne Gulch, Usal Creek, Russian Gulch State Park, Alder Creek, Admiral Standley Park, Greenwood Creek, Gualala River, Garcia River, Albion River, Hardy Creek, Wheatfield Creek, Haupt Creek, Willow Creek, Digger Creek, and at the Wages Creek and Rider Gulch confluence. (An earlier paragraph told of murrelet sightings in the vicinity of JDSF.)

17.

In 1999, Strittholt et al. came out with an admittedly "coarse" overview of relative conservation values for watersheds in the North Coast redwood ecosystem. There was a general map called figure VII.6.6.5A. on Page VII.6.6-27 which was the "Composite Model Ranking by Watershed Using Criteria Two Through Nine". Though the map should have been considerably larger and the names of rivers and creeks should have been listed, I used my California atlas and the shape of the coast to determine which river watersheds were which shade on that map. The Noyo River as a whole looks like it is given a "medium" conservation value. I believe that both Big River and the short coastal watersheds which run from JDSF through state parks to the ocean (as well as Ten Mile Creek watershed to the north of the Noyo) were given High conservation value potential.

Looking on Page V-28 at "Table V.4. Strittholt et al. (1999) Redwood Ecosystem Conservation Ratings for JDSF Cumulative Effects Assessment Area", it gets into more detail. Three of the four coastal drainages, as well as the Mouth of Big River, were the areas at least partially on the Jackson forest rated of High Conservation Value. In regards to the CWE assessment areas that have substantial acreage at JDSF, I note that 4 of the 5 CWE assessment areas scheduled to have the most intensive timber management activities over the next five to ten years are rated of Medium conservation value. Yet, these watershed assessment areas (Brandon Gulch 40.4%, Kass Creek 35.2%, Berry Gulch 23.8%, Chamberlain 21.6%, and Parlin Creek 17.9%) are planned for the most intensive logging at JDSF in the near future. Except for smaller coastal drainages and the Mouth of Big River, as well as 4 of the 5 just-mentioned watershed assessment areas, almost all the rest of the conservation value for JDSF is rated low. Why is JDSF itching to conduct timber management activities in the very near future which would ruin the redwood ecosystem conservation and recovery values? The one of the 5 mentioned watersheds which did not have a medium rating was Chamberlain Creek, however it has substantial mature stands on its western fork, and must not be hammered so that there would be close to no connectivity (with the exception of inadequate riparian buffers which could still have logging within them). So, besides being surprised at the rating for Chamberlain area, I'm not too surprised by the other ratings when one considers that it was based on GIS photography which is focusing on age and species of tree stands rather than focusing on maintaining watercourses so that they are not excessively sedimented which can ruin chances for reproductive success by native fish species. Likewise, clearly stream temperature needed to support Coho salmon as well as steelhead trout was not considered by Strittholt et al.

Before I relate the Stittholt redwood ecosystem conservation value criteria to JDSF, I will comment on the first and the tenth criteria. The first was given, but was ignored in the modelling and assigning of conservation values of watershed areas. That first criteria is "Patch size of late successional forest". While technical definitions would only include the ancient stands at JDSF none of which is over 101 acres, but Strittholt's calculations did not consider the considerable mature forests at JDSF which could develop within several decades to marginal habitat for ancient forest dependent species, and could be full-fledged old-growth habitat within a century. No other area can come close to the many thousands of acres of mature mostly redwood forest adjoining small ancient stands -- at least south of Humboldt Redwoods State Park. Thus, if relatively near future late-successional patch size at JDSF (depending upon management) could combine with the realization that JDSF is the largest contiguous publicly-owned redwood ecosystem land in Mendocino County, clearly JDSF would look rosier in terms of conservation value for the redwood ecosystem to Strittholt and others. Regarding the tenth criteria, it says on Page VII.6.6-26. "A tenth criterion addressing management potential was not modeled but qualitatively included to evaluate institutional barriers to management." What does that mean? Does it mean it examines the obstinance or bottom line of companies and management agencies to see whether practices are

18.

likely to change to allow more conservation? Does it mean that there are institutional barriers among companies and management agencies which precludes management (or non-management) which would protect or work toward late-seral characteristics? Of course, bear in mind that many of the most prime areas for conservation of the coast redwood ecosystem are natural and thus not managed by humans, and should not be managed -- though possibly some very light management in the greater area / buffer area of older or mature stands to assist recovery of the area to provide better habitat for old-growth dependent species. The BLM's Arcata office is doing well at such work in the Headwaters Preserve area, and they are not oriented toward cutting big trees and taking out the majority of large trees in a so-called buffer as are forest managers at JDSF.

Before I get into those 8 criteria which were listed and used to determine conservation value of watershed areas, I will point out that Strittholt's work was mentioned as "coarse", thus not having much detail. Did you consult any other groups (besides the few words mentioning BLM and Save-the-Redwoods League) about prime areas within which one could conserve, restore, and recover the priceless coast redwood ecosystem? Not long before finishing these comments, it occurred to me that Legacy - The Landscape Connection group did detailed GIS and other work in regards to the North Coast redwood ecosystem. They were unable to get back to me before I completed this paper, but their phone number, for future reference and to hopefully include some of their material in the next EIR / FMP is (707)826-9408.

In regards to Strittholt's Criteria 2 through 9, it is true that the road density currently at both JDSF and neighboring timberlands is out of control -- while the Alternative C1 proposes more roads and is very vague as to how many roads will be decommissioned, so it is important to choose Alternative E or F in regards to roads while being sure to fund their substantial decommissioning work in the very near future. There are some threatened and endangered species at Jackson, so do not let the watercourses receive more sediment or have their temperature raised, so that native fish can still survive in many of Jackson's streams and allow the mature stands to become old-growth habitat to host species such as murrelets and NSOs which are currently not very common at JDSF. The "Concentration of late successional patches" criteria should be examined in regards to what I mentioned under Criteria 1 about if one protects mature stands and lets that become ancient, that could become excellent future habitat for old-growth dependent species. Forest age composition I basically just covered, but unfortunately JDSF and the nearby timberlands have predominately young-growth -- which makes the substantial mature with a little ancient at JDSF more unique and important. Forest fragmentation is certainly a problem, thus do not fragment the mature stands bringing more edge effect to ancient stands at JDSF, and do not carry out widespread clearcutting as scheduled under Alternative C1 or under new Alternative G. Even the JDSF areas with some decent mature elements near the state parks to the west are not well-managed (regarding criteria 7). There are too many road and stream interactions at Jackson (partly due to Hwy. 20), though it does divide areas of the state forest where recreation should not be promoted toward the western reach of the forest, from the campgrounds, recreation corridors, and mature/ancient stands in the Brandon Gulch, West Chamberlain, and other areas. For criteria 9, while there are some regulations promulgated regarding riparian corridors at JDSF, they would allow too much logging of all but the ten larger conifers in a stretch of more than a football field, plus logging too much hardwood in places. These areas are not wide enough under the proposed alternative for Jackson to make edge effects negligible. However, some mature stands along the North Fork of the South Fork of the Noyo River, at West Chamberlain Creek, plus some toward the western part of the forest as well as a little of James Creek to the east do have some decent forest nearby streams.

13

19.

The 3 regions related to Strittholt's GIS work do not make much sense. Both the northern and central regions for redwood ecosystem conservation value in California include parts of southern Humboldt County, while both the central and southern portions include parts of northern Santa Cruz County. Seeing that redwood parks (besides narrow strips along the coast in northern Humboldt and Del Norte Counties) of substantial size are concentrated in southern Humboldt and in northern Santa Cruz County, watersheds partly within or adjacent to the major parks such as Humboldt Redwoods State Park and Big Basin Redwoods State Park help to skew the findings not in the favor of ecosystem recovery at Jackson and Mendocino County as priorities. Because only little state parks to the west are protected in the Jackson vicinity, and because most redwood state parks are so small in Mendocino County, only the little larger protected area at Little River made enough of an impression to get Strittholt to rate the Little River watershed and the neighboring Albion River watershed to the south as having a "Very High" redwood ecosystem conservation value in Mendocino County.

Page V-29 mentions the Save-the-Redwoods League and BLM report of 2001 which followed workshops about areas especially needing conservation in the redwood zone. Of the eleven focus areas, none involved watersheds within or adjacent to the CWE assessment areas of JDSF. It should be noted that historically SRL, besides purchasing some substantial acreage temporarily to be handed over to state or federal park managers, has been focusing on acquiring acreage to enlarge current parks. Since that 2001 report however, they have turned more attention to key biological connectivity corridors, both in the Redwoods-to-the-Sea / Gilham Butte area of southern Humboldt County, and more recently the considerable cutover lands in the Mill Creek area which link the Smith River Nat'l Recreational Area with the coastal redwood parks in Del Norte County. I'm sure all or close to all areas discussed were private land areas which some felt should come into the public realm (or at least have good conservation easements), and thus did not focus on the one large contiguous publicly-owned land in the heart of the redwood region -- that being JDSF.

Let us look at murrelet sightings and potential for recovery in Mendocino County, while keeping in mind the Stittholt map on Page VII.6.6-27. A few things should occur to one when looking at the shadings for conservation values of watersheds in Mendocino County. One notices a Very High rating for the Alder Creek watershed toward the southern third of the Mendocino Coast. Then one notices mostly darker shades in the latitudinal heart of Mendocino County. That area includes the Little River watershed with a more sizable (for Mendocino County) redwood state park, as well as the Albion River watershed to its south which contains some old-growth remnants. Then it is mostly High conservation values for watersheds until you reach the Noyo River which is rated Medium (yet varies on the more specific chart about the CWE assessment areas in the JDSF area). And then, north of the Noyo River, there is High conservation value, as well as murrelet sightings, at Ten Mile Creek. Thus, this Albion River through Ten Mile Creek area is essential to the recovery of the coast redwood ecosystem and its dependent species -- and seeing that JDSF is in this area and includes substantial amounts of the Noyo, Big, and other watercourses (and is so sizable especially in the west-east direction, this is clearly the place to focus conservation energy in the heart of the redwood region (along with protecting as much as possible of Alder Creek further south).

BLM's Cahto area is mixed conifer rather than redwood, while the lands to the east of the very narrow Sinkyone Wilderness State Park are generally in bad cutover shape. It is still important to conserve remnants of watersheds in those shaded areas indicating coastal watersheds in northwestern Mendocino County -- partly for murrelets who decide to fly to the southwest from their nests at HRSP or from southern parts of Pacific Lumber lands because they do not like to fly over the King Range which is primarily Douglas-fir and thus not ideal murrelet nesting habitat in

20.

California. But due to it being the heart of the redwood region and certainly the heart of Mendocino County's redwood region, that Ten Mile Creek watershed through Albion River watershed (including the sizable acreage at JDSF) appears to be the most vital area if murrelets are to survive in Recovery Region 5 (and many argue in Recovery Region 6) for the next few decades.

****

PACIFIC FISHERS

I notice on Map Figue M that there is no "fully suitable" Pacific fisher habitat at JDSF. There are some areas of JDSF which are adjacent to some "fully suitable" fisher habitats on private land, state park land, or Mendocino Woodlands area. Since fishers like a wide range of mostly old-growth with good canopy cover, on areas adjacent to "fully suitable" fisher habitat, there should be no logging -- even theoretically designed to develop "late seral" characteristics. This would include the northeastern end of Brandon Gulch CWE assessment area (which should generally be left alone anyway due to it having that large older mature forest), upper West Chamberlain area (also largely a key mature stand which also should be avoided as far as timber management activities), in some areas by the state parks to the west, in areas adjoining that private land which juts north of Highway 20 in the south-central area of Jackson forest, and by the Mendocino Woodlands area.

Besides some moderate to high fisher habitat on the map toward the west and in other areas, I note that the areas with the most moderate-to-high fisher habitat at Jackson are in areas proposed for especially heavy logging in the next 5 to 10 years, namely the Chamberlain Creek watershed, the Brandon Gulch CWE area, the Berry Gulch area, and the Parlin Creek area. It seems that the forest managers at Jackson have chosen precisely those areas which are best habitat for fishers to log -- which would be a disaster for this species that needs large ranges, good canopy, and little fragmentation. Page VII.6.6-13 points out some key habitat needs for fisher and marten, "Stand level characteristics of importance to forest carnivores (marten and Pacific fisher) include canopy closure, snag and log frequency". It is admitted that Alternative C1 would result in a 7% reduction in Pacific fisher habitat from this time through the year 2030 -- and I believe that this is quite an underestimation, while the fragmentation due to clearcut variations under new Alternative G certainly would not assist in the recovery of the Pacific fisher in the JDSF area.

14

NORTHERN SPOTTED OWL

I notice that there were most NSO sightings in the Brandon Gulch CWE assessment area, followed closely by the Parlin Creek CWE assessment area. Yet, the Proposed Alternative plans to log 40.4% of the Brandon Gulch CWE assessment area within the next 5 to 10 years (likely targetting the best NSO habitat other than the fairly limited ancient stands themselves). Such butchering of mature stands must not take place! The Parlin Creek CWE assessment area is being substantially targetted too (as is Berry Gulch to the south which has also had NSO sightings), and it already has been quite cutover. Furthermore, the plans for clearcutting / evenaged management in the central and eastern parts of the forest will definitely ruin the NSO habitat not only in Parlin and Berry Gulch, but also some areas recovering in the Chamberlain and perhaps James Creek area (though the table with planned percentages of CWE assessment areas to be logged in the next 5 to 10 years does not include the James Creek area). Thus, there is quite a difference between declarations (to please lawyers) like "silvicultural allocation plan and silvicultural practice retains and creates habitat available for Northern Spotted Owl" and the plans for logging in areas at JDSF which have had the most NSO sightings. It is ironic that the document says, "As budget allows, expand more staffing to include greater biological expertise." No wonder the Proposed Alternative is harmful to habitat -- it is admitted that there is little biological expertise at JDSF! Do NOT log the mature stands in order to higher a biologist who may well conclude that you just finished off the

21.

best NSO, fisher, and murrelet recovery areas in order to hire them! (There was a NSO sighting in southeastern Chamberlain CWE assessment area, as well as in southeastern James Creek and along the Big River nearby, yet southeastern Chamberlain is scheduled for group-selection logging which would decimate NSO habitat features.)

Page VII.6.6-28 says that, "Franklin (2000) found that for Northern Spotted Owls, in his Northern California study area, an increasing amount of forest edge could be detrimental by decreasing the amount of interior habitat, increasing predation rates, and reducing the survival rate." Thus, do not log those larger mature stands adjoining the smaller ancient stands in the Brandon Gulch and West Chamberlain areas, and do not claim that mere riparian areas where logging is somewhat limited can suffice for interior forest habitat even more than a century down the line.

****

In my initial enumerations as to basic problems with this Draft EIR and FMP for JDSF, I mentioned that there is too much "wiggle room" or leeway to allow even the logging of old-growth trees at JDSF -- let alone, for now, the sizable mature trees which are so rare in the redwood region of coastal Mendocino County. Page V-11 says, "The JDSF DFMP proposes to protect all old growth redwood stands, as well as individual old growth trees that have defined structural characteristics." What percentage of old-growth trees other than those in the unentered old growth redwood stands could face being cut down? Is it the RPF who gets to determine whether an old tree has sufficient enough structural characteristics to let it live? Be as specific as possible in the next EIR / FMP as to which old-growth trees could live and which do not qualify. Seeing that you mention old-growth trees with "defined structural characteristics", it sounds like there is a working definition to determine whether an individual old-growth tree would be left alone or would be logged. Please present this precise definition in the next EIR / FMP. Likewise, leeway is left to timber managers on page VI-49 of that table which says "Retain existing old growth groves, retention of large residual old growth trees and old trees with structure". Though old-growth trees would be comparatively large in general, but if an old-growth residual was not a dominant tree in a clump / aggregation, could some of that clump be logged of old-growth residuals since it was not comparatively large for old-growth residuals? Also, which kinds of both old-growth residuals or other old trees (and approximately what percentages) could be not declared to have an adequate "structure", and thus be logged? Another disturbing excerpt from the Draft EIR / FMP is on page VII.6.1-97, "Some flexibility should be maintained to allow removal of large trees to adjust species composition and improve the potential performance of future LWD". Much as some more LWD could be good at some sites at Jackson, the history of forest management has not demonstrated that the JDSF managers can be trusted with this "flexibility."Also, I see nothing here about if there is an old-growth Douglas-fir stand or clump / aggregation -- is there any protection for ancient Douglas-firs other than some which may be within unentered ancient redwood groves?

I do like Alternative F in terms of protecting "heritage trees" (trees that were living when California became a state in the middle of the nineteenth century) -- unless they are particularly a hazard that would impact people or property. This would get rid of the 'wiggle room" which would allow the logging of old-growth and trees which could be termed between some people's definition of old-growth and their definition of "very mature". Yet, the rare (in regional context) mature trees (generally 80 to 120 years old) need substantial protection as well.

****

The documents admitted that little has been done at JDSF since the court injunction blocking the woefully inadequate Draft EIR / FMP back in 2003. In the meantime, the lawyers reached the conclusions that needed to be made, and these latest documents are a flailing attempt at trying to make manipulated biology and manipulated logic try to fit neatly with the lawyers' conclusions.

22.

Publishing hefty volumes may impress some, but why aren't the noted references which are mentioned summarized, while giving quotes from those documents to show that indeed they support the conclusions of this Draft EIR / DFMP?

There are a lot of matters I noticed in these JDSF documents which mention that more information is needed, plus there are many JDSF issues where it is presumed that sufficient information is available and presented, but which actually are very vague and non-specific. Some of these are what specific areas will be newly roaded and logged under C1, and what would the consequences be for habitat for various sensitive species if such actions were carried out (including for aquatic species). One of these key tasks which should have been done already and should have been presented in these draft documents (or at least by the next EIR / FMP) are the need for specifics as to what parts of the cumulative watershed assessment areas would be logged during the next five to ten years under Alternative C1 and under other alternatives. Another task clearly needing to be done is to examine the erosion and sedimentation impact on streams from the major storms of late 2005 and early 2006 on various watercourses at JDSF, and it is crucial to take temperature readings in August and September 2006 to be clear on the impact of sedimentation on the watercourse which could deleteriously impact Coho salmon, steelhead, and other species. Likewise under new Alt. G, I am concerned with the hefty acreage to undergo clearcut variations, with the lack of detail about what would be logged within cumulative watershed assessment areas, and with the great unknowns as to whom would be on a Board-appointed Advisory Committee to help develop a landscape management plan for Jackson DSF.

Other information which should be able to be produced in a relatively short length of time are: 1. a temperature TMDL should be developed for the Big River watershed; 2. a more accurate vegetation map to distinguish between old redwoods with generally closed canopy from scattered old redwoods with dense understory such is in some of the James Creek area; 3. more specifics as to how many old-growth residual trees and mature trees can and will be logged (since this helps to determine how much increase there will be in edge effects, and in sedimentation of streams which also can impact temperature, how much decrease in shading of watercourses, how much management activity is planned in steep landslide prone areas and inner gorges, where new roads are planned and how many of these are clearly linked to a better location for a road to replace hopefully several nearby roads which have particular erosion / sedimentation problems); 4. let a recreation specialist or perhaps an artist or landscape architect, rather than a RPF, determine whether a logging project will significantly impact the aesthetics of an area; 5. consider new recreation corridors as well as protecting more than just narrow facade strips along roads and trails; 6. complete a recreation survey as called for in the Draft EIR and include these results in the next EIR / FMP; include the James Creek Watershed Cumulative Effects Assessment Area on Table VIII.10 on pages VIII-37 (and VIII-38) or else have no cut in this area in the next 5 to 10 years; and explain by words and by better labelling of maps where the 492-acre buffer around Road 334 which to be managed for late-seral characteristics is, as well as where the 250-acre buffer around the waterfall grove complex (also to be managed for late-seral forest characteristics) is.

ROADS, TRAILS, and FEEDING of ANIMALS who are GRAZERS

Page VII.6.1-100 says that, "JDSF contains an estimated 350 miles of actively used roads and 150 miles of potentially improperly abandoned roads. The sediment contribution per unit area from roads is often much greater than that from all other land management activities combined, including log skidding and yarding (Fumiss et al. 1991)." Elsewhere in the documents it is mentioned that the public uses 200 miles of road at JDSF. Page VII.2-12 says, "Aesthetic changes associated with paving a forest road would be less than significant whereas, establishing a new forest road may be significant." Thus, to abide by regulations, any new forest road should not be through or adjacent to mature or ancient forest areas, and it must be clearly needed for management activities and be in the general vicinity of several logging roads which have been decommissioned due to significant

23.

sediment from the roads having deleterious effects on watercourses in the area. All other new roads are clearly an aesthetic insult and would bring more edge effects which stresses (or results in deaths of) various species, plus can damage nearby watercourses. Even modern improved road-building techniques has done little to reduce sediment yields from the construction of new roads. Appendix 11 Page 5 says, "Significant construction of new roads has led to increasing sediment yields from road surface erosion, espite improved practices (see Table 27 in the Attachments, reproduced from Matthews 2001)." Page 11 of that Appendix points out that road-related sediment is the dominant source of sediment in both the Noyo and the Big Rivers. One should also realize that roads (and vehicular management activities largely using them) are the main spreader of non-native invasive plant species -- so there is another reason to minimize roads in the JDSF area.

It is insufficient to merely say regarding Alternative C1 that you will, "Decommission unnecessary and environmentally damaging roads." You need to give a general estimate regarding the approximate number of miles of road that would be decommissioned, since taking out just a token number of road miles when JDSF managers have such widespread logging plans (which include building some new roads, logging nearly all the mature forests, as well as logging in riparian areas which could also impact shading, sedimentation, and temperature of watercourses) is certainly insufficient evidence to be able to claim that overall there would be an insignificant cumulative impact from management activities proposed at JDSF. And while some principles under new Alt. G- in regards to recovery are an improvement, yet it is very vague as to how this principle would be translated into road decommissioning (or perhaps road-building) on the ground.

16

I appreciate the urgency which Alternative F has (noted in Table VI.1 on pages VI-45 and 46) in regards to immediately inventorying unnecessary and/or damaging roads, and that it is clear that this activity would take priority over other management activities at JDSF. It is not that I believe that Alternative E would not wish such a focus too, but the way it is worded in the aforementioned table, while it calls for aggressive road decommissioning, it mentions nothing about immediate inventorying and decommissioning or a focus for allotment of funds for that alternative. Perhaps that is because it is clear that JDSF managers consider Alternative F the enemy and will not really consider this fine alternative to work toward restoring the lovely habitat and watershed condition which those of European extraction found in Mendocino County centuries ago, as well as protecting the best remnants currently at JDSF. I notice that under Alternative C1, it says that the road management "plan includes standards for 5-year inventory, construction, maintenance, and decommissioning; establishes a schedule repair and decommissioning work. Not only does this give no indication about whether there would be a dozen or a hundred or how many miles which might be decommissioned, and it is clear that JDSF personnel are in no hurry to do the inventory and are more focused on the earlier mentioned "construction" and "maintenance" than in taking out roads to reduce sedimentation so as not to damage salmonid habitat in watercourses. Under "Transportation (see also Road Management Plan)" part of the alternatives comparison Table VI.1., the wording for C1 (following the lawyer-mandated assurance that it would "Comply with FPRs and sediment TMDLs where applicable") is "Roads and landings constructed and reconstructed as needed to support harvest operations." This does indicate the priority of JDSF under the proposed alternative as far as roads -- the priority is constructing and reconstructing to assist timber operations. Thus, the talk of inventory and decommissioning of roads at Jackson is just a token non-enumerated effort to seek to validate the claim that watercourses would be in better shape despite intensive management on 75% of the forest (including substantial clearcutting / evenaged management as well as many other intensely chopped areas) due to decommissioning a not-even-estimated number of roads or mileage of roadway.

There are various indications in the Draft EIR / FMP that trails are virtually an afterthought from the perspective of JDSF managers. Page V-26 says, "There are over 60 individual campsites, many

24

miles of riding and hiking trails, and over 200 miles of forest road utilized by the public." For a nearly 50,000 acre forest, obviously 60 individual campsites are not very numerous. Why is there no attempt at enumerating the miles of riding and hiking trails at Jackson? Is it because some of the trails are mostly animal trails and thus you do not know whether to count them, or has there just been so little recreation focus that there was never an attempt to enumerate how many miles of recreation trails (other than some roads) are being used by the public? Also, while a recreation survey is a decent idea, it doesn't take a rocket scientist recreation specialist to determine that, besides liking to hike some trails, many hikers and campers like to immerse themselves in Mother Nature, so butchering the forests other than along streamsides and major roads and trails (while even cutting in most of these facade buffer areas) is clearly not what most who would like to enjoy redwood forests without travelling an additional distance to Humboldt County have in mind for an environment that they wish to further explore. (Also, note some discussion on the main recreation areas on the forest when discussing mature forests, as well as some of the alternatives offered in the Draft EIR / FMP.)

While I can see why there are some concerns about horses and other animals which folks ride or perhaps which carry their belongings freely grazing on vegetation at JDSF, yet urging or requiring people to bring feed / mulch to feed to their animals is also a problem. Not only are increasing amounts of mulch (whether used for feed or for management-related activities at Jackson) genetically modified these days (which will increase if genetically modified alfalfa is commercialized), but mulch often carries seeds of invasive plants which we do not need more of in the JDSF area. Would JDSF managers consider that if certain invasive plant species are good to eat for horses and other livestock, that the target plants could be pointed out to riders and could be grazed upon at least near roads and trails which are some of the areas in which invasive plants thrive?

In case anyone needs to be reminded of the seriousness of mulch spreading invasive plant species, here are a couple quotes from page 3-26 of the BLM Vegetation Treatments Using Herbicides Draft Programmatic EIS, "Many other invasive plants have been introduced unintentionally via air, water, rail, or road transportation pathways. Common methods of introduction include contaminated seed, feed grain, hay, straw, and mulch; movement of contaminated equipment across uncontaminated lands; animal fur and fleece; spreading of gravel, roadfill, and topsoil contaminated with noxious weed seed; and plants and seeds sold through nurseries as ornamentals (USDI BLM 1996)." "Once introduced, invasive plants are spread primarily by vehicles, humans, wild horses, livestock, wind, water, and wildlife. Initially, invasive weeds may get established in disturbed sites such as trailheads, along roads and trails, firebreaks, landing pads, oil and gas development sites, wildlife and/or livestock concentration areas, and campgrounds". (Speaking of firebreaks, will the shaded firebreaks mentioned in the plan involve the spraying of herbicides on them?)

****

INTENSIVE MANAGEMENT Leads to FIRE DANGERS at JDSF

The logging of old trees (which provide shade and are well along in developing a plumbing system to provide a more ongoing flow of cool clear water), the drying effect from spraying herbicides, plus the fire risk involved with lots of machinery being operated on hundreds of miles of roads well as the drying effects of herbicide spraying, plus all the machinery used in management and along hundreds of miles of roads from which fires can accidentally or purposefully start are all major drawbacks of the Proposed Alternative C1. Regarding logging slash, it sounds like it might be gathered and burned in some clearcuts (obviously a slash fire is a fire and can escape at times), or just left on the ground upon other logging methods with a slight mitigation of scattering slash after

25.

logging within 50 feet of major roads and trails. Besides that, the highly flammable slash will be on the forest floor awaiting ignition.

It is quite obvious that if one removes all or nearly all vegetation from an area, it will dry out the area and provide deleterious edge effects to certain adjoining areas. Then, herbicides are sometimes used, which kills vegetation and dries things out further. Then, conifer trees (all of the same age and usually all the same species) are planted in a heavily stocked way. When one has a bunch of essentially Christmas trees all packed together, it not only could be prone to disease, but it is a virtual tinder box for not just fire, but for fire that is prone to burn more catastrophically which could also rise to become a crown fire and even seriously damage or kill ancient redwood trees in the JDSF area.

The DEIR / DFMP claims that the less intensive management alternatives are most prone to fire danger because a number of roads from which one could fight fires would be decommissioned. Certainly, a number of roads can remain not only to fight fires or for recreationists to use, but also for management activities. But, this document entirely fails to examine the implications in regards to forest managers promoting intensive vehicular and machinery activities in the majority of the JDSF. Other activities which increase fire danger are the use of herbicides, the increase in fire danger due to logging mature and other stands and replacing them with tightly packed conifer plantations, and even the further drying out of buffer areas intended for lighter management. There can be some valid excuses for managing an understory and brushfields in some places in order to lessen chances that there can be crown fires in the area, but seeing that even relatively light management at JDSF generally targets the larger trees of the area, the preponderance of proposed management at Jackson would lead to increased risk of fire -- including potentially catastrophic fire.

Page B-29 of the BLM's Vegetation Treatments Using Herbicides Draft Programmatic EIS says, "Herbicides used in site preparation reduce vegetation that would compete with conifers. In the brown-and-burn method of site preparation, herbicides are used to dry the vegetation, to be burned several months later." It should be pointed out that equipment use or smoking around herbicided vegetation on roadsides or in areas where intensive management activities occur would have a greater chance of igniting and spreading if there were drier dead vegetation around.

The DEIR / DFMP does nothing to analyze what age of tree species would be best to prevent not only fires, but catastrophic fires. Such fires could burn not only vital habitat, but could necessitate fire-fighting response with heavy equipment (including near watercourses) in order to control the fire, which could bring a horrible impact of less trees and vegetation shading streamcourses and thus more direct sunlight and warmer temperatures in streams (plus destabilized banks due to less living vegetation holding them together and due to heavy equipment use during firefighting). The ramifications on both native salmonids which need cool water to survive, as well as on mature and old-growth forest habitat if a fire burning super-hot through young plantations grew to a catastrophic level are very serious -- yet there was no analysis of such in the documents!

Because California Public Resources Code 4640 says (App. 5 pg. 2) that, "'Protection' means protection of forest trees against damage by fire, insects, disease, and trespass", i contend that this is being violated at Jackson DSF, and that the fire danger involved with the bulk of the management activities at JDSF must be analyzed in the next EIR / FMP.

STREAM TEMPERATURES and AREAS TARGETTED for LOGGING in Near-Term

26.

The U.S. EPA has listed both the Big River and the Noyo River as sediment-impaired under Section 303(d) of the Clean Water Act. The North Coast Regional Water Quality Control Board has listed Big River for both temperature and sediment concerns, while just listing the Noyo River for sediment concerns. Sediment TMDLs have been established for both of these rivers, but a temperature TMDL has yet to be established for Big River. Page V-16 says, "These sediment and temperature impairments are of particular concern due to the presence of listed salmonid species in these watersheds, specifically, coho salmon and steelhead trout (Figure V.5). These listings of the Big and Noyo River watersheds as impaired are an indicator of existing adverse cumulative effects in these watersheds."
This should happen certainly before a long-term management plan is adopted for JDSF.

On March 30th, 2005, the Coho salmon was listed as endangered under the California Endangered Species Act for the population south of Humboldt County's Punta Gorda area. NOAA Fisheries followed suit to list the Central California coast population of Coho as endangered on August 29th, 2005. The Northern California Evolutionary Significant Unit of the steelhead trout was listed as threatened on August 7th, 2000. All accessible reaches of coastal streams between southern Humboldt and southern Santa Cruz Counties have been declared "critical habitat" for the Coho salmon, while 50 occupied watersheds for the steelhead were delineated as critical habitat for the steelhead early this year.

It is important to examine (especially during the late summer rearing stage) the maximum weekly average temperature in watercourses, and this is especially important this year to see if there is an increase in temperature this year (despite plenty of rain) due to what could be substantially more sedimentation than usual from the major storms of late 2005 and early 2006. The Coho salmon, even more than the steelhead trout, particularly needs temperatures preferably cooler than 62.2% F, and certainly usually below 63.7% F at that critical rearing stage time of year.

Page 9 of Appendix 12 points out that, based on thresholds for interpreting water temperature, several areas in the JDSF CWE assessment area were potentially of concern. These included the South Fork of the Noyo River (including Parlin Creek) and the North Fork of Big River (including Chamberlain and James Creeks). Considering these concerns, which are also reiterated by examining the map on Page VII-6.1-28 about some on-the-brink temperature readings in certain areas of JDSF, it is appalling that the very watercourses that have temperatures almost too warm especially for Coho salmon, are precisely the CWE assessment areas targetted for intensive logging activities in the next 5 to 10 years at JDSF! Clearcutting is the preferred logging method under Alternative C1 for much of the Chamberlain Creek and Parlin Creek CWE assessment areas. It does not take a fisheries biologist to conclude that more roading, widespread clearcutting, herbicide spraying and other logging will have significant unmitigatable impacts on sensitive aquatic species including listed salmonids in these key tributaries, as well as the North Fork Big River and the South Fork Noyo River themselves. In addition, the CWE assessment area especially targetted in the near future, Brandon Gulch (which includes the North Fork of the South Fork Noyo River), would also contribute warmer water than usual to the mainstem of the South Fork Noyo upon massive logging of its vast tracts of mature forests. Note that Appendix 12 Page 19 says that, "The potential impact of timber harvesting on water temperatures can result from a single action, or the cumulative impact of multiple harvests." Plus, remember that roads are the largest source of sediments into watercourses, and Alternative C1 plans numerous more roads, and proposes a vague eventual decommissioning schedule, whereas Alternatives E and F are serious about road decommissioning if they could only get chosen and funded to carry out these worthy endeavors to help the aquatic habitats at JDSF.

27

The Proposed Alternative C1, despite claims to the contrary, will result in increased stream temperatures in most years. Some of this increase will occur due to the following activites: logging in streamside areas; increased sedimentation into watercourses due to intensive timber-cutting and roading activities; roading and logging on steep slopes or in inner gorges; focused intensive logging in watersheds which already have temperatures which are on the verge of being too warm to support Coho salmon and steelhead trout; poor management at JDSF across most of the landscape which increases danger of fire with many associated repercussions on watercourse temperature (even if a major fire doesn't envelop the bulk of streamside vegetation which would amplify negative impact on watercourses as would the equipment used in firefighting); plus other factors.

Consider the plans under the proposed JDSF alternative C1 in regards to logging in the streamside buffer areas. Obviously, large conifer trees have been targetted for logging historically, which means that hardwoods tend to be present in greater proportion than their historic numbers. The ten largest trees in a stream area longer than a football field supposedly must be left standing, but I'm sure most of the other sizable conifers will be logged even if it means opening up the canopy more than theorized in the document. Hardwoods are supposed to be retained unless they are at a higher than their naturally-occurring percentage. Thus, it is likely that most medium to large conifers will be logged from such areas, plus substantial amounts of hardwoods will be logged in order to bring species composition back to historical levels. This will result not only in direct solar radiation warming watercourses, but also in increased sedimentation of watercourses due to soil disturbance and streambank disturbances.

****

I will once again call for either rejecting this quite inadequate Draft EIR / FMP, or I call for adopting Alternative E while devoting funds to take out many unnecessary and damaging roads, plus funding in-stream salmon restoration and expanding some recreation opportunities though not focusing this recreation on the western portion of the forest unless it is agreed with some state parks to accomodate some of their campers if they want to close campsites closer to marbled murrelet nesting areas. Also in regards to the western portion of JDSF, the couple murrelet recovery areas under Alternative F make a lot of sense, and it is absolutely appalling that in what should be the geographical heart of this recovery area, there is this horrendous supposed "clearcutting experiment" and considerable infestation of Tasmanian blue gum (eucalyptus). I understand that this EIS / FMP cannot impact the Caspar Creek management mess, but the Board of Forestry likely has that power and should act immediately!

And, of course, need I mention again that the document has many unmitigatable cumulative impacts to aesthetics and to sediment / toxics / increased temperature in Coho salmon / steelhead / amphibian streams. The documents are largely in denial as to the existence, the biological importance, and the current and especially near future habitat value of the most extensive mature stands of redwood (with some fir) in Mendocino County. And, of course, the document tries not to realize that, despite historic abuses in the area, Jackson Demonstration State Forest can be the heart of the most hopeful area to recover habitat for old-growth forest dependent species in Mendocino County -- since it is in the heart of the area of good conservation value between the Ten Mile Creek watershed to the north and the Little River and Albion River watersheds to the south. Good management (which in some areas involves lack of management) at JDSF is the hope for continued existence (and even thriving) of Coho salmon, steelhead, and amphibians in the Noyo and Big River watersheds which will have positive repercussions elsewhere in the county and help bolster the struggling marbled murrelet population in Recovery Zone 5 to hopefully some day link up with the

28.

murrelets in Recovery Zone 6 – rather than have them meet the fate of the prediction of 100% likelihood of extirpation south of the Humboldt / Mendocino County line by he year 2044.

For all of its paper and words, this Draft EIR / FMP does not give adequate specifics or analysis to justify ridiculous conclusions as to how the aggressive logging and roading of Alternative C1 will not result in cumulative impacts to various aspects of the environment including impact to threatened and endangered species. You must either reject this document in its entirety, or else choose what is admitted within the DEIR / DFMP to be the most protective of the environment -- Alternative E. Please choose E and strengthen it by focusing funding on near-future road removal and salmon habitat restoration, as well as expanding recreational opportunities in certain parts of the forest.

Finally, some of the legal statutes violated by Alternative C1 include California Code of Regulations §1422 on Polluting Waters, California Public Resources Code §4640 due to widespread activities at Jackson that increase fire danger, the federal Clean Water Act due to likely temperature increase in watercourses beyond the legal limit if the Proposed Alternative is carried out, as well as violating cumulative effects regulations of the state, and violating the federal and state Endangered Species Act due to obvious negative impacts which Alternative C1 would have on current and future habitat for the marbled murrelet and northern spotted owl. New Alternative G would also violate many of these statutes unless management activities under ALT. G- avoid mature and ancient stands avoid the use of herbicides, and focus more on Marbled Murrelet recovery and late-seral development.

17

Sincerely yours,

Bruce Campbell

Bruce Campbell

Yours truly,

Bruce Campbell

Bruce Campbell

29.

Mailed Letter GM-39

This letter represents a resubmission of DEIR comment letter P-183, with the addition of a number of handwritten annotations. These annotations represent new comment and are addressed here.

Response to Comment 1
The writer states that additional area of JDSF should be managed as potential habitat for the marbled murrelet to help in the recovery effort and to make up for past clearcutting in the North Fork of Caspar Creek. He further states that the Jughandle and Caspar Creek watersheds are in close proximity to occupied murrelet habitat, and that the old-growth and mature stands should be protected.

In addition to the supplemental areas designated in Alternative G for development of marbled murrelet habitat (upper Russian Gulch and lower Big River areas), the marbled murrelet management measure specified in the DEIR will be applied. This management measure will involve future consultation with wildlife management agencies to consider additional habitat development area for the species, including area within the Jughandle Creek watershed. The purpose is to provide for future habitat development. Further, the USFWS is in the process of considering the designation of critical habitat for the species throughout the region.

Please also see response numbers 80, 84, 90-95, 97 and 98 to the letter by Bruce Campbell, dated February 24, 2006 (DEIR comment letter P-183). Significant impacts to the marbled murrelet are not expected to occur. Also, please see DEIR Section VII.10 for an assessment of potential watershed effects. Significant and cumulative impacts are not expected to occur as the result of past clearcutting in the North Fork of Caspar Creek.

Response to Comment 2
These are reiterated concerns from Mr. Campbell's earlier letter of February 24, 2006. Mr. Campbell would prefer that all of the "mature forest" and "mature trees" be retained to aid in recovery of endangered species. Please see responses to the February letter.

Response to Comment 3
The writer requests that "mature stands and mature trees" not be harvested by even-aged methods. He also suggests two constraints if even-aged management is ultimately included in areas with "mature stands". He further states that even-aged management should not "hurt watercourses, connectivity, or recovery chances for the Marbled Murrelet". Even-aged management will be planned and conducted to avoid significant impact to these resources. These are reiterated concerns from the earlier letter of February 24, 2006. Please see responses to the February letter.

Response to Comment 4
The status of the marbled murrelet has been considered. The USFWS is the entity responsible for creation of a recovery plan for the species. The state forest will contribute to the recovery of the species through the management of a significant area to recruit or develop late seral forest and older forest characteristics. In addition, large old-growth trees and old-growth groves will be preserved.

Response to Comment 5
Please see response #1 to February 24, 2006 letter. Alternative G adds to the protection and restoration of older forest by designating additional area for development of habitat for the marbled murrelet and through establishment of the Older Forest Structure Zone.

Response to Comment 6
Please see response #4 to February 24, 2006 letter. Alternative G adds to the protection and restoration of older forest by designating additional area for development of habitat for the marbled murrelet and through establishment of the Older Forest Structure Zone.

Response to Comment 7
This concern represents speculation. Please see response #14 and 15 to February 24, 2006 letter.

Response to Comment 8
Please see response #16 to February 24, 2006 letter. No variants of the clearcut method have been proposed. Many silvicultural variations may be practiced as elements of even-aged management.

Response to Comment 9
Please see response #56 to February 24, 2006 letter. In general, Alternative G offers a greater degree of environmental protection than Alternative C1. Alternative G includes greater restriction on the use of clearcutting and other forms of even-aged management.

Response to Comment 10
Please see response #57 to February 24, 2006 letter. A special treatment area exists adjacent to all state parks were the proposal to utilize silvicultural systems must be accompanied by a consideration of the values associated with the park, including aesthetic resources. Each proposal to harvest timber includes a site-specific assessment of the potential effects upon aesthetics and recreational values.

Response to Comment 11
Please see response 6 above and response #86 to February 24, 2006 letter. Alternative G increases the area dedicated to larger and older trees and forest management, while further reducing and restricting the use of clearcutting and even-aged management.

Response to Comment 12
Please see response #97 to February 24, 2006 letter and responses above.

Response to Comment 13
Please see response #106 to February 24, 2006 letter. Alternative G will reduce the edge effects and fragmentation associated with management, due to a reduction in the use of even-aged management and the designation of substantial area to an Older Forest Structure Zone and recruitment habitat for the marbled murrelet.

Response to Comment 14
Please see response #114 to February 24, 2006 letter, and response 13 above.

Response to Comment 15
Please see response #122 to February 24, 2006 letter. The committees to be established will be purely advisory to the Department and the Board. The Board is ultimately responsible for state forest policy and approval of management plans. Management plans are prepared by the Department for review and approval by the Board. Anticipated future projects are disclosed in RDEIR Alternative G Table II.3, and other future plans are discussed and considered throughout the DEIR and the management plan.

Response to Comment 16
Please see response #135 to February 24, 2006 letter. The Road Management Plan establishes a program for inventory of the road system, followed by prioritization of maintenance, improvement, and decommissioning activity.

Response to Comment 17
Please see response #158 to February 24, 2006 letter and responses above.

June 20, 2007

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan (Alternative G)

Dear Members of the Board,

The Mendocino Working Group (MWG) has been reviewing and discussing Alternative G. Subsequent to our MWG meeting on Tuesday, June 12, we decided it was appropriate to clarify our position on a few issues.

1 As we stated in our February letter we feel strongly the proposed Jackson Advisory Group (JAG) is essential to the long term success of this Management Plan. For the sake of transparency, credibility and effectiveness one advisory body needs to be in a leadership role during the interim period. Our group feels strongly this lead advisory body needs to be the JAG, in consultation with the other groups. In addition, as the MWG suggested in our February letter, we feel that the authority and effectiveness of the JAG would be strengthened by being appointed by the Director and ratified by the Board of Forestry. To maximize the effectiveness of the JAG, it should report to the Director on forest management implementation issues and to the Board on management policy issues.

2 Evenage management has always been a controversial subject and we feel some clarification is warranted here also. A goal of our recommendations is to provide the necessary flexibility for all research projects. Nothing in our principle statements was meant to preclude meaningful, scientifically designed evenage research projects during the interim period or into the future, with the important condition that the projects be of the minimum size required for scientific validity.

3 Some evenage management projects may conflict with some of Alternative G's stated goals, such as promoting forest health and ecological processes and providing enhanced opportunities for recreation and aesthetic enjoyment. Further, evenage management is extremely controversial within Mendocino County and the environmental community at large.

4 We recommend that great care be exercised before approving evenage management projects not directly tied to a specific research project or justified for forest health. We recognize that not all future research needs can be foreseen, but we feel that a workable planning process is needed to assure that stand manipulation for future research is appropriately balanced against the other goals for future conditions. Therefore, we recommend that decisions on stand structure for future unspecified research projects should be developed by JDSF staff in cooperation with researchers,

4 the Demonstration State Forest Advisory Group (DSFAG) and, when functioning, the JAG. The amount of evenage management should be the minimum that reasonably can be justified for future research projects that can't presently be anticipated.

5 We note there has been no revision of Jackson's residual old growth harvesting policy, which differs in significant ways from our recommendation. We believe review of this issue by the JAG is necessary to minimize potential future controversy.

6 The last issue the MWG would like to address is the short-term harvest proposal. We understood that the Board's EIR subcommittee accepted the MWG's concern that interim harvesting should not preclude future planning options and agreed to our recommendations for achieving this objective. We recommended that if THPs were to be proposed for sensitive areas in the interim period that they should **both** 1) meet the interim harvest restrictions, and 2) be submitted to the DSFAG or, when operational, the JAG for review. CDF developed a map that shows sensitive areas in purple (Alternative G Map Figure 2).

7 We are concerned that although the THPs in Section 1 of Table II.3 conform to the interim harvest restrictions recommended by the MWG, they are listed as **not** being subject to DSFAG or JAG review.

We believe that everyone's interests are in resuming operations in Jackson in a way that minimizes the chances for reigniting controversy. DSFAG or JAG review of sensitive THPs will significantly reduce the chances of a misstep. Such review will provide a forum for the public and provide the public with greater assurance that the THPs implemented in the interim period are chosen and designed so as to keep open future options for restoration, habitat, and recreation to the maximum extent feasible, consistent with the need to generate revenue to fund interim operations of the forest.

The MWG recommends that all interim-period THPs proposed for sensitive areas be reviewed by the DSFAG or JAG, provided the review does not unnecessarily impact JDSF staff's ability to move forward with the 2008 sale program.

8 We recognize the importance of resuming operations in Jackson Forest in 2008. The MWG does not want the recommended advisory committee review to disrupt the 2008 JDSF Timber Sales Program. At the same time, we would like to have as effective as possible review of proposed THPs consistent with this desire. To achieve these twin goals, we ask the department to 1) identify those THPs that are prime candidates for 2008 harvests and to have the DSFAG review these plans as soon as possible so that preparation of approved plans can proceed with assurance of acceptability, and 2) to expedite formation of the JAG so that it can take over the review process as soon as practicable.

9 The MWG would especially hope that the JAG could review the North Fork Spur and the West Chamberlain THPs, because both of these contain some unentered stands of old second growth and are in an area of high recreation potential.

10 One issue that still needs deliberation as this process moves forward is the final resolution of the two enjoined plans. Nothing in any of our correspondence is meant to state or imply that the contract holders of the two enjoined timber sales relinquish any right or expectations that their agreements will be fulfilled.

We are very appreciative of the Board's previous willingness to accept many of our recommendations. We hope that you will consider modification of Alternative G to conform to the aspects of our original recommendations that we highlight in this letter. We believe that these changes are important to our shared goal of operating Jackson Forest in the public interest and without further conflict.

Sincerely,

Bruce Burton	Kathy Bailey	Art Harwood
Vince Taylor	Mike Jani	Mike Anderson

Mailed Letter GM-40

Response to Comment 1
Comment noted. Alternative G contains many provisions in direct or close alignment with the recommendations of the Mendocino Working Group.

Response to Comment 2
Comment noted. It should be noted that in addition to research projects implementing even-aged management, the proposed management plan by necessity also includes even-aged management independent of research projects, in order to create and maintain the desired future conditions outlined in RDEIR Table 1. Most of these harvests will occur under even-aged systems that retain substantial portions of the pre-harvest stand un-harvested to provide shelter, habitat and aesthetic enhancement. Under no circumstances will the limitations on clearcutting specified in the management plan be exceeded.

Response to Comment 3
The commenters claim is too vague to provide a complete response. They do not provide specifics of their claim that some even-aged management projects may conflict with some of Alternative G's stated goals, such as promoting forest health and ecological processes and providing enhanced opportunities for recreation and aesthetic enjoyment. It is not clear what is meant by "promoting ecological processes".

The Board believes that the proposed management plan contains only even-aged management projects that are in agreement with the stated goals of Alternative G as approved by the Board.

Response to Comment 4
The Board agrees with the commenters. The Board believes the Jackson Advisory Group and the DSFAG will fill an essential role in crafting a lasting consensus solution for future even-aged management on JDSF, which meets the research and demonstration needs of JDSF and wins the support of the public.

Response to Comment 5
Comment noted.

Response to Comments 6, 7, 8
The commenter expresses concern regarding THPs in section 1 of Table II.3, which are listed as not being subject to DSFAG or JAG review. These THPs were agreed to be acceptable to move forward without review. This is not an environmental impact issue. The Board shares the MWG's concern over resuming operations on JDSF in 2008.

Response to Comment 9
The environmental impact being expressed is unclear. Harvesting old second-growth does not in and of itself constitute an environmental impact. The area of old second-growth will increase over time under this management plan. In order for JDSF to remain a managed forest and meet the goals of the proposed management plan, specifically the desired future conditions in Table 1 in the management plan, many areas of old second-growth by logical necessity will have to be harvested. This is a direct result of the relatively conservative long-rotation management in the management plan, where many even-aged stands will be managed on an 80- to 150-years rotation age.

It is unclear what is meant by "unentered" second-growth. Second-growth stands at JDSF and elsewhere by definition are a man-made entity, and as such cannot full meet the definition of the term "unentered". A second-growth stand has either been planted and/or received some treatments throughout its life, ranging from early stand treatments, spacing, competing vegetation control, stocking control or commercial thinning.

Both THPs referred to have been carefully planned to mitigate any negative impacts on recreation to a negligible level. See also response to comments 6 – 8 above.

Response to Comment 10
Comment noted.

V. Form Letter Responses

This section presents responses to form letters and form letters that contained additional comments. Responses immediately follow each letter and are organized in the same order as the comments in each letter.

F-1

George D. Gentry, Executive Officer
Board of Forstry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Mr. Gentry:

The reason for my letter is to insist that you return Jackson Demonstration State Forest to active status. Over the years many of us have enjoyed Jackson Demonstration State Forest for recreational purposes, for others it has supported our households by way of jobs or revenue to our local businesses and communities. The shut down of Jackson Demonstration State Forest has had a devastating effect to our community and our county. In addition the State of California has not been receiving the much needed revenue from the sale of the timber.

1-

JDSF was created in the 1950s as a demonstration forest; it has historically been a well managed forest. It is vital that JDSF be returned to an active forest; the revenue and jobs it will provide are very important to our community, our county and our state.

2-

I urge you to accept the proposed Alternative B EIR and return Jackson Demonstration State Forest to an active production forest. JDSF's continued operation is essential for everyone.

3-

Thank you for your consideration.

Form Letter 1

Response to Comment 1:
The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan. The Board recognizes that Jackson Demonstration State Forest is utilized for the purpose of recreation as well as a source of jobs and revenue for local businesses and communities.

Response to Comment 2
The Board concurs that the lack of active management and timber production in recent years has resulted in the loss of jobs and revenue for local communities and the State. In addition, the loss of revenue in recent years has precluded some management activities on the forest. In particular, an absence of significant revenue has reduced the level of road maintenance and improvement, as well as other aspects of forest management, such as timber stand improvement, stream restoration, research, and recreation.

Response to Comment 3
Support for alternative B is noted. Active management is required by the legislative mandate that created Jackson Demonstration State Forest. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

F-2

Members Board of Forestry
P.O. Box 944246
Sacramento, CA 94244-2460

Subject: Jackson State Forest

Dear Members Board of Forestry:

1,2,3 4,5,6 7 I strongly oppose the proposed management plan for Jackson State Forest. I oppose the plan's clearcutting, large-scale commercial logging, cutting of the oldest second-growth stands, inadequate stream protection, herbicide use, and lack of a plan to expand recreation. I personally want Jackson State restored to an old growth redwood forest for habitat, recreation, education and research.

8 9 10 11 I oppose approval of the draft environmental document (Draft EIR). It fails to consider the restoration alternative that I favor. The closest alternative, Alternative E, promotes restoration of old growth, but it fails to commit funds to repair or decommission the hundreds of miles of roads that are pouring sediment into salmon streams, nor does it provide for actively restoring salmon habitat or expanding recreation opportunities.

12 The draft EIR rules out Alternative E as a feasible alternative, saying it s contrary to state law and Board of Forestry policy. This makes a mockery of the EIR process.

13 The Draft EIR concludes that the state's proposed massive logging plan (Alternative C) can be carried out with "less than significant environmental impacts." This is absurd.

14 The draft environmental document is so huge and obscure that I am unable to review it thoroughly. Its 1500+ pages make the electronic version impossible to use, and the printed copies are too expensive to buy – over $200 per copy!

15 The Draft EIR fails to meet its legal obligation to provide the information and analysis I need to be able to make informed judgments on the environmental effects of the proposed management plan relative to other alternatives.

Sincerely,

Form Letter 2

Response to Comment 1
Please refer to General Responses 1 and 10

Response to Comment 2
While no definition of “large scale commercial logging” is provided in the comment, it can be assumed that the comment relates to the overall quantity of harvesting. While the comment does not go directly to the contents of the EIR, or the analysis therein, the following response is provided.

The legislative mandate for the forest is to demonstrate sustainable and economic forest management. The economic component of this mandate requires the use of commercial logging operations. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to “less than significant”.

Response to Comment 3
Please refer to General Response 9

Response to Comment 4
Please refer to General Response 11

Response to Comment 5
Please refer to General Response 7

Response to Comment 6
Please refer to General Response 14

Response to Comment 7
Please refer to General Responses 8, 2, 11 and 12

Response to Comment 8
Opposition to approval noted. Please refer to General Response 4

Response to Comment 9
Please refer to General Response 13

Response to Comment 10
Please refer to General Response 11

Response to Comment 11
Please refer to General Response 14

Response to Comment 12
Please refer to General Response 4. Alternative E was not "rejected", and was thus included in the alternatives analysis in both the DEIR and RDEIR. The DEIR and the RDEIR included an in-depth comparison of the proposed project alternative and the other project alternatives, including E, as required (CCR §15126.6). Some elements of several of the final alternatives under consideration (A, D, E, and F; see DEIR Table VI.1 or RDEIR section II.5 and Table II.4) may not be consistent with the Public Resources Code, regulations, or Board policies. A clear discussion of the statutory framework from which the state forests are managed is contained in Section II (Introduction) of the DEIR and a

detailed compilation of relevant statutes, regulations, and Board policies is provided in DEIR Appendix 5.

Response to Comment 13
Please refer to General Response 6

Response to Comment 14
Please refer to General Response 5

Response to Comment 15
Please refer to General Response 3

F-3

George D Gentry
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RE: Jackson Demonstration State Forest Draft EIR and Management Plan

Dear Mr. Gentry,

As in any agricultural pursuit, flexibility, best available science and a wide array of available tools are all necessary for the best results. Current management of Jackson Demonstration State Forest has been guided by the 1983 management plan and the results speak for themselves. I support alternative B and believe that it provides the flexibility and proven track record to guide the management of JDSF into the future. 1-

For the past few years, due to the lawsuit, there has been no management of any significance on the state forest. There has been minimal road maintenance, no stream restoration, no timber stand improvement, no research, and limited recreational opportunities. There has been a significant loss of infrastructure, while state and local government have lost millions of dollars in revenue. The impacts to state and local government, JDSF, and the local workforce due to this shut down have been significant. It is time to get JDSF back into production. 2

JDSF is the largest forest in the state forest system. Public Resources Code (PRC) 4631-5658 provides authority for the administration and operation of this forest. The state forest system is managed for research and demonstration of sustainable timber harvesting. In the absence of new legislation, not harvesting on the forest is no alternative.

I strongly feel alternative B is the alternative that give managers the flexibility needed to properly manage JDSF. I also feel the Board of Forestry needs to do all in its power to insure the forest is back in production as soon as possible. 3

Sincerely,

Form Letter 3

Response to Comment 1
Support for Alternative B is noted.

Response to Comment 2

The Board recognizes the fact that the loss of revenue in recent years has precluded some management activities. In particular, an absence of significant revenue has reduced the level of road maintenance and improvement, as well as other aspects of forest management, such as timber stand improvement, stream restoration, research, and recreation. However, some level of management associated with these activities has occurred.

The Board also recognizes that there has been a loss of tax revenue and jobs associated with the absence of timber production. The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to certify the EIR and approve a management plan.

Response to Comment 3

Support for alternative B is noted. Active management is required by the legislative mandate that created Jackson Demonstration State Forest. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

F-4

George D. Gentry, Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460

Mr. Gentry:

1- The reason for my letter is to request that you accept the Proposed Alternative B Environmental Impact Report and return Jackson Demonstration State Forest to active status. The shut down of Jackson Demonstration State Forest has had a devastating effect to our community and our county. Families have lost jobs, small businesses are hurt, taxes and income are way down.

2- I support the past management of Jackson Demonstration State Forest. I believe that the benefit of a productive JDSF will spread throughout the North Coast community. The EIR projects if JDSF resumes active status it will sustain 240 timber jobs paying $7,600,000 in wages and 240 support jobs producing an additional $4,700,000 in wages.

3- I truly hope you will adopt the proposed Alternative B EIR and return Jackson Demonstration State Forest to an active production forest.
Thank you for your consideration.

Sincerely,

Form Letter 4

Response to Comment 1
Support for Alternative B noted. The Board agrees that it would be highly beneficial for the State Forest to fully resume management activities, so the Board is working actively to certify the EIR and approve a management plan. The Board recognizes that the lack of active management and timber production in recent years has resulted in the loss of jobs and revenue for local communities and the State.

Response to Comment 2
Support for the past management noted. A significant level of sustainable timber production will continue at JDSF. The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in section III.6.2 of the DEIR. The resumption of timber production is expected to have a positive economic impact in the region.

Response to Comment 3
Active management is required by the legislative mandate that created Jackson Demonstration State Forest. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

F-5

George D. Gentry, Executive Officer
Board of Forestry and Fire protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry:

I would like to comment of the Draft Environmental Impact Report for Jackson Demonstration State Forest.

1, 2, 3, 4 Alternative C-1, the proposed project, permits too much logging and provides too little protection for old-growth forest, wildlife habitat, and watercourses.

I urge you to revisit the environmental impact report for Jackson Demonstration State Forest, and develop and alternative that would:

5 - restore the natural forest ecosystem;
6 - safeguard fish and wildlife habitat;
7 - protect water quality;
8 - eliminate clearcutting as a management tool;
9 - cordon off old growth from harvest; and
10 - end herbicide use

11 Also, the Board of Forestry should extend the public comment period another 60 days. The complexity and sheer volume of the 1500-page EIR makes it difficult for the public to respond during the too-brief period allowed for public comment.

Thank you,

Form Letter 5

Response to Comment 1
The legislative mandate for the forest is to demonstrate sustainable and economic forest management. The economic component of this mandate requires the use of commercial logging operations. The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. In addition, the commitment to monitoring and adaptive management will ensure not only that harvest does not exceed growth, but that other timber related resource conditions are on the correct trajectory to meet the stated management goals. Potential impacts to other resource values have been mitigated to "less than significant".

Response to Comment 2
Please refer to General Response 8

Response to Comment 3
Please refer to General Response 12

Response to Comment 4
Please refer to General Response 11

Response to Comment 5
Please refer to General Response 2

Response to Comment 6
Please refer to General Response 11, 12

Response to Comment 7
Please refer to General Response 11

Response to Comment 8
Please refer to General Response 10

Response to Comment 9
Please refer to General Response 8

Response to Comment 10
Please refer to General Response 7

Response to Comment 11
Please refer to General Response 5

F-6

Dear Members of the Board:

1- Jackson State Forest is a valuable public resource that belongs to all Californians. I am very concerned that Jackson Forest has not been managed in a way that adequately balances the needs of fish and wildlife and the desires of most Californians with the Department's desire to log the forest.

2- Jackson State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coast redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range. In the area that includes Mendocino, Sonoma and Marin counties, only 1.36 percent of redwoods are protected in parks and reserves according to an analysis published by the Save-the-Redwoods League in 2000. It is this context that brings a heightened urgency to management issues at Jackson.

3- I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson. Given the legislative mandate under which the forest is operating, Alternative F balances a high level of environmental protection with a carefully implemented timber production program. A gently applied timber management program will be consistent with the existing legislative mandate while greatly reducing the long-running controversy at Jackson. At the same time, regionally scarce fish and wildlife habitat will be enhanced. Alternative F strikes a good balance.

4- For the past ten years there has been a high degree of dissatisfaction with Jackson's management. I urge you to adopt the meaningful reforms that are outlined Alternative F, and finally put the controversy to rest.

Sincerely,

Form Letter 6

Response to Comment 1
The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The management plan is designed to balance the demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

Response to Comment 2
Clearly, there is a desire amongst many citizens to protect all redwood forests. While JDSF will not be managed as a park or reserve, one of the primary goals of the ADFFMP is to improve the overall health and ecosystem function of the Forest (see General Response 2).

In their analysis, Save-the-Redwoods League utilized the four categories of management or protection status recognized by the national Gap Analysis Program (GAP) of the US Geological Survey Biological Resources Division:

Status 1. An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.

Status 2. An area having permanent protection form conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.

Status 3. An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area.

Status 4. There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout.

The quoted statistic of 1.36% protected in the central coast region includes only areas protected at the GAP 1 level. For their planning purposes Save-the-Redwoods League considers both GAP 1 and GAP 2 as the protected parks and reserves. The area they consider “protected” under this definition is 6.72%. Save-the-Redwoods League also acknowledges that additional land has been protected in Mendocino County at both the GAP 1 and Gap 2 level (e.g. Big River) and GAP 3 level (Garcia River Forest project).

The Board recognizes the regional importance of JDSF and the value of reserves and parks for providing functional ecosystems. However, it is beyond the scope of this EIR to address the adequacy of the reserve system. JDSF may not meet the criteria used by Save-the-Redwoods League to define “protected”, but it is protected at the GAP 3 level from conversion to other land uses and will remain a redwood forest. The ADFFMP calls for harvest levels set well below growth, so there will be an increasing inventory of larger, older trees. All remaining Old-growth will be protected as described in General Response 8. The ADFFMP designates 33% of the forest to the retention or development of late seral conditions by either no harvesting, to allow stands to develop in a non-

managed state, or by understory thinning, selective harvest or other management activities designed to promote late seral characteristics (see General Response 9). The management plan also calls for increased emphasis on protecting and enhancing the associated resource values, such as aquatic and wildlife habitat (see General Response 11 and 12). The DEIR found that after mitigation the proposed project (Alternative C1) would have less that significant adverse environmental impact for all analyzed resource values and would have either no impact or beneficial impact on many resource values. The ADFFMP incorporates increased protection measures and a reduced timber harvest level, so no significant adverse impacts are expected.

Response to Comment 3
Support for Alternative F noted. The ADFFMP has been developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even age management and clear cutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. One example of the research and demonstration emphasis will be to test the cost and effectiveness of the riparian zone management approaches contained in Alternatives C1 and D-F. The results of these experiments will be utilized as part of the adaptive management process defined in Chapter 5 of the ADFFMP.

Significant impacts to fish and wildlife habitat are not expected due to management as approved by the Board. Please see DERI Section VII.6.1 and VII.6.6 and REIR III 6.2 and II.6.7 for the analysis of these resources (see also General Response 11 and 12).

Response to Comment 4
Unfortunately, there is no alternative that “will finally put the controversy to rest”. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance the demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

F-7

California State Forestry Board
P.O. Box 944246
Sacramento, CA 94244

Dear California State Forestry Board,

1 As a supporter of Defenders of Wildlife and California's great natural heritage, I strongly urge you to adopt Alternative F, the "Older Forest Emphasis" plan for management at Jackson Demonstration State Forest.

2 Alternative F balances a high level of environmental protection with a carefully implemented timber production program. Such a gently applied timber management program would be consistent with the existing legislative mandate. Alternative F would also enhance fish and wildlife habitat, which is now scarce in the region.

3 Jackson Demonstration State Forest is a unique resource in the redwood ecosystem. It is situated in the central part of the coast redwood range, where there is no national forest with redwoods, and where redwoods are preserved at the lowest rate of their entire range.

In the area that includes Mendocino, Sonoma and Marin counties, only 1.36 percent of redwoods are protected in parks and reserves according to an analysis published by the Save-the-Redwoods League in 2000. The forest's special place in the redwood ecosystem makes its proper management all the more important for future generations of Californians.

I urge you to adopt the meaningful reforms that are outlined in Alternative F. Thank you for considering my comments.

Sincerely,

Form Letter 7

Response to Comment 1
Support for Alternative F noted. The Board has developed an alternative that strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. The ADFFMP is designed to balance the demonstration and research, production of timber products, and the desires of the public, while improving the overall health and ecosystem function of the forest.

Response to Comment 2
The ADFFMP has been developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even age management and clear cutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education. One example of the research and demonstration emphasis will be to test the cost and effectiveness of the riparian zone management approaches contained in Alternatives C1 and D-F. The results of these experiments will be utilized as part of the adaptive management process defined in Chapter 5 of the ADFFMP.

Significant impacts to fish and wildlife habitat are not expected due to management as approved by the Board. Please see DEIR Section VII.6.1 and VII.6.6 and REIR III 6.2 and II.6.7 for the analysis of these resources (see also General Response 11 and 12).

Response to Comment 3
Please refer to Form Letter 6, Response to Comment 2. See also General Response 15.

F-8

George D Gentry
Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244

Dear Mr. Gentry:

1 I urge the California Board of Forestry to select a management plan that accounts for the research and demonstration of sustainable timber harvesting while generating revenue for the state. Previous management of the forest transformed the cutover timberland in 1947 to a premier second growth forest.

2 Over the past few years, there has been no management of significance on the state forest. There has been minimal road maintenance, so stream restoration, no timber stand improvement, no research, and limited recreational opportunities. As a result, state and local governments have lost millions of dollars in revenue that provides for the management of other state-owned forests, state nurseries, forest practice regulation, and the California Forest Improvement Program.

3 It is ludicrous to shut down a sound revenue-generating forest that provides key information on watershed function and sustainable resource management. The research conducted at JDSF is world-renowned and contributes to improved forest practices statewide.

Active management is how resources are protected and revenue is generated. The state of California is a massive consumer of forest products, with the most cumbersome and burdensome environmental framework by which that active management is guided. Many of the best management practices have been developed and demonstrated at JDSF.

4 I urge the California Board of Forestry to consider a management plan that includes research and demonstration of scientifically based maximum sustainable timber harvesting while providing increased knowledge and expertise as well as much needed revenue for the state of California.

Sincerely,

Form Letter 8

Response to Comment 1
Support of the previous management program noted.

Response to Comment 2
The Board recognizes the fact that the loss of revenue in recent years has precluded some management activities. In particular, an absence of significant revenue has reduced the level of road maintenance and improvement, as well as other aspects of forest management, such as timber stand improvement, stream restoration, research, and recreation. However, some level of management associated with these activities has occurred.

The Board also recognizes that there has been a loss of tax revenue and jobs associated with the absence of timber production.

The State Nursery Program and Forest Practice Program are no longer funded by revenue from the State Forest Program.

Response to Comment 3
The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to certify the EIR and approve a management plan. The Board agrees that JDSF has played an important role for research and contributed to the development and demonstration of improved forest practices.

Response to Comment 4
As defined in PRC 4639, “Management” means the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality timber products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment. The ADFFMP is designed to balance the research and demonstration mandate, maximum sustained production of timber products, and consideration to the values of the other resources listed above. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

F-9

Members Board of Forestry
PO Box 944246
Sacramento, CA 94244-2460

Dear Members Board of Forestry,

1- I congratulate the Board on its actions to ensure that Jackson State Forest is managed for the broad public interest. I support Alternative G's emphasis on research, forest restoration and ecological health, and recreation and public enjoyment.

2- However, I strongly oppose giving the forest managers an open-ended license to clearcut thousands of acres each decade to provide for unspecified "future research possibilities." We need more research on restoring forests, not on destroying them.

3- I cannot support Alternative G in its present form. Any clearcut or similar destructive harvest needs to have an explicit research justification and be limited to the minimum area required for scientific validity, as recommended by the Mendocino County working group. I urge you to incorporate the recommendations of the working group into Alternative G.

4- I applaud the interim period in Alternative G during which forest managers will work with a new public advisory committee to develop a long-range landscape and management plan.

5- To ensure success of the interim planning effort, all proposed interim timber harvests need to be reviewed by the Jackson Advisory Committee. This review is needed to assure that interim harvests are designed and chosen so as to keep open planning options for restoration, habitat, and recreation to the maximum extent feasible.

We are close to ending the long controversy that has kept our public forest shut down for eight years. Please make the requested changes in Alternative G. You will have my thanks and support for moving us forward.

Sincerely,

Form Letter 9

Response to Comment 1
Support for alternative G noted.

Response to Comment 2
The future use of the clearcut silvicultural method has been limited. The use of this stand management method is limited to no more than a few hundred acres per decade, primarily for research or very difficult stand regeneration circumstances (RDEIR Page II-9). The Board recognizes that the scope of potential future research is greatly enhanced by the availability of a broad range of stand and habitat conditions. Significant impacts due to the limited use of clearcutting are not expected to occur. The Board concurs that additional research on the recovery and restoration processes within forests is both needed and beneficial. Future research and demonstration will include this form of examination. Please see DEIR Section VI and REIR Section III for an assessment of potential environmental impacts as the result of the future management of JDSF. See also General Response 10.

Response to Comment 3
Many of the recommendations of the Mendocino Working Group have been incorporated into Alternative G, including interim harvest limitations and the formation of a JDSF advisory committee. The commenter does not describe the form of destruction that is asserted will occur with the limited use of clearcutting that has been proposed. The potential for impacts to occur as the result of timber harvest, including the use of even-aged management, have been considered, and significant impacts are not expected to occur.

Response to Comment 4
Support for the interim period and advisory committee noted.

Response to Comment 5
The JDSF advisory group will provide the Board and the Department with advice concerning both implementation and policy issues related to the future management of JDSF. This group is expected to review and comment upon many of the proposed harvest plans for the interim period, except those for which the Board has determined that review is not required, either due to the implementation of interim harvest standards or specific research proposal as is the case in the South Fork of Caspar Creek (see RDEIR Table II.3). Alternative G retains future planning options, including options related to restoration, habitat, and recreation. The management plan is expected to remain in effect for the next 10 to 15 years, and the Board anticipates reconsideration of the management plan following receipt of input from both the JDSF advisory committee, the general public, and the Department following the interim period.

F-10

Dear Members of the Board:

1- Thank you for reorienting the management at Jackson Demonstration State Forest toward scientific research about a broad range of forest ecosystem issues. We applaud that the new goals include a focus on developing information for small landowners and those who are interested in conservation and restoration as I am.

2- Please keep in mind that Jackson is the areas only significantly sized public redwood forest. Low-impact outdoor activities such as hiking, camping, birding, and mushroom hunting are generally compatible with research on conserving and restoring forestland. Because the region does not have ready access to the vast expanses of public forestlands available in other parts of the state, Jackson is a vital recreation resource.

3- While your new Alternative G does recognize the importance of recreation, I urge you to take the next step as soon as possible and complete a comprehensive recreation plan that identifies key assets and locations and reasonable means for the public to access them.

4- The idea of an Older Forest Structure Zone (OFSZ) is a good one, but the boundaries should be revised and expanded. The OFSZ fails to include many areas that currently have large, old trees, for instance near West Chamberlain Creek and Brandon Gulch. The region is so deficient in older trees, their location on Jackson should be the most important factor in designing the OFSZ. The Late Seral Development Areas within the OFSZ should also be expanded to ensure that significant intact areas of existing older forest remain for research and as reference stands.

5- Even though research will be the focus at Jackson, be sure to consider the regional context before allowing experiments that diminish a forest or watershed resource. It could seem reasonable to experiment with less than standard watercourse protection but, in a region where the National Oceanic and Atmospheric Administration (NOAA) has changed the listing of Coho salmon from threatened to endangered, assisting the recovery of the species is a higher responsibility.

Again, thank you for taking Jackson Forest in a new direction. With careful attention to the guidance you receive from the various advisory groups, Jackson can finally become the asset it should be.

Form Letter 10

Response to Comment 1
Support for Alternative G noted.

Response to Comment 2
The Board concurs that JDSF is an important recreational resource.

Response to Comment 3
Support for comprehensive recreational planning is noted. The ADFFMP includes a plan for future management of the recreational resources within the State Forest, including a modest increase in recreational facilities. The ADFFMP also includes provisions for consultation with local recreational user groups. Please see DEIR Section VII.14 for an analysis of potential recreational impacts and an overview of recreational provisions of the ADFFMP. See also General Response 14.

Response to Comment 4
No specific environmental concern is expressed other than a desire to see the older forest structure zone and late seral development areas expanded. A reasoned response to a specific environmental concern is not possible. The intent of the older forest structure zone is to develop habitat, to promote connectivity between old-growth groves and late seral development areas, and to promote structural characteristics associated with older forests. It is also the intent of the Board that the management of the Forest balance watershed and habitat values with other forest management benefits in compliance with existing legislation and Board policies for the state forest.

The Board did not intend to extend the older forest structure zone or late seral development areas to include all large trees within the Forest. The terms "large" and "old" are subjective, but the management plan provides for the retention of large old-growth trees and old-growth trees with specific structural characteristics. Most of the forest area included in the older forest structure zone and late seral development areas is second -growth forest that is currently either even-aged or uneven-aged, depending upon harvest and management history. All of this area is valuable habitat, and is expected to develop into a highly variable uneven-aged condition with structural characteristics of value to wildlife species, including many species normally associated with older forests. There is no inventory of "old trees" per se for the region or the assessment area, since the term "old" is not defined. The value of forest stands as habitat is more a matter of structure than the size or age of individual trees within those stands, though size is one component of structure. An estimate of habitat distribution within JDSF and the assessment area is provided in DEIR Map Figures J and K. See also General Response 8 and 9.

A significant area of second-growth forest that has not been re-harvested is encompassed by the late seral and older forest development areas across JDSF.

Response to Comment 5
The potential for impacts to listed fish species has been considered. Significant cumulative impacts are not expected to occur (DEIR Section IV.6.1 and Section VIII). It is the Board's intention to promote continued recovery of the aquatic ecosystems on JDSF. Demonstration and experimentation will be conducted with this intention, but there remains a considerable degree of uncertainty in the relationship between protection mechanisms, restoration efforts, and the aquatic systems. JDSF can help add to the body of knowledge concerning restoration and protection. The Board does not propose to apply "less than standard watercourse protection". At a minimum, the protection standards specified in the ADFFMP will apply. See also General Response 11.

VI. Oral Testimony

This section of the JDSF FEIR contains a summary of public comments received at four public hearings for the project. Two public hearings were held during the Public Comment Period for the Draft EIR, one in Ukiah on February 2, 2006, and one in Sacramento on February 9, 2006. Two additional public hearings were held during the Public Comment Period for the Recirculated Draft EIR, one in Ukiah on June 20, 2007, and one in Fort Bragg on June 7, 2007. Comments were transcribed from recordings and numbered by the Board to facilitate response. Because the comments were transcribed from audio recordings and comments were not always entirely intelligible, some errors in transcription may have occurred.

Draft EIR Public Hearing, Ukiah, February 2, 2006

George Hollister:

Comment 1
I am from Comptche. I'm a commercial forest owner for the past 30 years. I know that human enterprise can make the forest a better place. And commercial forest management based on science can meet the needs of people better than that which excludes people and ignores science.

Jackson Demonstration State Forest is an excellent demonstration of commercial forestry based on science to achieve its managerial goals. It is an example of management that is capable of meeting the diverse challenges of today as well as the many challenges we will face as fiscal years challenges.

The draft EIR and Management Plan that while is not perfect, it is beyond adequate. It investigates the issues of humanitarian significance. Alternative B is preferred option for management. This is the most flexible choice to meet the needs of the most people.

Response to Comment 1
Comments noted. The Board has determined that Alternative G balances operational flexibility, timber production, recreation, and environmental protection, and that Alternative G is in keeping with Board policy and existing state forest legislation.

Els Cooperider:

Comment 1
I was appointed by Richard Wilson to serve on the Citizens Advisory Committee. Back in 1997-8, along with 15 members on the Citizen's Advisory Committee and I think that what came out of the advisory committee is a good document. I think it was printed in April, 1998 and quickly discarded by CDF after taking almost two years time of 16 people to work on an action plan and I'm still upset about it.

Comment 2
In the meantime, can you guys come up with some other ideas about what you'd like to see on the forest and not forgetting that this forest belongs to the people? I know we can get hung up and get caught up with a lot of details that can make us forget the big picture. The big picture is that Jackson State Forest does not only have to meet the needs of the people, but for all the critters that live there. We have critical habitat for marbled murrelet and endangered threatened coho salmon. And the only

viable option at this time is Option F, and if you can't do that, I would go for the Citizens Advisory option C1.

Comment 3
I also what I really would like to say that if you really wanted input on Jackson State Forest, this meeting should have been held in Fort Bragg, at the Fort Bragg Town Hall. I have talked to a lot of people who would have come to this meeting that live on the coast they could not take off a whole day to come to Ukiah so I request that you will set another meeting in Fort Bragg and give a chance for the people who live close to the forest to submit their comments.

Response to Comment 1
Comments noted. An examination of the ADFMP, the RDEIR, and the report of the CAC indicates that a number of the recommendations of the committee were incorporated into the management plan for JDSF, while others were not. The committee was advisory to the Department, but did not have oversight authority. The Board and the Department appreciate the efforts of the CAC.

Response to Comment 2
The DEIR and RDEIR thoroughly evaluate the effects of future management upon fish and wildlife resources. Please see DEIR Section VII.6 for the assessment that was conducted. Also, please see the FEIR for the allocation of lands to various forms of timber and habitat management. Support for Alternative F is noted by the Board. The management plan incorporates provisions from several of the alternatives that were considered.

Response to Comment 3
JDSF is a state resource, so hearings were conducted in various locations, including Fort Bragg.

Bill Heil: I took the day to talk about Jackson State Forest in general. Things I think we might have missed.

Comment 1
One is that the situation has changed a lot in Mendocino County. Mills have been sold and closed. I live on the coast, as far as I can tell, there is nothing in the management of Jackson State that affects anyone on the coast anymore. All the logs are shipped out. The thing that is done locally is the logging. I am not a logger. I am a sawmiller along with at least fourteen hundred other sawmillers that live along the coast who have small sawmills. We would love to have access to the logs coming out of Jackson State Forest. We don't. In the past, the nearest we've come to being able to access Jackson State is that they decided to have small sales. They do not care if the sale is small and the trees are standing. I don't have a logger. I do not want to be a logger; I want to buy logs from Jackson, and so do my friends, and so do the other micromillers. We want to be able to get them fairly at a fair price on the ground. And to be able to load them on the truck. In terms of the way we view it economically on the coast that would be helpful, that would help a lot of people. There are a lot of smart people on the coast. They can figure what products they need to make in order to make it pay and then they can figure out how to hire other people. This has happened. There are no longer big mills but lots of little mills. You have to take that into account somewhere. I don't know if it is in the EIR, but it has 1500 pages. You might have perfect vision but I haven't, but I can get through 1200 pages of the Apostle.

Comment 2
I said right upfront that when I saw an E and F Options with an exclamation mark after it, that is the options I want to see done because we need to let the trees grow. I think we need to figure out how to take advantage of the fact that some of the nicest forests that are left in Mendocino County are under the preview of CDF, who facilitated letting all the forests to be cut down except Jackson State. Now that we got that, we've got to look at it differently. We have to protect it. It can be resource but it has to be managed on a much sensitive scale than the way it has been managed so far.

Response to Comment 1
JDSF is a valuable and important resource to the people on the Mendocino coast and elsewhere throughout the region and the State. Please see the economic assessment in the DEIR for an estimate of the values associated with the local economy. The size of log sales is not an environmental issue. The Board wishes to emphasize that small sales would be a valuable demonstration that should be considered, while also recognizing that small sales are much more difficult to administer in total, due to potentially high number of sales necessary to produce a given level of revenue.

Response to Comment 2
The preferred management alternative for JDSF incorporates a very high level of forest growth and habitat development, including the dedication of a significant portion of JDSF to development of late seral and older forest structure. The Board recognizes that a significant acreage of forest has been managed within the assessment area, but also recognizes that the forests in this area remain highly productive, and contribute valuable habitats and forest products to the region. The Board does not agree that the Department has facilitated letting all of the forests surrounding JDSF be cut down. The resources within JDSF will be protected.

Louis Bigfoot: I have been following the issues since 1989.

Comment 1
What's right is right for the forest. What's right for the forest is to maintain the integrity and to grow the trees so grow old over time because they are all dying. We need to the old trees for our kids, we need strong rivers, and we need to bring the opportunity to bring back the fish. The question in my mind is not the EIR, it is the amount of money requested by the state that out of the forest is what needs to be managed. If they want millions of dollars, how are we going to stop them? I can't stop them, can you stop them? My wife says, "what are we going to do?" The people who want to control a person, they want money. If you apply that to Jackson State Forest, you will get a different answer.

Comment 2
The answer is that it is the only area of all the forested land near it. It has 500,000 acres of forest and G-P and L-P sold out. The environmentalists said you are over-cutting, over-logging, Chris Rowney says no, we are doing a great job! We are saying, "heh, you are crazy." Get up in airplane and take a look. We're seeing that this is a disaster. "Oh, no, no," says Chris Rowney. LP and GP says, "Oh, no problem." There's the bet. Where's Chris Rowney today? He's on the Board of Forestry. The guy who wrote all the timber harvest plans for LP and a lot of clearcuts from hell and back. That's the problem. It's the management people who have been inundated by the people who have worked their way up the ladder to the point where [they're the ones] who makes the decisions. Can you trust the foresters? I do not know.

Comment 3
Herbicides? You have a committee for them. Willful intelligent people, together and the committee says, "hey, we do not want any herbicides. Hey we want to hold the fort" …What did CDF decide to do? Aggravate the problem. If they would have agreed with the forest committee, we wouldn't be here today. We could have harvest a few trees and they would have their employment. So my recommendation is let the committee finish their job. Wilson appointed them, so let them continue on. I think it will bring a good result. Take away the professional foresters, because they have been around too long. So let them retire; let the young people who have vision. We need people who have a vision, not control the amount of money. Make sure Mr. Gentry that we reduce the amount of money that is demanded upon you. We do not need to go back.

Response to Comment 1
The comments are somewhat unclear. There is no indication that the trees are all dying. The Board recognizes the need for habitats consisting of older forests and structural elements of older forests. The management plan will dedicate a significant portion of JDSF to the maintenance or development

of late seral forest and older forest structure. The streams will be well protected, with the stream zones being managed to develop late seral forest. Significant impacts to streams and wildlife are not expected to occur.

The Forest will be managed as a demonstration of sustainable forest management. The amount of revenue ultimately produced will be determined by forest growth and development in consideration of management constraints.

Response to Comment 2
The comment is unclear. The Board has considered past, current, and probable future projects within the assessment area, and has concluded that significant cumulative impacts are not expected to occur. The record suggests that the level of harvest within the assessment area has declined substantially.

Response to Comment 3
The Board is aware of the recommendations made by the CAC. The committee recommended a temporary moratorium on the use of herbicides. The Board and the Department will maintain or establish three separate advisory committees to review JDSF management and the potential for research and demonstration, and these committees will report back to the Department and/or the Board with recommendations.

Mr. Vanderhoorst: The letter that Mark read or delivered this morning from CLFA pretty much covers every point I intended to make. I'll save a bit of time by ratifying and supporting the comments made in his letter. I too am a member of the California Licensed Foresters Association.

Comment 1
I would support the C1 alternative. I think in order to have something management regime that is relevant as a demonstration ground for private timberlands throughout redwood counties, you need some kind of management that emulates what properties would be right to. Given the good management that is going on, Alternative C1 does that. It probably is the best balance between alternative values and all the inherently conflicting with one another. It is not a zero sum game. One thing does not preclude other things turning out well. You can have timber production and recreation, watershed protection. save large quantities of old growth managed at near park status, for example around the Mendocino Woodlands and probably save a large variety of public needs doing that than some of the other alternative

Response to Comment 1
Support for Alternative C1 noted. The Board agrees that elements of JDSF management should serve as a demonstration for private landowners within the region, and should incorporate forms of management that are common in the region. The management plan will implement these forms of management, and will also strive to demonstrate a broad range of conservation and habitat development techniques.

Kathy Bailey: Because I intend to take other opportunities to talk to the Board, I just want to highlight a couple of things here. I represent the Sierra Club.

Comment 1
Alternative F was developed from comments that we submitted as part of the scoping process, along with features of the Chesbro bill two years ago, which we sponsored. And so alternative F represents some of our ideas, and one thing I wanted to hear and flush out a little bit more is about what we have in mind with alternative F. The C1 and C2 CDF goal for making consideration of non-timber goals equivalent to the goal of the timber management program is a great goal, but I think it needs improvement and have it effectively implemented.

Comment 2
One of the key features of alternative F has been to identify high priority areas in the forest that we think are important for habitat value and public use value.

Comment 3
The description of Alternative F in section 6 of the EIR is more complete than in the Executive Summary but it misses (from my point) some of the key points. I just wanted to make sure that when you all think of alternative F that you have a sense of how it was presented in the scoping comments because I think that there was some features that were not adequately conveyed in the EIR. There were key features in the forest that were identified. The channel of all trust for Alternative F is to provide continuity between these key features.

Comment 4
For instance, CDF has identified all identified all the old growth groves and demarcated the late seral development area around several of them, but under the C1 and C2 alternatives, those late seral development areas will become islands over time. In a couple of places including where the joint timber harvest plans are in the Camp 1 and Camp 3 areas cover 2,000 acres, as far I can tell, of contiguous forestland that hasn't been logged since 1925, which stretches from the Camp 1 and Camp 3, over to the designated late seral development area in the North Fork/South Fork of the Noyo. One of the logging plans in the 10 year logging plan will cut into that and one of the joint timber harvest plans is adjacent to the CDF designated late seral development area. So, instead of taking up timber that we do have and maintaining contiguous habitat where it exists, the harvest proposal for the C1/C2 plan will cut into that existing forest which is a really scarce resource in Mendocino County, and the redwood region in general. The EIR does not overtly identify the fact that there are between 10 and 12,000 acres of forests that has not been logged since 1925, or in some cases, much earlier. So there is a significant part of the forest that has a stand age of 80 to 120 years old and it is not all necessarily contiguous. There is some in some places, and others in other places, but I was hoping that the EIR would overtly identify those areas so that we could plan for the best uses for those areas.

Comment 5
Now for some areas, some of it, timber harvest is the best use might be. Maybe they might not be healthy habitat areas significantly. Other areas, particularly where they are adjacent to the old growth areas that exist. I would seriously consider it for habitat value because we simply are not going to get anymore of this 80 to 120 year age class.

Comment 6
Another feature of the EIR is there is an elaborate analysis on how to create late seral forest that I believe was originated by Gail Hornberg from the Appendix of the previous EIR. It doesn't state about the work at the outset, but it talks about how to this in the course of the 100 year planning horizon of the EIR. Well at the end of this planning process, we won't be getting late seral forest. Well, if you look at the very end, you realize it appears that the very assumption is that we're starting with a 50 year old forest. The fact of the matter is that Jackson has 100 year old forests.
If your are talking about growing late seral forest, we certainly should be looking at how to grow the oldest forest component that there is now, and figure how to build on that, develop truly the old forest features of the decadence, and the downed wood and old growth features that everybody knows is important to wildlife, but that we have not focused on clearly. I'm much less focused on late seral development than I am with maintaining the late seral or near late seral that we actually have there now and how we manage that we maximize that to habitat continuity.

Comment 7
Some of that has been has been identified, for instance, in the proposed the marbled murrelet area in the headwaters of Jug Handle Creek. So it has been identified in the EIR, something that's part of it is an interesting key feature for wildlife but I really do think that the EIR has missed something here too. Not mapped or clearly identified in some other way where this oldest forest is because when you get right down it, going to the trouble to litigate the timber harvest plans as Vince Taylor has done, it's

about a specific place. Those timber harvest plans were in Camp 1 and Camp 2, they were in this older forest component. They were in this high visitor use place.

They were in area that was potentially contiguous with a CDF designated late seral area. And additionally, the area that was specifically litigated, has a road that goes along the North Fork/South Fork of the Noyo that provides a very unusual feature for forest visitors in this county. It has a relatively flattish road, along the realty, along the watercourse that is far, far away from the highway. Although as crazy as it sounds, that situation is very hard to find in Mendocino County in the redwood region. And even though it might seem that litigation happens because someone has decided something randomly, these things happen because very specific concerns about very specific areas.

Comment 8
So I would suggest that you take to heart your goals of making the timber management program equivalent with the habitat and the multiple use goals of the forest and think clearly a little more about how to maintain habitat we do have, make sure it is continuous with other habitat that would be a benefit to species and to people, visitors, and for recreation. Take a careful look at some of the proposals for Alternative F that have tended towards to identifying some of these key features and how they can be managed. Again I want to reiterate something I said in the scoping comments, don't think this not a logging area, this area is to be managed for specific values like building out from the old growth areas, and maintaining connectivity. It could be managed, timber management carefully in some of the right places. It does not have to be in a logging area.

Comment 9
As to demonstrations of the future of the logging industry, I think some of the most interesting demonstrations that Jackson could do is to try to figure out to do logging in such a way that the public is okay with. It can be done. There are timberland owners who are doing it. And as the area inevitably becomes more populated, with more and more interface with commercial forestlands, it has to be really important to notice the sorts of things that can be done that making logging feasible to the general public and stop being so confrontational. That's something I'd like to see Jackson doing. In terms of its demonstration, habitat and figure out how to sustain logging that the public can tolerate and embrace.

General Response
Please see also responses to letters of concern from Ms. Bailey elsewhere within this FEIR, which include many of the same or similar comments and concerns.

Response to Comment 1
Support for Alternative F noted. The management plan alternative selected by the Board incorporates elements of Alternative F.

Response to Comment 2
The Board has thoroughly assessed habitat values found within the Forest, and has adopted an alternative that includes a significant area of interconnected forest that will be managed toward a late seral forest or older forest structure. Potential recreational use and development has also been thoroughly considered for the alternatives presented in the DEIR.

Response to Comment 3
Alternative F is one of several alternatives assessed by the Board. The construct of Alternative F was established by the Board in consideration of public and agency input, including comments by Kathy Bailey and the Sierra Club. A description and analysis of the alternatives can be found within the various subject areas of the DEIR and RDEIR. The Board recognizes that Alternative F, as assessed in the EIR, may not incorporate all provisions that each individual believes should be included as part of the alternative.

Response to Comment 4
Neither alternative C1 or C2 proposed to create islands of the old growth groves. In both instances, the majority of the groves are adjacent to late seral development areas, stream protection zones, and areas to be managed on an uneven-aged basis. These conditions preclude the groves becoming islands, due to the maintenance of continuous forest and a general absence of abrupt edges. Selective harvest does not preclude valuable habitat, and may actually improve conditions for many species, including those that prefer older forests. This is due to the fact that selective harvest accelerates the growth of the larger trees, provides light to the understory, promotes the development of various age classes and near-ground vegetation, and generally increases habitat diversity. There is no evidence to suggest that uncut second-growth presents a more valuable habitat than stands with more than one age class present. In fact, late seral and older forests are commonly characterized as being uneven-aged.

The DEIR identifies the habitats present within JDSF. While Ms. Bailey suggests that specific young forest types within JDSF are regionally rare based upon their logging history, this has not been demonstrated. The reader is referred to the habitat maps provided in the DEIR. The reader is also referred to the logging history maps and Map Figure 2 of the RDEIR, which depicts the estimated number of large trees present on a per-acre basis across JDSF.

As approved, the management plan will incorporate an older forest structure zone, which provides additional linking habitat across JDSF, including a significant area within or near the North Fork of the South Fork of the Noyo River, and area for which Ms. Bailey expresses concern. The vast majority of JDSF is linked by either late seral development area, watercourse protection zone, older forest structure zone, or uneven-aged forest management area.

Response to Comment 5
Future habitat availability has been thoroughly considered. Significant impacts to wildlife are not expected to occur. Contrary to the stated concern, the management plan provides for a vast increase in older trees across much of JDSF. Where even-aged management is proposed, stand rotations will be as high as 150 years, resulting in stand ages between 60 and 150 years at the time of harvest. Uneven-aged management will continue to promote multiple age classes within stands, and most of these stands will incorporate trees in excess of 80 years of age. In addition, the management plan provides for the recruitment of snags and down logs, and the protection of old trees with structural characteristics of value to wildlife. The plan provides forest habitat connectivity through management of the old growth groves, late seral development areas, the older forest structure zone, and the watercourse protection zone. This is in addition to the continuous forest habitat provided in areas managed on an uneven-aged basis.

Response to Comment 6
The stated concern is somewhat unclear and speculative. The Board recognizes that the majority of JDSF stands include a substantial element in excess of 50 years of age. The general logging history of JDSF is known, and stands with a significant component of trees in excess of 60 to 90 years are relatively common. The Board also recognizes that forest development is dynamic, and that late seral forest will not be created in most areas within a 100-year period. However, the period of time since an area was last clearcut is not a viable indicator of the amount of time needed to develop late seral forest in the absence of stand management. In fact, it is likely that the areas of JDSF where second-growth stands have been selectively harvested may have potential to develop late seral characteristics over a shorter time frame than those that are even-aged. Current stand age differences of a few decades have little bearing on the eventual development of late seral forest, which may take many decades to hundreds of years to develop, depending upon both natural and management factors.

Response to Comment 7
The concern is somewhat unclear. The area of Jughandle Creek is composed primarily of young stands that have been selectively harvested on at least one occasion in the past. This area is included for consideration as part of the marbled murrelet special management measure. The Board

is aware of the fact that the current civil suit concerns timber harvest proposals in specific areas, as well as the management planning and EIR process in general. However, the Board does not agree that roads near streams in public forest areas is a rare resource. In fact, locations near streams are quite common throughout the regional redwood parks and reserves, as well as within JDSF. The Board recognizes the recreational value of the roads and trails throughout JDSF. Please see the DEIR for the assessment of potential impacts to recreational resources.

Response to Comment 8
Comment note. The Board believes that an appropriate level of consideration has been given to future management for timber and habitat values. Recreational values will be maintained or enhanced by implementation of the management plan. It is expected that recreational values will be specifically enhanced by provisions for late seral development area, older forest structure zone, and watercourse protection zones. The comments related to "logging area" are not clear.

Response to Comment 9
The Board agrees that the compatibility of recreation and stand management should be explored and demonstrated. This is particularly true in specific areas of the Forest, for example, near campgrounds, recreational trails, rural residential neighborhoods, and public highways. The potential for impacts to recreational and aesthetic resources has been thoroughly considered.

Pete Passof: I live here in Ukiah. I am a Registered Professional Forester. I have lived in Mendocino County for 40 years. I was the extension forester advisor for U.C. Cooperative Extension here in Mendocino for about 30 years. For 10 or so years I have been retired. From a matter of perspective, I was a member of the team that was led by John Helms back in the late 70's and the early 80's and actually prepared the forest management plan which became Jackson's plan for many years. It was subsequently attacked for not being up to date. From the perspective of having to deal with forest management plans, I remember those early days which I fondly remember as the good old days. The good old days being those when you put together the plan with a team of 15 or so individuals and not having to go through five iterations of an EIR which I think is reflected today in a set of problems. This county has been concerned with sustained yield and with good management for a good long time. In the late 80's, concern was building up about the amount of cutting that was going on in the County, and particularly, on the industrial lands. The concern was, and that everybody knew but didn't want to admit, that we were facing a timber cap and that some changes or modifications that was going to happen in this county were necessary or we would be simply closing down mills or be quickly going out of business. The Board of Supervisors appointed the Forest Advisory Committee in 1989 on which I served as the Staff Secretary on behalf of the Board. That committee, there are several here that were on it, it was about 18 or so individuals that were on it, a cross section of the community, professional foresters, environmental activists, technicians in the areas of specialties of wildlife and fisheries and so forth. One of the drivers of getting this committee formed, was a gentleman named Dr. Hans Burkhart who had a lot of insight into what he thought the problems were and how they might be taken care of.

Hans was the type that liked to look at what he thought that were conditions he described as" models," that one would go to that would point to the idea that this the way we liked to see the ideal conditions. I was always struck because of his activism. He was obviously trying to get some changes done. The thing that comes to mind at this point in the conversation is that he viewed back in 1989/91 when the committee was activated. He viewed Jackson State Forest at that time, at that point, as being an ideal situation to be used as a model from trying to draw-up changes in regulations or ordinances or whatever in Mendocino County. Using the volumes that they had, the growth, the amount of cut, and all of that young logging, Dr. Berkoff has passed on but I think he provided a legacy for thinking about what Jackson was all about, how successful in his mind it has come to be and in spite of people did not believe him, he did favored logging, cutting and managing the forest down the line. Well some time went on, as I remember the situation for many people out of the Advisory Committee, it became the Citizens Advisory Committee. That Committee struggled with

some ideas, some viewed at that time as radical ideas on how Jackson should be managed. I don't know, and history is not terribly important, the future is what we need to talk about.

Comment 1
After many, many months and many, many meetings of that Advisory Committee, they were dismissed and far as I can see, there were entire elements of their recommendations, from a diverse crew very much like our original Forest Advisory Committee. They were essentially dismissed; it was probably not being workable. That being as a part of history. Then we had a series of our conflicts, which has led to the fact for five years maybe six or seven years, essentially harvesting in Jackson has come to a halt. I guess I'm of the opinion when I look back how things have changed in the county, from the good old days to where we are going now, where we are going in the future, we have to do a little give and take. A little politicking here and there, "you scratch my back and I'll scratch yours." I recognize I can't have it all, but we have to come up with a plan to block this future stalemate that seems to be on the Jackson. So in summary, I'm suggesting from my particular viewpoint as Professional Forester, a resident in the County, as one who has been actively involved with the conflicts for long time, that the success for the forest, the Jackson Demonstration State Forest, is going to rest with the Citizens Advisory Committee recommendations which I believe is Alternative D. That's the one I think that has the best chance.

Comment 2
I would like to think that more heavier cutting on the forest mighty be useful for shortening the long rotation age that has talked about as a concern. But at the same time, if those plans (if that can count as the plan) of record I think we are back to Day 1 and to more lawsuits. I just think this is a tragedy in this county. That Jackson State Demonstration Forest is one of the best examples of what forest management is all about. Maybe the timber industry has not followed their recommendations, but that is not a reason to turn Jackson State Forest into a park. We need to have for the record a state forest that is actively working in demonstrating for not only the people in this room, but for our kids and grandkids. I think that maybe the best solution. If it is not, then it results in more lawsuits, more conflicts, and more stalemates. I might regret my offering as this recommendation, but I think it is the best opportunity.

Response to Comment 1
Support for Alternative D noted. The Department has indicated that many of the recommendations made by the CAC in the late 1990s were either totally or partially adopted, while others were not. The Department has indicated that Alternative G, as adopted, incorporates many provisions that are similar to recommendations made by the CAC. The Department will appoint a JDSF advisory committee, and will maintain a separate advisory group for the state forest system as a whole.

Response to Comment 2
The management plan will make provision for the demonstration of various rotation ages. However, the majority of the Forest will be managed on an uneven-aged basis. The Board agrees that JDSF should remain a demonstration of sustainable forest management.

Linda Perkins: I am a member of the Albion River Watershed Protection Association, Sierra Club, and I am not speaking on behalf for either of these organizations. I got involved in forestry activism in 1992. I've stood by logging roads holding a sign with grand kids in tow saying "LP EQUALS LOCAL PROPERTY" and "LP OUT OF MENDOCINO COUNTY", both of those were prophetic. LP did leave and sold. I'm still involved. This morning I was at CDF in Santa Rosa. At least 14 years later, I think what has happened with our forests. I think that here one of the issues, and I do not know if it is in one of the 1600 pages, is that people of Mendocino County are intensely involved with our forests.

Comment 1
I do not know if anything is going to work that doesn't have a regular feedback system for the people in the group. I would suggest that there would be a local Citizens Advisory Committee that was made of a cross section of people. In the count, I think those venues work. I was part of the Richard Wilson-

appointed Citizens Advisory Committee in 1997/98. That was a cross section of people in the county I think we worked well together and I think we came up with some good ideas. Unfortunately, they were shelved. I think it works. I think CDF would be very afraid of that because they'd feel that it would limit them. I don't that such a selection of people would be so unreasonable that if CDF came up with something they needed to do on the forest in terms of a demonstration, and that they would not be able to do such a thing, that it would be in the public interest that this could not be done. So I think we are going to have conflict unless somehow the local people are brought into the picture.

Comment 2
And I guess my final comment I really do not think that the California Department of Forestry should be Jackson State. I think there is an inherent conflict if they are having to review timber harvest plans on national timberland and I think there is too big a disconnect between on what's allowed on industrial/commercial timberlands and what the public is expecting on Jackson State Forest in terms of innovation etc. I think it would be good to see combined, to play both rules. Although I think l that most of the people in this room would end-up laughing if I said I am not necessarily against logging because I review several timber plans every year and have a coastal representative and….my proposal writing has gone on line.

Response to Comment 1
The Board agrees that local input is valuable. The Department will establish a JDSF advisory committee, and will maintain a state-wide committee to make recommendations for the entire state forest system. The Department has indicated that some of the recommendations of the former CAC, of which Ms. Perkins was a member, were implemented in whole or in part, while others were not.

Response to Comment 2
Comment noted. Existing legislation provides the authority for management of the state forests by the Department of Forestry and Fire Protection. The Board believes that the Department is imminently capable of implementing the management plan for JDSF. The Department has managed JDSF since it's inception in 1947, decades before the enactment of the current Forest Practices Act. JDSF can play a significant role in testing and demonstrating the effects of proposed forest practice regulation.

Jimmy Smith: I am a resident of Mendocino County. I am currently going to school at Humboldt State. I plan to become a teacher. I recently graduated from San Francisco State.

Comment 1
I am currently working on educational projects that involve Jackson State Forest and some of the other Californian rain forests. I think that Jackson State Forest is an excellent example of what rain forests should be and gives an fantastic opportunity to do research on environmental science and learn more about nature about what we are dealing with and what kind of factors are involved for things like sustainability, to ensure biodiversity, and so I was in the process of writing this educational course when I was starting to review the Draft EIR/EIS.

Comment 2
Upon my review of this draft management document, I was very seriously concerned because I think Jackson State Forest is at a very high risk as far as fire danger. The reason for this is that it is primarily a second growth forest that has been allowed to go uncut for the last four or five decades. So we have 40 or 50 years worth of second growth, small trees and undergrowth and things like that, combustible materials, litter, things that need to be removed from the forest. I think that this forest management plan needs to be more comprehensive in that it needs to include plans for tree thinning and to remove other hazards like combustible materials. This would [be applicable] for the entire forest, so that there are tens of thousands of acres that needs to go through this process. In just thinking about this, I did a little research I learned there is new machinery and new equipment that would do this tree thinning and create all new forest products. These forest products could include poles like telephone poles and redwood bark that sells at a premium like $160 per ton. A lot of this

woody debris that I would like to see removed can also be sold to raise revenue and I think they're a really good price for this so you can get thousands of dollars per acre in addition to doing the fire prevention for this. What needs to be done is to remove the undergrowth and small trees first.

Comment 3
So what I'd like to see in the next five or ten years is developing a long-term comprehensive management plan for Jackson State Forest and in the interim time period while working on this comprehensive management plan to do this tree thinning for the entire forest in a short period of time, say 2-3 years. That will do your fire protection so the forest would be safe from things like lighting strikes, internal combustion, and weather. Dry, hot days with extremely high winds in the late summer could really prove disaster for Jackson State Forest.

Response to Comment 1
Comments noted.

Response to Comment 2
Significant impacts related to fire hazard are not expected to occur. Please see DEIR Section VII.8 for the assessment of hazards. Numerous factors will contribute to help prevent significant wildfires within JDSF, including maintenance of access for fire control apparatus, proximity to fire protection resources, and continued thinning and natural development of forest stands. The management plan includes provisions to consider biomass thinnings and controlled understory burns in the future, in an effort to demonstrate and better understand the role that these stand manipulations have upon wildfire occurrence and behavior. However, the Board does not agree that the entire Forest should be thinned over a very short period of time, due to the potential for this form of stand manipulation, on a vast scale, to result in significant impacts to watershed, fishery, recreation, timber, and wildlife resources.

Draft EIR Public Hearing, Sacramento, February 9, 2006

Board Executive Officer George Gentry: Thank you very much for your attendance here today to comment on this very important issue. Before we begin I would like to make an announcement of a board action taken yesterday. The public comment period which was due to be closed on February 14th has been extended and will now close on March 1st at five o'clock. Secondly, the purpose here today is not necessarily for board interaction, the board does not want to appear to be predetermined or predecisional. Our purpose here today is to hear comment from the public and their thoughts on the Jackson Draft Environmental Impact Report and management plans. The comment is important to us; it is an important part of the boards' process. I also want to reiterate something that I reiterate at every hearing and every possibility. Although there is a "preferred" alternative to this plan all alternatives are available to the board, any combination of alternatives are available to the board, any combinations post mitigation are available to the board. There has been no determination of how the board will move from this point forward.

After the close of public comment, so you are all aware, there will be a special meeting called by the board once responses to comments have been drafted for the discussion of the draft environmental impact report. Normally, I would impose time limits, but, give that not a lot of people have signed up at this point; I see no need to impose time limits at this point. I only ask that you be reasonable in the length of your comments. I also ask that you be respectful of others and you listen carefully to what people have to say. Do the board members shave any questions for me before I begin calling speakers? Okay then, with that the first speaker today will be the honorable Senator Wesley Chesbro. Senator.

Senator Wesley Chesbro: Thank you very much Mister Gentry and Stan Dixon, my old friend, and other members of the board. I really appreciate your efforts and your work with regards to Jackson State forest and I appreciate the opportunity to talk with you this morning. Today I would like to offer

my comment and observations on the boards' obligations both to the EIR and the management plan for Jackson Demonstration State Forest in Mendocino County. For those board members who may not have been on the ground there, Jackson is a fifty thousand acre parcel of timber land in Mendocino county and was purchased by the state in the 1930's, were it had been badly cut over, and I think it was a great day for Mendocino county and the forest when the state stepped in. The goal at that time was to demonstrate that we could manage a forest and bring it back. I think that has certainly happened historically. The board of forestry is responsible for establishing day to day the states forestry policies for the states forests. We have tried to make it clear that the state of California should be managing the states forests to be a producing forest and demonstrate the best management practices for the forest, one that would provide timber for local mills and the jobs and support for the local economy, local governments that goes along with that. But also one that would value the wide range of resource values that this forest offers and of course as with all our forest lands, you deal with it at every one of your meetings, that's the rub, that's the challenge of finding that combination, that balance, where we concern our self with as many other values as well as trying to have product forest lands and try and support the economy.

Comment 1

We have a serious management problem at the Jackson State forest, for the past four years no timber has been harvested and that has been devastating for the local economy, the mills and the works who have depended on that forest for their livelihood. In 2004, I think you are all aware, I assume you are all aware, I attempted to bring all the parties together in Mendocino County, the timber industry, the environmental community and local officials to develop a comprehensive plan to help unstick the deadlock that the forest has gotten stuck in. I introduced legislation, SB 1648, to implement that plan and quite frankly the initial reaction from many of the parties reminded me of why so many of my predecessors in the legislator decided that bills regarding forest lands aught to be done by legislation and the state, because its so politically difficult to negotiate these compromises. This bill was approved, in the end, by the end of the session by the Mendocino timber mills, community groups of Mendocino and local governments. It was approved by both houses of the legislator after a long and difficult process, but was opposed by the department of forestry, I think, as a result of the attitudes on the ground amongst the folks who work in Mendocino county for the Department of Forestry, they convinced the department to appose the bill and consistently described it as a bill that was intended to shut down the forest and create a park, which was absolutely untrue, but none the less it was sufficiently to apparently convince the governor to veto the bill.

So here we are again, I'm starting to feel a little like groundhog day, the movie that is, I know we just passed the real groundhog day, but I am referring to that wonderful movie were we keep waking up to that same reality and not seeing progress.

Comment 2

The board of forestry and fire protection must now find a management plan that will move the Jackson State Forest into the twenty first century and you have the opportunity, through this process to accomplish what I tried to accomplish with my bill, which is to move us off dead center and accomplish that balance and hopefully forgo the kind of litigation that has kept the forest stuck in the position that its been in.

Comment 3

The key elements that should be reflected in the EIR preferred alternative and then incorporated in the management plan are: a commitment to the original goal of the demonstration forest of reforestation and restoration of the land. This goal is consistent with the overall legal requirements of the statues that guide state management of the state forests. Public resources code sections 4651 provides broad authority for the management of the demonstration forests in a way that values timber production as well as other resource uses such as recreation and restoration. Jackson State Demonstration Forest has a unique opportunity for habitat protection for threatened and endangered species, including the Coho salmon. The management plan must place a high value on these unique habitat needs. We have put all this burden on private land owners to help us recover the fishery, the

state should be doing the best job, the very best job, of any land owner in demonstrating on how to recover these species.

Comment 4
A part of the discussion on the future of Jackson forest has been a new recognition that this is a unique opportunity to grow an old growth forest, or at least a forest that has old growth characteristics, by managing the older second growth on the land in a manner that allows the forest to continue to mature. That doesn't mean no logging, it means finding a distinction between those forests that have the old characteristics and those that do not.

Comment 5
I would take exception to the draft EIR document when it addresses alternatives like those included in SB 1648 and proposed by the Mendocino county citizens' advisory group. The draft document inaccurately characterizes the legal management requirements of section 4651 that I referred to. The statue gives the Board broad authority to establish management principles in the forest and I encourage you to exercise those. I hope the board members that use this broad authority to create a plan that will reflect the wishes of the community to create a demonstration of the best possible integrated management of our forest lands that incorporates these various values, we need to demonstrate that it can be done so we can hopefully inspire better forest practices else where.

Comment 6
Finally, I am pleased to see a growing local consensus that the management of Jackson forest needs to take a longer view than the one that is based on a strictly industrial model. While there was a lot of conflict early in the year that I pursued my legislation, by the end of the year, there was not complete unanimity, but certainly a much broader consensus and since that time, I think the middle, there is a growing middle on this topic. I see general agreement that a much higher priority be placed on habitat restoration and protection as well as recreation. The Mendocino county supervisors are supporting this new type of management and I would as well, I recommend that.

I assume you have in your packets a letter from my friend Art Harwood, I urge you to read his comments very carefully, they reflect the growing consensus that we can find a way to have both habitat and recreation values in a productive forest that supports the local economy. This is good news, I have never accepted that the old joke made by colleges, and I've said it too, that my constituents love trees, the only trouble is that half of them like them standing up and the other half like them laying down. I've always believed that there was a type of forestry that could bring these two points of view together and I think you have the opportunity to help us demonstrate that with this environmental document and subsequent plan for managing the forest. So, I hope you will join with that broad consensus and help us move the Jackson forest along, but in the process also move the forest practices in general along by demonstrating what is possible. Thank you so much.

Response to Comment 1
Comments noted. The Board is familiar with the history of SB1648.

Response to Comment 2
The Board concurs with this statement.

Response to Comment 3
The Board concurs with these statements. The original intent of the Legislature when adopting legislation authorizing state forests was to promote the creation and maintenance of productive timberlands as a demonstration of sustainable forest management, given the recognition that timber supplies were waning (PRC 4631).

Response to Comment 4

The Board concurs with this statement. The ADFMP will allocate a significant portion of the land area of JDSF to the development of later seral forest and older forest structure.

Response to Comment 5
The Board believes that the ADFMP appropriately implements the intent of PRC 4651. The Board has determined that specific elements of some of the alternatives may not comply with the provisions of PRC 4651.

Response to Comment 6
While the Board does not agree with the opinion that JDSF has been a purely industrial forestry model in the past, the Board concurs that JDSF should provide a balanced approach to forest management, by achieving a high level of timber growth and production while also demonstrating a high degree of forest and habitat recovery.

Richard Gienger: I could make a joke there I guess, but forget it. Richard Gienger, chair of the board. Seeing how Kathy isn't here right now, I am going to read into the record what I think is a really import key context, and this comes from several paragraphs in page two of Kathy Baileys comments on scoping session that was dated March 15th 2004, from Kathy.

Comment 1
"Compared to other regions of the state, there is an extreme deterrent to public forest land from the redwood region between San Francisco Bay and Humboldt County, in particular, Mendocino County. Jackson forest is the only opportunity to protect and restore the regions depleted biological heritage and provide forest based recreation with public. Jackson is trying to reconcile the largest industrial largest timber land ownerships in the county, for intensive management has led these lands to be virtually stripped of trees and access of about forty years old. The land from the East of Jackson Demonstration State Forest is even worse shape."

Stocking volumes and yield tables of comparisons were provided in some information she submitted earlier.

Comment 2
"What everyone believes about the silviculture practiced on these adjacent timber lands, one must acknowledge that they will not be late seral forest anytime soon. Logging, agriculture, and development have virtually eliminated late seral forest in the region."

So, in her writing, and others, have explained some of the reasons why late seral forests are ecologically important.

Comment 3
"California Department of Forestry has been intimately involved in enabling the loss of late seral habitat and other cumulative impacts that have occurred on the landscape. Jackson's management is rightfully proud to point out that Jackson's stocking levels are quadruple, or more, than what exist on the surrounding lands. That everyone of the timber harvest plans that resulted in the low level of stocking on the surrounding lands, not to mention, the radical change in the regions environment, had been approved by another part of CDF. In every instance, CDF approves registered professional foresters RPF certification that the THP "will not have a significant adverse impact in the environment." We could argue forever about the rules, CDF's application of them and the causes that have led the multiple federal and state species and water quality listings in the region. However, it boils down to this, virtually everyone, except CDF and the timber industry, believes there has been an adverse cumulative impact on the environment in this region from the intensity of the timber harvesting that has occurred here in the distant past. In the past 20 years, in the last 10 years, and yesterday. When the public ask that management measures at Jackson make up for some of this by preserving and developing habitat, CDF prefers not to consider the regional context, even though CDF is directly responsible for it being the way it is. This is one of the sectional disconnects between the environmentally oriented public and CDF managers. Jackson is not only a unique opportunity, we believe CDF has a responsibility to Jackson to provide strong protection and consideration for wildlife,

fish, plants, water quality, the whole forest characteristics and native species diversity to provide some sort of mitigation for the immensely impaired conditions of our regions forest. Additionally, as the largest publicly owned forest in the area, Jackson also has a responsibility to accommodate the publics' desire for recreational opportunities."

So this is from Kathy's, page two, of her scoping comments from March 2004. I think it really sets the context for a lot of this.

One thing I appreciate, I'm not sure of course it is off the paper, but the immense amount of information CDF has compiled, it's a wealth of information, specifically, about Jackson, about the north coast, Mendocino County in particular. I, speaking for myself, someone representing, skill recovery coalition, but I will be giving comments in writing to you on behalf of myself, and a lot of the smaller people, before the deadline.

Comment 4
In general, what I think is important is that you have meld some of the most positive aspects of several of your alternatives that you have in front of you. In specifically I refer to C1, C2, D and F. I am especially concerned, and I am sure Kathy will articulate this a little more closely, but the approach of alternative F, were by some structure given to what the old growth characteristics are, structure in terms of corridors, in terms of murrelet habitat, structures that make some sense.

Comment 5
I would also like to endorse Kathy's call for CDF to map seral stage of 80 to 100 years old, so that context of this large second growth is understood spatially in actually making the plan.

Comment 6
Also, further types of stands of old growth, some more specific regard perhaps is there needs to be a real program of recovery in riparian area. Let's actually assess the riparian areas and institute replanting programs, as appropriate. I know that in more areas tolls, there is a lot of areas, even though they do have cover a lot of it is older and regeneration of redwoods is often not that good in some of these riparian areas. There really needs to be a real focus on recovery in Jackson Demonstration State Forest, its role, central role, the ability to head a higher stand, full recovery of fisheries and the resources available there, especially of cove are valuable and need to be treated as such. So that is all I have for now, thank you.

Response to Comment 1
Please see response to comments by Kathy Bailey below.

Response to Comment 2
Please see response to comments by Kathy Bailey below.

Response to Comment 3:
The Board acknowledges that significant impacts to local forest resources have occurred over the past 100 years or more. Please see the DEIR for the assessment of impacts to biological and watershed resources. The ADFMP will make a significant contribution to recovery of forest, watershed, fish, and wildlife habitat. Significant impacts are not expected to occur.

Response to Comment 4
The ADFMP represent a combination of provisions from many of the alternatives, and incorporates the concepts of habitat structure, connectivity, and species recovery.

Response to Comment 5
See response to comments by Kathy Bailey below.

Response to Comment 6
The ADFMP will provide for management of the riparian zones towards recovery of a later seral condition. The vast majority of streams within JDSF is bordered by a significant component of redwood and Douglas-fir. Please see DEIR Section VII.6.1 for the assessment of aquatic resources.

Kathy Bailey: Well, thank you. I had no idea I was, sort of, going to be following myself here in terms of my comments from two years ago. I guess it will be interesting and I am taking advantage of the fact that we don't have a huge audience and I may go on at length likely and so I think in retrospect what I am almost doing is the executive summary of the non-regulated publics EIR here. So, quite a few of you have heard me go on about this, at length, and some of you have not at all and so I hope it is still interesting even though some of you have heard it before.

So, good morning, my name is Kathy Bailey and for around a decade, more or less, I was forest conservation chair for the Sierra Club, California. I retired from my volunteer position a few years ago. But, I just can't quite let go of Jackson forest. So, here I am. Previous to my work with Sierra Club I had been engaged in issues regarding the state regulated forests off and on since 1976. I have lived in Anderson valley, Mendocino County since 1971. The valley is virtually surrounded by state regulated forestland, including tens of thousands of acres now held by the Mendocino redwood company. Which previously was owned by Louisiana Pacific, and prior to that, at the time I moved to area, by the Masonite Corporation.

I am going to try and provide some background information for the public perspective on the issues surrounding the management of Jackson Demonstration State Forest. The key to why Jackson is so controversial is the old realist ate maxim "Location, Location, Location." Jackson is by far the largest public redwood forest in the region. Jackson is in the middle of the coast redwood region, a relatively narrow strip of land that runs barely into Oregon and down into Monterey county and Big Sur. The bulk of the region is in about 30 miles of the coast. As one moves toward the East, Douglas fir become a larger portion of the forest. Except for a few hundred acres up in Humboldt County, there is no coast redwood in the National Forest system. Of course there are some state and federal parks, but these are not evenly distributed. According to a study published by the Save the Redwoods league, in the year 2000, in the central region around Jackson, including Mendocino, Sonoma, and Marin counties redwoods are preserved at the lowest rate of their entire range. In that area only 1.36% of redwoods are protected in parks and reserves. If this were not the case, the discussion about Jackson would be completely different.

Comment 1
From both the public use and the ecological perspective, Jackson is a unique and irreplaceable public resource. It is our areas only large public redwood forest.

Comment 2
The ecological importance of Jackson in the region is greatly magnified by the diminished condition of the regions forest land. Going back to the European settlement of California, the redwood stands North of San Francisco were the first to be harvested for timber, because they were close and the coast allowed for boat transport. Later in the twentieth century, taxes on standing timber provided and tremendous disincentive to maintain valuable old growth redwoods. This taxation situation did not change until the 1970's. The result is not only a region that does not have much old growth redwood parks, the region has very little old redwood anywhere. In my community we have two of the largest old growth stands in Mendocino County at Hendy Woods State Park. One grove is 20 acres and the other less than 40 acres. As far as I can tell, Jackson's 11 groves of old growth total more than 459 acres, is probably the largest concentration of old growth redwood groves in the county.

Comment 3
Directly around Jackson, both North and South are broad stops of land formerly owned by Georgia Pacific and Louisiana Pacific. On the East are more commercial timber holdings. Combine these

properties total about a half a million acres are Mendocino County's redwood region. The old growth has long been gone so the primary timber base for commercial timber company in the county would have to be second growth forest. It probably won't come as a surprise when I say that overwhelming the older larger second growth trees on those industrial forest lands have been virtually logged out already.

What are some of the ecological consequences of this history? Older redwood forests have unique characteristics that develop over time. They are moist and cool and support mosses, lichens, banana slugs, incredible mushrooms and brightly colored frogs and salamanders and much more. Along with the loss of the big old trees themselves, some of the more obvious losses have marble murrelets, experts believe today, and this is new data, that the population that this highly dependent old growth cedar big is at most 300, more likely close to 200 individual birds in the region from the north of Mendocino county line to the South of San Francisco bay. Some of those few Murrelets nest directly adjacent to Jackson. There is the Pacific Fisher, this lovely brown, dark brown fur bearer that can range up to around 13 pounds, once roamed the region, eating everything from porcupine to truffles, except fish, which they don't eat. The elimination of the wide spots of old growth they need, eliminated the fisher. They struggle to survive in a few isolated parts of the state. The Humboldt martin, a small furry mammal has not been seen in Mendocino County since the 1950's, it too needs spots of large or older forest. Salmon, Coho and King salmon, were once plateful, but are now in dire straits for a number of reasons, including the loss of the old forest habitat that helps keep streams cool and clear. Steelhead trout, not quite so fussy about water temperature and water speed, there populations have never the less plummeted.

Water quality, most of the streams and coasts of Mendocino County are listed as impaired under section 303D of the clean water act, because of sediment temperature or both, with logging being the significant factor being identified by listing. These are just a few specifics to remind us once again that rich natural resources associated with forested areas of the region have suffered dramatic people induced declines.

Comment 4

It is in this environment that you have to make decisions about management of Jackson Demonstration State Forest. Particularly, you must decide how to interpret the legislative mandate for "maximum sustain product for high quality forest products while given considerations to values to recreation, watershed, wildlife range and forage, fisheries and esthetic enjoyment." You the board, have the authority and the duty to interpret how you want to apply this mandate.

Comment 5

There has been so much controversy, particularly in the last ten years about Jackson's management that we occasionally forget to acknowledge that the reason people worry about Jackson is there is still something there to care about. We recognize that, but because of the historical diminishment of forest resources in the region and the lack of public access to other public redwood forests. The non-regulated public has become adamant about time that Jackson should be maintained as a place that looks like and functions as much like a natural system as possible, given the understanding that a significant level of timber harvest will happen because of the legislative mandate.

I want to give you just the briefest of reminders about some of the ways the Jackson controversy has manifested in the last ten years. In 1966, launched among concerns regarding management erupted. The flash points included: one, a timber harvest plan mushed in corners area, an often used recreation site near Mendocino village and rural residential parcels. Two, a plan to spray 70 miles of Jackson's roadsides with herbicides and three, the cutting of some isolated and relatively smaller diameter old growth trees. There were several large demonstrations and a few people were arrested.

In 1997, CDF director Richard Wilson appointed a citizens advisory committee the, CAC, that included broad representation of community interest, including a lumber mill owner, in fact our hardwood, that Senator Chesbro mentioned, two foresters, several small timberland owners, representatives from several communities and environmentally oriented participants. The CAC met

regularly for 18 months. In 1998, in December, the CAC issued a report and made recommendations to Direct Wilson that were approved by a near unanimous vote, but most of the recommendations were not implemented and at that point there was a turnover in the administration, I think also had something to do with their failure to implement there. In 1999, there were three timber harvest plans submitted for Jackson that were not consistent with the recommendations of the CAC. Although the CAC had recommended the increase consideration for the recreation potential at Jackson, the new THPs included two selection harvests in an area of old second growth immediately adjacent to the principle camp grounds. A third THP was a plan for a clearcutting, a technique the CAC specifically recommended be eliminated at Jackson. In 2000, the 1999 THPs were approved and Mister Taylor's group, sought and received a preliminary injunction to halt their implantation until a current management plan was in place. The forest had been operating under a management plan approved in 1983, prior to the endangered species and water quality listings. The injunction halted logging at Jackson.

In 2001, a new draft management plan was published, that was virtually identical to a 1999 draft habitat conservation plan that had never been released for public view. Neither the old draft HCP nor the new draft management plan was consistent with CAC recommendations and despite the fact that the CAC made its recommendations at the same time the HCP was being put together. In 2002, the management plan was released for public comment along with the draft EIR. CDF received approximately 100 comments against adoption of the plan for every comment received in favor of it. Never the less, in November of 2002, CDF director Andrea Tuttle certified the EIR and the board of forestry adopted the new management plan. The 2002 management plan, which is virtually the same as the current EIR preferred alternative C1, did not include most of the previsions recommended by the CAC. In 2003, in July, the court ruled the EIR was deficient and further that the lead agency regarding the EIR should properly be the board of forestry, congratulations, rather than CDF.

Except for a very brief period, logging has continued to be conjoined been since 2000. In 2004, the board of forestry rescinded the approval of the 2002 management plan and contracted with CDF to prepare a new EIR under the board as the lead agency. In 2005, in December, the board of forestry published a notice of availability and proposed seven alternatives, C1 is the preferred Alternative, A is the no action plan, the baseline at which alternatives are measured. B is the 1983 management plan, hardly appeasable alternative. Alternative D is the citizens' advisory committee. Alternative E is a late seral emphasis, which is segues interpretation of Mr. Taylors wishes. Alternative F, is older forest emphasis, Sierra Club has been deeply involved in the development of Alternative F. In 2006, the other day, February 7th, in a 2:3 vote, as you know, the Mendocino County board of supervisors, passed a motion to support Alternative D, the recommendations of the CAC, first purposed in December 1998, roughly seven years ago. The three yes votes are the three supervisors who have Jackson forest in their districts and here we are two days later.

Comment 6

There are three key points I want to convey about the EIR and the situation. One, which is ironic, seeing Richard just read my remarks here, the EIR has still not acknowledged or mapped the ten thousand to twelve thousand acres of old second growth forest at Jackson that has not been logged since, 1925, or earlier. As I have mentioned, this is a regionally scarce resource. In spite of excessive lip service about ecological importance of older forest and supposed a commitment of having 20 to 29 percent of the forest in so called late seral development areas, new people I guess you have probably picked up that late seral is forestry amongst the older forest. The key piece of knowledge about the location and extent of forest stands at Jackson remains unmapped and unacknowledged. I care about how much the forest, of the forest, will eventually be allowed to grow into older age classes over the hypothetical 100 year plan horizon. But, given the context of Mendocino county, people care more about maintaining as many stands of 100 year second growth as possible and doing so in a way that maximizes continuous old forest habitat, to help recover what we have so thoroughly lost.

Comment 7
Two, the EIR states that the Jackson management plan Alternative C1 proposes to put the non-timber considerations, outlined in the legislative mandate, on an equal footing of sustained production of timber. This is a terrific goal, one that we support. However, if you look at the spatial allocation of the CDF designation of the late seral, that is older forest development areas, and then also look at the 10 year timber harvest schedule, you will see that logging in the first decade is going to make the old forest development areas into islands. This contradicts the basic tenets of conservation biology and seems to contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest.

Comment 8
Additionally, despite the fact that it is a no brainier to identify key areas of public interest in recreation on the forest, the EIR defers identifying these places, or making significant accommodations among the barest of buffer zones, generally speaking a couple of hundred feet. The injunctions on the THP's that have brought us here today occurred because Mister Taylor, along with a lot of other people, had a deep love for the peaceful and beautiful forested area among the main camp grounds and the lovely walks along the river there. These were not the worst THPs in the world but, they would have greatly compromised people's enjoyment of the area. These THPs were simply located in an area that should have been set aside for recreation use if the plan truly did consider recreation on equal footing with timber production, that this area is also a part of this old forest not logged since 1925, or earlier, is also an issue and one of the THPs in the campground area is also adjacent to a designated old forest development area to its East. Operating that THP will cut into the existing continuous older forest. Forest managers get a two-for out of this area if they acknowledge the existence of the old forest stands and then try to design a management plan that maintain old forest stands for both recreation and habitat purposes. It would not be that difficult if one just decided to do it. In fact, that is what we have attempted to do with Alternative F.

Comment 9
Three, we talk a lot about the coming crisis in forest ownership were more and more people move into the forested countryside and have conflicts with forest managers. That is exactly the situation we have on our hands right now at Jackson. Big chunks of Jackson are adjacent to a whole bunch of people, by country standards, at Mendocino Village, Caspar and Fort Bragg, in addition to the tens of thousands of visitors we see each year. If you are truly dedicated to avoiding the continued fragmentation of forest land ownerships, it is important to figure out a way to do logging that is does not diminish public trust resources, like wildlife and water quality, and does not make people gasp when they see it. Jackson is the perfect laboratory to figure out how to do this. You have a preexisting skeptical neighbor base, the best forest inventory in the county and a current opportunity to think this through, forced onto you.

Comment 10
Finally, I urge you to take this opportunity and run with it. Your not here yet, but you have the elements of a solution laid out in the various EIR alternatives. While we have always supported Alternative D, CAC recommendations, we have applied information we have learned about the forest subsequent to the era of the CAC to create Alternative F. We view the portions of Alternative F that were encompassed in the EIR scoping comments as completely consistent with the current long and believe that Alternative F is a creative way to melt recreation and timber harvest needs of the forest. Remember, location, location, location. From the timber production point of view, Alternative D, the CAC recommendations, yields 81 percent of the C1 preferred Alternative and Alternative F yields some what more than 60 percent according to your EIR. These reductions in yield do not seem like an unreasonable price to pay for taking Jackson off the hot potato list and making it what it ought to be, the beloved crown jewel of the state forest system. Thank you very much.

Response to Comment 1
The Board agrees that JDSF has both ecological and public use values that are substantial. In addition, given the forest resources, size, and location of JDSF, it is a unique resource. Within the

redwood region, there are approximately 300,000 acres in parks and reserves. JDSF is the largest area of public forest available for research and demonstration.

Response to Comment 2
The old growth forest within JDSF will be preserved, and many of the groves will be augmented by late seral development areas. The Board is aware of the regional availability of old forest, and has provided a detailed description of the assessment area within the DEIR (Sections III and V).

Response to Comment 3
The Board agrees that there has been a substantial level of timber harvest in much of the area surrounding JDSF within the past several decades (DEIR Map Figure G). Please see DEIR Section VII.6 and Map Figures J and K for the estimated vegetative habitat distribution, which serves as an estimate of habitat values and is used in the wildlife analysis. No regional or assessment area inventory of young trees exists, especially one that would include detail as to the age of second-growth trees. The DEIR assesses the potential for impacts to wildlife primarily by examining current and future habitat quality and availability. The age of trees is but one of many factors that contribute to habitat.

While JSDF can and will contribute to the continued survival or recovery of species, it is incapable of providing for full recovery in and of itself. Species populations rely upon a vast area in most instances, and JDSF comprises a relatively small portion of the range of most listed species or species of concern.

Response to Comment 4
The Board agrees that historic timber management has contributed to the decline in population levels of some species within the region.

The Board is aware of a responsibility to interpret legislative, regulatory, and policy direction for the state forest management planning process.

Response to Comment 5
The ADFMP provides for sustainable forest management while maintaining or producing a forest that also maintains proper ecological function.

Response to Comment 6
While the general logging history of JDSF is known, there is no complete historic cutting record for the Forest, since harvesting began decades before detailed records were kept. Staff have made unofficial estimates in the past, but these have not been used for habitat assessment purposes.

While the commenter has stated that "older second-growth" is a regionally scarce resource, there is no such resource that is either quantified or officially recognized.

The Board has approved the plan to manage a significant area of JDSF toward a late seral or older forest structure. Habitat value and ecological function depend upon a host of factors, including tree size distribution, crown density and crown characteristics, mortality rates, canopy diversity, species diversity, unique structural elements, understory vegetation, and others. Stands have been identified for late seral or older forest management based largely upon proximity and connectivity to existing old growth groves, watercourse zones, and occupied murrelet habitat, recognizing that it may require many decades or even centuries for late seral forest to develop.

Response to Comment 7
The Short-term Harvest Schedule has been amended for Alternative G. Neither the harvest outlined in Alternative C1 or Alternative G would create islands of the late seral or older forest development areas. In fact, most of the proposed harvest in the short-term in these areas would be selective in nature, producing a thinned, yet continuous forest canopy contiguous to late seral development areas. Ms. Bailey does not explain the assertion that the islands will be created, nor how the

proposed harvest contradicts the basic tenets of conservation biology, not how it may contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest. Please see DEIR Section VII.6 for the assessment of potential impacts to wildlife and fishery resources.

Response to Comment 8
The Board's policy for JDSF establishes recreation as an important, but secondary use. The DEIR includes an assessment of potential impacts upon recreational values (DEIR Section VII.2, 12, and 14). The management plan involves a much greater level of mitigation to protect recreational resources than Ms. Bailey suggests. Included in this consideration is the location of recreational resources, surrounding forms of forest management, adjacent buffer zones, noise production, aesthetics, and other factors. It is the intent of the Board to prevent significant impacts to recreational resources. The Board believes that timber harvesting can be compatible with recreation in the Forest, and should not be precluded in order to produce zero effect. In fact, the demonstration of the compatibility between timber harvesting and recreational use is encouraged by the Board.

Response to Comment 9
Comments noted.

Response to Comment 10
Support for Alternative F noted.

Paul Mason: Good morning, Chairman Dixon, members of the board, Paul Mason on behalf of the Sierra Club California, with the umbrella group that represents the 200 thousand members with in the state of California. Given that Kathy has already laid out much of the historical context I will be much briefer.

Comment 1
Really, much of what is driving much our concern with Jackson is the regional context, the fact that Mendocino County is the poster child for previous failures of forest practice rules, to really mitigate adverse impacts to the resource base. Mendocino county has been largely liquidated, for those of you who haven't spent time up there, the over all stocking of the forest in Mendocino county is low teens, maybe thirteen thousand, fourteen thousand board feet to the acre, which for an area, that was previously some of the most productive forest lands in the world, is very sad.

Comment 2
Jackson forest on the other hand, has fairly significant stocking and is some of the only public land in the area. Another thing you should be aware of, and we will go into more detail in our written comments, is that over the last several years situations have changed. Marbled murrelets continues to be a state listed endangered species and a federally listed threatened species, their population is in serious decline. The Coho salmon was recently proposed a state listed threatened species and when national marine fisheries service recently did a review of all the salmon populations on the West coast, for the central California coast region, which includes Mendocino county, upon review, they changed its status from threatened to endangered. Again, the Coho salmon is in extremely dire straits in that part of the state and Jackson forest is the significant chunk of public land that has the opportunity to recover it.

Comment 3
In addition to it being, logical, that we can use the land that the public already owns, to contribute to recovery of public trust resources, it is also pretty clearly the mandate of the state to contribute to recovery under the state and federal endangered species acts. Where as the private land owner has a lower burden to contribute to the recovery. Looking at the various ranges of alternatives, I think it's pretty clear that continuing the status quo laws logging, the C1 or C2 alternative, does not alleviate the on going controversy. We've been spending a lot of time, the Sierra Club has been spending a lot of time, trying to lay out a road map for how we can move beyond the conflict surrounding Jackson, continue to do significant amounts of logging there, do excellent research and demonstrations there,

while providing for recreation and recovery of endangered species, the whole suite of opportunities at Jackson forest. I'll say it again, we are not advocating the no logging alternative.

Comment 4
The alternative, as Kathy said, is a combination of issues raised in Sierra Club scoping comments, as well as aspects of the bill that Senator Chesbo carried a couple of years ago and some more input from the Sierra Club during the development of that alternative. It's a plan that allows logging roughly twenty million board feet a year. The previous CDF proposal has been roughly thirty million board feet a year, I'm not sure the last time, clearly they haven't done any logging in the last four years, and prior to that they have not often reached that target, largely because of the controversy that surround the management there. If we can lay out an approach that gets to twenty million board feet annually, without the controversy, while getting areas where we can develop good habitat protection for endangered species that seems like a really good deal. We are trying to provide a road map for how we can get out of this "controversy".

Comment 5
So a couple of the aspects of Alternative F, and I still haven't had a chance to go through the EIR in some detail, prior to meeting a couple of months to make some choices about this topic, are of course, it is a logging alternative, it does designate large areas for development of older forest conditions, but even those areas are not off limits to logging, those need to be logged in a way to promote those older forest values. Even the even aged management, clearcutting in the similar form is restricted to research purposes. That is something that the citizens advisory committee, and virtually everyone involved in Mendocino County, is supportive of. We are not saying that you can never use even aged management, but you should only be using even aged management if is it part of a launchable research purpose, otherwise it is not compatible with the publics desire for high levels of conservation at Jackson forest. Alternative F also provides opportunity to demonstrate other riparian protective measures, other than the forest practice rules, or the T and I rules as we talk about quite a bit in forest practice committee would allow us to demonstrate the national fisheries service the key guide lines and other strategies for riparian conservation and place a thirty-five hundred acre marbled murrelet area.

Comment 6
As Kathy pointed out the marbled murrelet is in extremely bad shape in that part of its range. There are murrelets nesting in that region to the extent that the state and the publics own habitat develop into murrelet habitat and certainly Jackson is going to become murrelet habitat far before anything on private land is likely to, we should be making that contribution to their recovery.

Comment 7
It would prioritize protecting and improving the infrastructure, the roads, the current investment in our road there at Jackson, which has historically been a source of frustration, that bunch of infrastructure, historically, at Jackson has deteriorate in condition. So again I would note that the timber harvesting under alternative F is roughly two thirds of what CDF has previously proposed while balancing these competing ecological and recreational values and ending the ongoing controversy and allowing us to move forward.

Comment 8
We believe this is a good compromise, even though many of our members and that vast majority of Californians, would prefer to see our state owned redwoods not managed at all, or managed for park like purposes. We recognize the opportunities for research and demonstration at Jackson, but we believe that since this is public land owned by all Californians, to use the advantage for a high standard of recovery of endanger species and research purposes. So I urge you take is opportunity to move Jackson into the twenty-first century and end controversy. Thank you very much.

Response to Comment 1
Please see the regional setting provided in the DEIR (Sections III and V).

Response to Comment 2
The Board is aware of the legal status of the marbled murrelet and the coho salmon. Please see DEIR Section VII.6 for the environmental assessment of biological resources. JDSF will make a significant contribution to the recovery of listed species.

Response to Comment 3
Comments noted.

Response to Comment 4
Support for Alternative F noted.

Response to Comment 5
Support for specific elements of Alternative F noted. The ADFMP incorporates elements of this alternative.

Response to Comment 6
JDSF is expected to make a significant contribution to the recovery of the marbled murrelet. A substantial area of JDSF will be dedicated to the development of late seral habitat, including the area of upper Russian Gulch, lower Big River, and most of the Mendocino Woodlands STA. In addition, the WLPZ will be managed toward a late seral condition, and all identified old growth groves will be preserved. Significant impacts to the species are not expected to occur as the result of the planned management of JDSF.

Response to Comment 7
Comments noted. The implementation of the Road Management Plan is expected to increase the level of protection and the rate of recovery of aquatic and watershed resources.

Response to Comment 8
Comments noted.

Mike Anderson: My name is Mike Anderson, I'm a LTO and RPF, in forest trade. I'd like to tell you a lot of consensus has been seen in the last few weeks, in Fort Bragg, revolving around Jackson State forest. We have had citizens' advisory committee meetings, which advise the board of supervisors on forestry issues, which they discuss at the board of supervisors meeting, and it is a welcome change. There used to be a lot more animosity at these meetings and is seems as though they have disappeared or mellowed, I don't know which is which.

Comment 1
There seems to be unanimous consensus on the resumption of harvesting, on old growth protection, on the need for added recreation, the need for research.

Comment 2
Something that is not addressed in the EIR is a stable funding source for Jackson, that we are all in favor of, and also the restoration work.

Comment 3
There are a couple issues that did not reach consensus and that's herbicides and clearcutting. The citizens' advisory committee was evenly split three and three on C1 versus D as preferred alternative and the board of supervisors voted 3:2 in favor of D. Frankly, I'm not sure that C or D is a real answer, I think it is up to the board of forestry to come up with something in between.

Comment 4
What I want on Jackson state forest is the opportunity for managers to manage the forest in such a way that they can perform meaningful research, provided timber resource for Mendocino county that

would need jobs, recreation, all the important attributes that we have come to expect from that forest. I would hope this would carry on for another five years.

Comment 5
I'm afraid option D ties in land managers to the point where they can do future research is almost impossible.

My written comments will be coming in the next couple weeks but there are a couple things I would like to mention from comments that were made and one thing is this concept of timber wars. Timber wars are over in Mendocino county, and that's my words, not one of the speakers, but it was brought forward that there seemed to be a lot of conflict. There is much more consensus than there is conflict in Mendocino county right now.

Comment 6
A comment was made about timberlands around Jackson state forest being virtually stripped. I've logged around Mendocino County my whole life and I've logged a lot of the ground around Jackson state forest. In 1973, when forest practice rule came in, that part, we protected streams above everything. Those harvest plans were all completed, with the most stringent forest practice rules in the nation and what you have outside Jackson state forest is young growth timber, cutover timberland that is also thriving young growth stands. The road systems are maintained, but it is not an ulcer.

Comment 7
Senator Chesbro made comments about 1648 and said that CDF personnel lead the charge against 1648, well that's not quite true. There were a lot of us in the industry that had real serious problems with 1648, it was not just CDF, but we were pleased to have CDF join us in the same problems that we felt 1648 would bring forward. That's really about all I have, the diversity of opinion in Mendocino county hasn't changed, but there are two issues that really seem to bring it to the forefront and that's herbicide use and clearcutting.

Comment 8
Personally, I would like to see the board doing something to get Jackson state forest moving forward and in my opinion, if herbicide use and even aged management are necessary tools I would think that when the time comes to use those techniques there should be public hearings in our county and frankly that the staff of Jackson state forest relay the need for those uses, those herbicide uses, those even aged management uses to the general public to some reasonable consensus that maybe they should back off of it. But I believe that they should have them as an option to use, but they need to develop support from the community in order to go forward with them.

Response to Comment 1
Also see response to P-193. Comments noted. These are elements of the ADFMP.

Response to Comment 2
The DEIR considers the budget for JDSF, but the Board cannot guarantee funding. The budget is allocated by the Legislature on an annual basis. Restoration is an important element of the ADFMP, and the Board anticipates that a significant level of funding will be provided for these activities.

Response to Comment 3
The ADFMP incorporates elements from many of the alternatives. The Board agrees that clearcutting and the use of herbicides are controversial issues.

Response to Comment 4
The Board agrees with these comments.

Response to Comment 5
Comments noted.

Response to Comment 6
Comments noted. The Board is aware of the condition of resources within the assessment area surrounding JDSF.

Response to Comment 7
Comments noted.

Response to Comment 8
Comments noted. While the Board will not require public hearings prior to the use of herbicides or the practice of clearcutting, the Board and the Department will jointly formulate a JDSF advisory committee capable of considering a broad range of both implementation and policy matters concerning the management of JDSF, including the use of herbicides and the practice of clearcutting.

Bill Keye: I was hoping you wouldn't call me quite so soon George. My name is Bill Keye and I am a government affairs specialist for the California Licensed Foresters Association. I want to thank the board members that are here to listen to the comments that are being made. It is encouraging to hear, following Mike, and this will probably end up in our next CLFA newsletter, but one of his quotes were "the timber wars are over in Mendocino County". I think that many of us as professional foresters are still kind of stuck in that mode and we need to realize that things are changing and the old paradigms are giving way.

With all due respect to Senator Chesbro, since I am down here in Sacramento, and I have my tie on I have to use the term "with all due respect", I would also recall what Mike said, we work very hard as California Licensed Foresters and I know that the Society of American Foresters, in Northern California work very hard on this issue of SB 1648 and characterizing it as just CDF versus the world is not entirely accurate. What we are doing in CLFA and in general, is constantly trying to get our arms around a whole range of complex issues and I can get right into specifics at JDSF, but I would prefer to set the table in the world that we are in here in 2005 and the many changes that some of the previous speakers have spoken about.

The white papers that we produce, and I have got copies of course, I will go ahead and pitch our website at CLFA.org, and the white pages are posted on a hyperlink that says white papers and also our comments to your board, which I have distributed additional copies, on this particular issue, they are also under CLFA.org posted under what's new. White papers come out of the effort that the board is on going on policy and arrange statement based on forestry assessment 2003. The profession took it upon ourselves to take that report and look at all the changes and try and come up with some of our best points. With regard to the difficulty of practicing forestry in California, I will just go other some of these quick bullets.

Despite vast natural resources California has some of the highest proportion of urban residents, 94%, the highest in the United States, so we have tremendous reservation set aside, national forest, national parks, but the fact of the matter is that most of us Californians live in urban environments as categorized by the census bureau. What we identify, and we didn't coin the phrase, but we are certainly happy to promote the phrase because we feel it is certainly important, we identify these demographics as aggravating the problem, agricultural illiteracy, and it is not just forestry illiteracy, it is agriculture illiteracy. This is a big issue for those of us in the agriculture, forestry is related to agriculture, it is a specific part, it is not exactly agriculture but in some aspects it is. Most folks, if you have got 94% of us living in cities, watching TV, maybe getting out of the city on summer vacation, maybe going to a state park and that's our view of wildlife, of wilderness, it is a though boat.

I think I was not the only person in the room impressed with Kathy Bailey's comments earlier, articulating the values of the wildlife and some of the non-commodity values, which is gross characterization, but those are very compelling and very valuable insights. Forestry kind of straddles that because we manage land with a multitude of objectives and when you have 94%of the population that may not know too much about what you are up to. Whether it is even or uneven aged management it makes it more difficult to, a friend of mine from Truckee sent me a mailing and in

some ways this is why it is difficult for us to have a coherent forest policy in California, this is a photograph of a large redwood tree. It is part of a Sierra Club mailer, and it was passed on to me, on the back it says "The mighty sequoias have lasted for over 35000 years. Don't let them be destroyed in just two terms of the George W. Bush administration. Please join the fight and the Sierra Club today." and there is other material.

Now, as a professional forester, working with other professional land managers, I can look at that and I can say, that's not true, that's not possible for what's being trotted out there to happen. However, this organization, two hundred thousand members would not use this as a fundraising tool unless it was considered to be an appropriate thing, passed a moral hurdle rate and probably is also quite successful in achieving both money influence and what have you.
Our white papers also talked about, one of them was "Natural resources illiteracy and public policy of expanded role of the California Board of Forestry" and again these are all on the website. We also got into the issue of governments and this is where the Board of Forestry comes in, I think all our challenges, and to this board to not be a defensive board. I think in a context of timber wars that we are coming out of, the board is dealing with so many issues defensively in recent decades, maybe this is a time for the state to have a board of forestry that can exercise some leadership, some positive initiatives and of course the focus on positive, is one way that we have been trying to make a contribution.

The other white paper "natural resource governments sustainability: balancing economic, environmental and social values", and finally "California national forest act: a management key to sustainable forestry in the golden state". For the sake of new members, one very quick sound bite is this state used to produce most of its timber, up till recent years. We used to harvest 4 billion board feet of timber a year, we were the second or third timber producing state in the United States. We are down to about 2 billion, about half that now, maybe slightly less. Most of that reduction is due to forest policy, where national forests went to close to 2 billion board feet to close to zero.

Along the lines of Jackson, again taking the very broad view, a lot of these controversies do seem to come out of the timber wars paradigm in that, I would voice, a duly cynical view, that once folks shut down logging on national forests and there was no log trucks coming off of national forests anymore, in a way, and I am doing this with a distance outside Mendocino county, in a way and this organization, Sierra Club has an official position on it, no commercial logging on national forest is, maybe that is where Jackson Demonstration State Forest really achieves some attention. There was no more logging to shut down on public forest, and my god we've got a public forest right here in Mendocino County and there is actually logging going on. We are trying to get our arms around all this stuff and to come in and talk about the Jackson issue kind of on the narrow side of the DEIR, I think that is a disservice to how important these issues are.
We are happy to engage in the competition of ideas, I think that is, again I don't think this should be a polarizing exercise and been through the polarity and hopefully good ideas will come and are going to be what is going to carry us forward.

Comment 1
Couple of quick comments on even aged management and herbicides, I don't know that much about herbicides, I would just simply say they are very powerful, very effective chemicals at controlling certain species, they are extensively tested, they are used quite commonly in many aspects of our world, urban areas, agriculture. I think they carry environmental burdens, but they are pretty well documented and perhaps the objection to herbicide and forestry may go back to how compelling images can play, we may accept the use of herbicides to control weeds in our yard, it is something we can accept. But the notion of a forest undisturbed, a natural system being assaulted with these chemicals is a different area, and that may explain things. I would just simply say they are very effective in controlling vegetation and this includes cost effectiveness.
California has about 20 million acres of good commercial timberland, much of that is very high sight, and when there is an kind of disturbance to the forest the competition is very intense between timber species and non timber species. Now, if your objective is to control timber species it is effective to control the brush and other methods are more expensive and sometimes less effective.

Comment 2

On clearcutting, a college of mine had open heart surgery about a year ago and I visited him in the hospital, this is a gentleman with a huge scar right down the middle of his chest and really pretty disturbing to look at and yet I had to recall to myself, what an ugly and amazing and repulsive to look at, this fresh assault on this persons body, what an amazing, as it has turned out things have gone well as with most patients, what an amazing procedure with the recovery and renewed health and possibly another couple of decades of life. Clearcutting, I don't want to take the analogy too far, but clearcutting is ugly. It is ugly especially if it is presented in a context that takes full advantage of the lack of understanding of why anybody would do such a thing. I guess I would just simply say that if surgeons had to explain and justify every ugly procedure that they did it might affect the health of patients. Anyways, I don't want to take that too far because I don't want to say that clearcutting is what we need to do on every acre and what have you so, but it is a great way to grow wood fiber to control competing vegetation, to control stocking as well and there is that economic part of all other issues.

What I want to do, my previous research on Jackson, I went to one of the state libraries here and I have a letter here I want to read and this is on the University of California letterhead, college of agriculture, department of forestry, Berkeley, California. This signature is Emanuel Fritz, associate professor of forestry. The data is April 13th, 1945 so we are talking about something 61 years ago. This is addressed to Honorable Earl Warren, who went on to become the Chief Justice of the United States Supreme Court.

> "My dear Governor, by the time this letter reaches you, you will probably have signed SB 647, a bill assigned to regulated forest cutting practices. Foresters will hail this bill as the most important step California has yet taken to make its commercial forest continually productive and I am glad for the faith in your administration. This bill will materially reduce the possibility of more "problem" cutting of lands. There will be some conservationists who will criticize the law because it has no teeth. Knowing of many lumberman personally and knowing of their changed sentiment of timber management, I feel not only certain that they will abide by the new law, but they will exceed its requirements and thus prove to the critics of the public enterprise system that self regulation is not only desirable, but quite possible in this country. In my capacity as a teacher of forester at the University of California, as a consulting forester I shall immediately take steps to make the new law work and put California, so far behind other timber states, in the lead in forestry matters. There still remain two more basic steps in order to get forests restored to those old cut over lands that were cut too close for natural restocking, you must embark on a general reforestation program. In this, the state must set the pattern in leadership and we must buy up some cut over forest lands and hope, by example, show the way for private landowners to do like wise. Show the way for reforestation will be very short of timber after the way this matter present supplies are almost exhausted. We have temporized this matter for too long.

Then he goes on to refer to a couple of additional bills he is supporting. One of which would become the bill that authorized Jackson Demonstration State Forest. It is kind of humorous to note a lot of the themes that we deal with today, as far as the differences of opinion that you see and hear in this letter written 61 years ago, so it is interesting to see some of the same things. One of the things that makes me very proud is the fact that this gentleman, he went on to become Mr. Redwood it was kind of his mantra, was taking the leadership role and he was a forester. Foresters hailed this bill. He was trying to effect change, trying to get involved and he had enough impression with in his group that he felt confident saying foresters would hail it.

Comment 3

So we have Jackson Demonstration State Forest that was set aside in a different world, a different paradigm, and the concern wasn't some of the "non-commodity" assets that we have become more

concerned about, but scarcity always drives natural resources, perceived or real, drives issues. The perceived scarcity, or the real scarcity, at that time was previous industrial forest practices without any forestry. You could say industrial logging practices, another way of putting it, mining timber, getting out there, cutting down the trees, getting them to a mill and then we have allowed these cut over lands and in Richards comments earlier he mentioned Mattole River, that is a good example of some old logging without any real forestry. Jackson was, the idea was, we need to get a piece of ground and we need to show these people that this is a doable thing. Well Jackson has done very well on that, and one of the intellectual arguments that I have heard in recent years is well we don't need it anymore. We know how to clear-cut, and spray and plant trees. We know how to log. We know how to make sure the regeneration is done. That really brings me to the crux of our letter and our issues.

What we really believe is that if you can take, we really think that we are at a second time frame of very momentous decisions that need to be made on forest policy and instead of the scarcity that concerns us, the issue of reforestation, this issue is are we really going to have a timber industry, sustainable forestry, or not, in California. I know that I could quote my letter, but I have probably over stayed my welcome. We really think that there is a legitimate issue of rural economic development and stability and all this and we can go into the letter of broken promises of rural prosperity, in regards to taking lands and making them into non-extravagant reservations.

Comment 4
Hopefully, a piece of ground on Jackson can help lead the way to new ways of doing things and do not swing to either extremes. In our letter we went into quite a bit of documentation as far as the trends facing the timber industry in California and the United States and the real practice mentality of owning timber. Now we as a profession are not going to be able to stop land owners in the path of development from converting their lands of forest, excuse me to converting the forest to other uses. What we can do, however, is try to incentives land owners as much as possible not to do that. We are dealing, and I did mention that timber harvest has come down 50 percent, well some of that is also on private lands too because of community changes and regulatory issues and costs.

So, we think of Jackson as kind of an anchor that we need to build off of the new challenges, a new paradigm that we are facing. Instead of Jackson being less relevant because of its past accomplishments we will suggest that it is more relevant and I will conclude with our final paragraph "Sustainable forestry may be counter intuitive to some, in that it embraces social and economic considerations along with the ecological. We recognize that it is easier sometimes to bypass conservation to meet ideological demands for preservation. But JDSF is not a park and should not become one, parks answers many profound questions, but are silent on others." Thank you.

Response to Comment 1
Comments noted. The ADFMP makes provision for the judicious use of herbicides when necessary.

Response to Comment 2
Comments noted. The use of clearcutting will be allowed, primarily for research purposes, and for very difficult regeneration situations. However, the use of the system will be strictly limited, due to concerns related to aesthetics, watershed, and wildlife resources. Other forms of even-aged management will also be available for use on up to 26 percent of the land base.

Response to Comment 3
Comments noted. JDSF will continue to make a significant contribution to the local economy, and is expected to provide a valuable demonstration of sustainable forest management for the benefit of timberland owners and the general public.

Response to Comment 4
Comments noted.

Pamela Flick: Good morning ladies and gentlemen of the board.

Comment 1
My name is Pamela Flick and on behalf of Defenders of Wildlife and our more than ninety thousand members of California, I hear to urge you to adopt Alternative F the older forest and specific plan for management at Jackson Demonstration State Forest. While we understand that logging will take place at the Jackson State forest, clearcutting is not an acceptable practice for an area of such ecological importance. As Kathy noted, there is less than 2 percent of redwood forest in the protected redwood region encompassing Mendocino, Sonoma, and Marin counties. The public is not going to tolerate clearcutting of our largest redwood forest. CDF needs to focus on demonstrating restoration forestry and habitat, recreational opportunities, and doing meaningful scientific research. Jackson is a critical resource for the region.

Comment 2
As Paul mentioned, upon review of current conditions and updated information the National Fisheries Marine Service recently upgraded the central coast Coho from threatened to endangered, under the federal endangered species act. Jackson is the only large chunk of land in the region that can manage to aid in Coho recovery. Alternative F applies strong water course protection and will help Jackson maintain habitat so crucial to the health of the regions salmon. This alternative also designates areas for enhanced protection of endangered marbled murrelet, a small seabird closely associated with old growth forests, known to be nesting near by.

Comment 3
Additionally, emphasis on maintaining and creating conductivity between old growth and old second growth providing much needed corridors for many wildlife species. This issue is of statewide concern and the public is looking to the board to provide clear direction of CDF to resolve this long running controversy. We believe that by adopting Alternative F you will strike balance between producing high quality forest products, while also protecting other key forest values such as protection of water quality, wildlife habitat, and recreational opportunities. For all these reasons we urge you to adopt Alternative F. Thank you for your consideration.

Response to Comment 1
Comments and support for Alternative F noted. Please see also response to comments by Kathy Bailey above. The use of clearcutting on JDSF will be limited, and used primarily for research purposes. The ADFMP incorporates a goal of forest restoration.

Response to Comment 2
Please see response to comments by Kathy Bailey and Paul Mason above. JDSF will contribute to the recovery of the coho salmon and the marbled murrelet. Significant cumulative impacts to these species are not expected to occur as the result of the management of JDSF.

Response to Comment 3
Support for Alternative F. The ADFMP provides for connectivity between existing old growth groves, late seral development areas, and second growth forest. This connectivity provides vast corridors for the movement of terrestrial species. Significant impacts to wildlife are not expected to occur.

Board Executive Officer Gentry: At this time we have no one else signed up to address the board. Is there someone who wishes to address the board? Seeing none, we will hold this hearing in recess until such time that we have adequate to commenter's. We will stand in recess at least until 11 o'clock. Thank you.

Recirculated Draft EIR Public Hearing, Fort Bragg, June 7, 2007

BOARD EXECUTIVE OFFICER GENTRY: A couple of Items first. The first thing I wanted to cover was this is the first hearing. We actually have a hearing scheduled for June 20th, which is dedicated

for public comment, so there is another opportunity for you to address your comments orally. The public comment period closes July 16th. So with that out of the way, what we have today is about 14 of you who that wish to comment on Alternative G. We are going to keep you to 3 minutes in order to get through this as efficiently as we can. On the podium there is a light, when it is green, you're free to go. When it goes yellow you're inside a minute, when it is red please stop, so we can move on to the next speaker. We'd appreciate it. So with that I will begin calling names and this first name we start with today is David Turn.

David Turner: Well welcome to Fort Bragg. The council has not had the opportunity to review the June 1 EIR of the draft management plan. But I would just like to make a few comments and remind the board of our past statements and we will be, Councilman Melo and I have been appointed to put together a response, bring it to the council work it out and we will have a council response to your latest draft plan. The February 2006 Fort Bragg resolution 2923-2006 resolution, where as the legislative directed to the chief "maximum stated production of high quality forest products, while giving consideration to values relating to recreation, watershed, wildlife range for fisheries and esthetic enjoyment" by the board direct from the decision makers.

Comment 1
And where as our area has historically been a high in production if high quality timber and we believe that Jackson can help maintain that tradition, by focusing most if its timber management on maximizing the sustainable production of mature saw logs, roughly speaking, those from 80 to 120 year old redwood trees.

Lumber from these older trees has a superior characteristic that make redwoods famous; the beautiful red color, the relatively straight grain, the low variability from thick and live beams, the rot resistance, characteristics that demand a higher price at the lumber yard. And where as maximizing this unique resource of high quality timber, for timber production and maintenance of the natural surroundings of the region, is both important to our local economy, and where as immense community concern over even aged management and the application of herbicides has existed for a very long time.

Comment 2
Further more, the Fort Bragg city council also wishes to address the strong recommendation that an emphasis is placed on sustainable harvest of mature high quality redwood in the 80 to 120 year class making sure it is measured correctly, the forest wide inventory of redwood stands, in more than 120 years old, is gradually increased to the point reached when a sustainable continuous yield of that mature timber can be regularly be harvest.

Comment 3
In another letter on May 26th said "Our citizens strongly support the management approach on JDSF that balances research, recreation, restoration, habitat enrichment and leadership needed to sustain a healthy forest products infrastructure. In particular, Fort Bragg would like to encourage an emphasis on sustainable harvest," and I will say it again, "the mature high quality redwood in the 80 to 100 year range and see that class gradually increased until the of sustainable yield of that mature timber can regularly be harvested."

Comment 4
I encourage the board to keep these concerns in mind, as they give direction to the advisory committee. I believe we can minimize even aged management and maximize sustainable harvest of mature high quality redwood.

Comment 5
This is the right balance, and on the subject of the advisory committee, I wish to make a workable group, too large become unwillingly and in the end counter productive. So thank you very much for all the hard work you are doing on this and thanks for coming.

Response to Comment 1
Comments noted. The growth and production of large redwood trees will be a prominent component of the future management of JDSF. The Board recognizes the value of this form of forest resource. While the Board is aware of long-standing controversy over the uses of even-aged management and herbicides, JDSF is a demonstration forest that should demonstrate a broad range of viable forest management tools and techniques. However, the majority of JDSF will be managed on an uneven-aged basis, and the use of herbicides will be judicious.

Response to Comment 2
Comments noted. The JDSF forest inventory is state-of-the-art for a large timberland ownership. The inventory of large trees is expected to represent a substantial part of the future condition within JDSF.

Response to Comment 3
The Board concurs with these statements, and believes that they represent the management approach that has been selected for JDSF.

Response to Comment 4
Comment noted. It is not the Board's intention to minimize the use of even-aged management. However, the use of clearcutting will be heavily restricted, and even-aged management will be confined to specific areas of the Forest. The Board intends to maintain a mix of even-aged management in order to produce a mix of forest conditions available for future research. In addition, the Board recognizes that even-aged management is a useful and productive form of redwood forest management.

Response to Comment 5
The Board appreciates the recommendations of the City of Fort Bragg in the effort to formulate a viable and workable advisory committee for the Forest.

Jere Melo: Thank you mister chairman, and members of the board, my name is Jere Melo and I'm a city council member here in Fort Bragg and I am speaking for myself, as our vice chair indicated you will being getting comments from us in letter format. But I would like to back up one day, as I just told you as an individual, I would like to raise, perhaps another matter for your consideration.

Comment 1
And that is the new thing about this time around with the Jackson forest management plan, is your desire or emphasis on the research, and we have had some precomments about this, without having your document before us. But I want to inform you that our city council has been part of the redevelopment of this part of this mill site which is the west portion of town. It is interesting and we have gone a long way down the road to create something that we're currently calling the Noyo Center for Science and Education. Okay, and so in this Alternative G, you have a lot to do with demonstration and education and research and so you need to know that we're interested in your program. So far, we have a couple documents prepared by folks who are used to establishing field stations and our emphasis so far has been on the marine research and development. I can assure you that we would like to have your program incorporated into that science and education center, so that we have the terrestrial aspect and the marine aspect that will follow up on our own. In addition to that if you, I believe it's in your demonstration portion, if you need a marshalling point for conducting tours and what not, we will have that available. So we really encourage the collaboration with our city to carry out this plan. Stand by for Tom. Thank you so much for coming to Fort Bragg.

Response to Comment 1
The Board appreciates these comments and is hopeful that the Department can become an active participant in this effort to promote public education in the realm of resource management and forest ecology.

Tom Lisle: Hi, I'm Tom Lisle I'm research hydrologist for the Pacific Southwest station in Arcata.

Comment 1
Our unit has cooperated with CDF since 1962 in research of Caspar Creek, and I want to speak in general on the value of maintaining the flexibility of science to design and administer research, in general and particularly Caspar Creek. As many of you know, Caspar Creek has been highly valuable for educating and learning new things about the effects of forest practices, particularly on watershed concepts. There are over 150 publications that have come out of Caspar Creek, from ourselves and also from university cooperators. All sides of the forest practice issues have used our information.

This has come, I believe, from careful planning and execution of large scale experiments. First in the South Fork of Caspar Creek, where the selective logging, and yearly subsidies, and then clear-cut logging currently in the North Fork conducted in the early 1990's. We're now in the stage of planning a third experiment in the South Fork. Again, it was slightly logged and tractor-logged in the early 60's. We wanted to reenter the South Fork and conduct another series of experiments by using a range of intensities of selective logging, to discover the effects, in this case, where by you, cause and effects that overlap existing effects. Because of the carving of the landscape with tractor-logging in the first go around, that forest has not recovered in terms of sediment, erosion and transport. We're still seeing sediment.

This condition is typical of many areas of the redwood region, where reentry is compounding effects that occurred for previous cycles of logging. We want to figure what those effects are and how we might reiterate those, by conducting this experiment on South Fork.

Comment 2
And so, again we would like to use a range of treatments. There will be some control, some watersheds, where no logging or anything will occur. There will be some watersheds where we will do selective logging to promote late seral stage conditions and there will be others where we'll do more sort of commercial selective logging. We'll also like to, in one sub watershed, that most I can recollect is under 30 acres, do clear-cut logging in order to cover the full gamut of effects. Our philosophy here is, according to one of my professors, is that if you want to study the physics of sound, you need to hit the bell hard. And so this is one example where what we would like to do here is hit the bell hard.

We're now, through 10 years of calibration of South Fork conditions, with North Fork, we're now ready to start treatments the of South Fork, and delaying these treatments is costly for ourselves and for CDF, in the sense that we need to keep the measurements going. We cannot withdraw from this and go to sleep and come back some other time between treatments, ongoing monitoring of conditions that are involved. And so there is urgency in promoting and starting this experiment.

Comment 3
Lastly, I'd like to comment on the roll of the advisory committee. We at PSW, in coordination with CDF seek input from all groups on what kinds of research we should be conducting at Caspar Creek, and we thought that this information is very valuable to us, but when it comes to, and that it involves what kinds of research we should do. But how we conduct research is basically a scientific problem. It involves coordinating treatments, measurement and analysis of data that needs to fit the gamut and so we would like maintain treatment to determine what these treatments are. Many of us in science use scientific advisory committees to look at our proposals and give advice on how good those are scientifically, and that certainly has value, but from other groups, comment on research can be problematic, and I'll use the example of the Boeing Corporation. They seek advice from air passengers and what kind of features they like on the airplane, but they've never asked passengers to design and build the airplane. Thank you.

Response to Comment 1
The Board agrees that the Caspar Watershed Research Project has produced valuable information for land managers, resource professionals, and the general public. The Board supports a continuation of this research, including the next phase in the South Fork.

Response to Comment 2
The Board concurs that the South Fork treatment should represent a range of management intensity, and should proceed on a timely basis.

Response to Comment 3
It is the Board's desire that the Department receive advice on a broad range of management proposals, including research projects. There is an appropriate role, yet a limitation to the degree of specificity to the range of advice that is provided, depending upon the make-up of the group providing the advice. It is the Board's intention that the specific design criteria for research projects be created by those with the appropriate level of knowledge.

Garland Mason: Hi again, I'm Garland Mason. I am the deputy director of the Pacific Southwest Research Station and I wanted to comment very broadly and very quickly and very generally and leave the details to Tom Lisle. Well since Tom just gave you some details, I will make me faster and quicker.

Comment 1
I just want to say that we Forest Research support the proposal from CAL Fire for Jackson Demonstration Forest primarily to keep it for the uses that it was designed. That is for experimentation for demonstration and to provide a place where we can have long term access to answer these questions. We all want to do a better job in forest management and over the thirty-five years or so that the work has been going on here at Caspar Creek, these results have been applied throughout California in both the forest practice rules that you are responsible for, but also than have been interpreted and applied to other states throughout the west and there have been considerable extension of results to these projects to international activities. So, we would support continuation of these kinds of opportunities supporting research and we feel that the proposal is capable of doing that, so we encourage your support of the proposal. Thank you.

Response to Comment 1
The Board concurs with this comment.

Kathy Bailey: Good morning, Chairman Dixon, members of the board, my name is Kathy Bailey and I represent Sierra Club regarding Jackson Demonstration State Forest. I want to begin by thanking the board members and CDF staff who have spent many long hours, and many cases, many long years on trying to figure out how to help people on Jackson and move us into a new era of productive discussion and management.

Comment 1
I believe you have come up with a workable formulation by redirecting your focus back to Jackson's fundamental research and demonstration mission.

The goals articulated by the new Alternative G are outstanding. They have put a clear direction on issues we think are key to success to both ecologically sensitive management at Jackson. There is also a definite movement to an inclusion of issues that Sierra Club has been particularly interested in. The new older forest structure zone acknowledges the need for maintaining habitat and a continuous configuration.

Comment 2
It does appear however, there are a number of locations were adjacent old second growth should be considered for inclusion in this zone or perhaps designated for later seral development. We are also happy to see the designation of long term forest structure goals, even though they are still very rough estimates. Knowing where we are trying to go really helps plan the management plan process. Creation of a map provides baseline information on creation of old forest stands is something we have long asked for and we are happy to finally see it in print. Establishment of some interim harvest limitations for up to three years to allow advising entities to make recommendations is also a step in the right direction.

Comment 3
These advising entities however, are giving serious concern, and I strongly recommend that this be more carefully thought through. According to the document, Alternative G the director on the board about receiving advice about the possible modifications in the management plan from three entities. One directly appointed from Jackson specific advisory committee, two a currently demonstration state forest advisory group, which I ask you be rethought and reassessed. This group has a chart that includes all state forests and is also appointed by the director and three the board is planning to reestablish the committee on research, which has been dormant for some time and has been in charge of anything and everything to do with research. Alternative G includes a interim hearing to allow time for a detailed, information based look at specific issues that potentially may be recommendations, modifications and refinements to the broad outlines set up by Alternative G.

However, with three entities designated and the interaction, or potential lack of interaction, may leave this critical feature, at best, unwieldy, or at worst, unworkable in its current vague configuration. We consider the advisory function of this interim period and beyond to be the key to the long term goals of Jackson's management plan. The advisors need to have a clear consistent charge and close communication that can really only come from a single group. Use of three advisory groups, each with a separate charge will result in advice that is like a proverbial blind trio describing an elephant from one touch each. You will get the trunk, the tail and the maybe the foot, but you won't get a coherent picture of the whole elephant.

I am at the end of my three minutes; I did have something else to say. Would it be okay to precede chairman Dixon? Thank you.

Comment 4
My initial reading of Alternative G suggests that while there are significant items that need to be fixed, like the West Chamberlain THP needs to come off of the THP list and the residual old growth policy still needs revision, the advisory committee situation is signally the most potentially difficult long-term weakness in the proposal.

Comment 5
I would like to close by reminding you of something I have pointed out on a number of past occasions. Here is the map of the 2001 management plan entitled regional forest land ownership of northern California. It shows California's forest lands from Monterey bay north to the Oregon boarder and the Pacific Ocean over to Nevada. The green is federal forest land, the orange is parks, purple is private forest land yellow hear by Fort Bragg and a small bit in Santa Cruz is state forest. The green to the far East of Fort Bragg is across highway 101, Mendocino national forest is mostly Douglas fir. This coastal belt is overwhelmingly purple. In other words, private, and it is the coast redwood region.

Comment 6
We had an interesting fieldtrip the other day to some of that private forest land. Although, there are certain variations in management between the predominant lands visited and Mendocino Redwood Company lands make up the other predominant private forestry lands in this county and no matter what you think about how these other industry lands have been managed in the last 150 years. I think we can all agree that those landscapes are overwhelmingly missing large old trees, and the types of environment that large old trees help to create.

Comment 7
So, remember that when people get worked up about Jackson. Remember the extent that this coast redwood region is not public land, and remember in your minds what must have been here once and for the most part, is no longer here and realize it is true, not matter how much the Board and CDF don't want it to be true, it is true that Jackson forest is our regions only large public redwood forest and it is the principal refuge of the forested landscape that still bears, in some places, some resemblance to what has once covered two million acres here and is now for the most part gone. Thank you.

Response to Comment 1
Comments noted. The Board appreciates the support for Alternative G.

Response to Comment 2
Comments noted.

Response to Comment 3
Comments noted. The Board believes that there is merit to reinstituting the Board's technical advisory committee, while having a committee specifically charged with consideration of the JDSF management, including a significant level of local involvement.

Response to Comment 4
Comments and requests noted. As the comments are stated, a reasoned response is not possible. The Board believes that the short-term harvest schedule is appropriate, as is the old tree retention policy.

Response to Comment 5
The Board is aware of the current forest ownership pattern in the region. The large acreage of private land in the region emphasizes the need for an on-going research and demonstration program at JDSF, as well as the maintenance and creation of valuable habitats, and the continuation of the recreation program.

Response to Comment 6
The EIR includes an assessment of habitat availability for various species within the assessment area. The Board is aware of the fact that most of the local lands have been managed for timber production for over a century, and that the former old forest is largely gone.

Response to Comment 7
Comments noted. Please see the DEIR for an overview of the environmental setting and an assessment of potential impacts associated with the future management of JDSF.

Vince Taylor: I'm Vince Taylor and I represent the Campaign to Restore Jackson State Forest and I have prepared remarks that I hope where circulated to you. I plan to speak a little over two minutes, but not much. Firstly, because I want to compliment people on all that they have achieved, I think it is the time to do that. I think we are now really close to negotiating what's been now a seven year rogue, as far as finding a way to get Jackson state back into operation in a stable way that it will not continue to generate more controversy. We are very close, and I congratulate, commend the board on its willingness to work with the department of forestry, they have really opened up an inclusive process by developing Alternative G. I especially want to give compliment and appreciation to Director Grijalva, who invited me to meet with him and his staff a year a ago and committed himself to seek a consensus and I think that really opened the door to a working group here in Mendocino county that has people from the timber industry, myself and Kathy Bailey that worked hard to get a settled recommendation that we could all buy into.

Comment 1
In November of last year we published that set of recommendations that was signed by all but one member of our working group.

I think that this set of recommendations has been really recognized by people as the only way to really get Jackson forest back into operation, a goal we all share. The Board has indorsed that process, the town has now worked on it, we now have a plan before us, I think, a plan to incorporate all the important features of the solution that the board came up with, except in one area. I really want to bring this to the attention of the board, you have a chance to change it here, and I think it is really questionable language, but the language is very important and it has to do with even-aged management.

Everybody on the working committee, working group, myself included, believes that the primary purpose of this forest is research and research will include the necessity of even-aged management, but we also believe that it needs to be tolerant and justified to a specific research program. Right now the language is very permissive it just says, we are going to manage the forest for a broad range of future conditions and that has been interpreted by CDF to mean to do a lot of clearcutting, and its variations, in order to create possible future opportunities for research. Nearly 26% of the forest has even-aged management on it, nearly 2,700 acres can be harvested with even-aged management without regard to any specific research program and this is a completely unacceptable way of determining this.

Comment 2
This allows a lot of controversy, I think the appropriate way is to say it really needs to be tied to specific research appropriate and planned so that the advisory committee, people here can prepare and evaluate it. Plus we can propose and say, alright, if we do it in a different way, what would you give up and what we need in terms of environment effects and recreational benefits.

So, that is the only major outstanding issue and I hope that the Board will direct and staff the interim, hearing and both the working group and come up with language that we in the research committees, no one wants to halt the research committee, but also to satisfy the people who are concerned that even-aged management not be used indiscreetly. Thank you.

Response to Comment 1
Comments noted. The Board believes very strongly that even-aged management should be maintained at a significant level, in order to create variable conditions available for future research and demonstration. Most of the research that has been conducted within JDSF and elsewhere has targeted and has been dependent upon a specific starting condition or set of conditions. To limit forest stand management unnecessarily to those instances where a specific research project has been proposed would represent a significant limit to the range of potential research and the level of information that could be collected. Clearcutting is but one unique form of even-aged management. It is incorrect to state that other forms of even-aged management are variants of clearcutting. While up to 26% of JDSF may be managed on an uneven-aged basis, the actual application of even-aged harvesting will occur incrementally over many decades, with rotation ages up to 150 years, which will create young stands that are older than any young stands currently found within JDSF.

Response to Comment 2
Comments noted. The Board expects even-aged management to be utilized in an appropriate manner.

Mike Jani: Mike Jani, Mendocino Redwood Company, member of the small community group that got together to provide you some comments earlier. The main reason I am standing here is to let it be known that I personally am very appreciative of the time that the staff, CDF staff, put into this and particularly Russ. I think he tried very hard to take the comments that we gave him and put it into this new alternative.

Comment 1
I also agree with what Vince said, was probably the biggest gap in what has been presented in Alternative G and from what came from our local groups recommendations and so I would ask the Board to spend some time focusing on that one issue. If you look at the letter than Vince sent you the last couple of paragraphs, very clear in detail what the issue is. I think our group's recommendations were unambiguous. It was very easy to tell, in our recommendations, hopefully, that is was our hope that when we gave those recommendations to the board and CDF it would go the necessary distance to end the controversy that is surrounding Jackson State Forest. Thank you.

Response to Comment 1
Comments noted. While putting an end to local controversy concerning the management of JDSF may be desirable, the Board also believes that the management of JDSF should reflect the Board's policies and the intent of the enabling legislation. A broad range of management is intended.

Linda Perkins: Thank you with this opportunity to speak. My name is Linda Perkins. I am representing the watershed protection association. I was a member of the citizen's advisory committee appointed by Richard Wilson; it was a cross section of people here in Mendocino County. We made some recommendations very similar to those that had been made by the current Mendocino working group.

Comment 1
My concerns, based on what happened to our recommendations, are that the advisory committee groups that will be appointed will not assure that input will be heard. In other words, I think we need some assurance as to the specifics of how these advisory groups input will be received so they don't ill apparent position making recommendations that will then be shelved.

Comment 2
I also think there need to be sidebars put on the even-aged management; I think we are in agreement with that. Our citizen's advisory committee recommended individual tree selection, as a primary way of managing a forest. I think the current level of even-aged management is probably high, particularly incense, in more specifics, as to research of what they needed with that management.

Comment 3
I am also concerned about connectivity to adjacent lands, I am glad that you are, the department, is in touch with conservation of other parts and obviously there is a connection to Mendocino Redwood Company, through the Mendocino working group. I'm concerned that the forest plan some how we got what is happening on adjacent lands, on those plans, on the edge of the forest connect this place. Thank you very much I have appreciated all the work that has gone into this, we are looking forward to a time when the forest can meet production and be extremely constructive. Thank you.

Response to Comment 1
Comments noted. It appears as though the former committee's recommendations were implemented in large part, but not in total. The Board does not believe that there should be a guarantee that recommendations will be accepted and implemented. The committees appropriately advise the Department and the Board, but it is the Department's responsibility to manage the state forests.

Response to Comment 2
Comments noted. The use of even-aged management has been limited to specific sub-watershed areas, and clearcutting has been significantly limited. Significant impacts associated with the use of even-aged management are not expected to occur.

Response to Comment 3
Comments noted. The management plan provides forest habitat connectivity to adjacent lands. The older forest structure zone lies adjacent to lands managed by the major private timberland ownerships found within the assessment area.

Bill Keye: Chairman Dixon, members, Bill Keye California Licensed Foresters Association. We haven't had a chance to review this and so this is not our formal comment, I just wanted to take the opportunity to make a couple of points. I think we all recognize that this plan represents not just Alternative G but the entire effort represents the paradigm shift from a previous management regime on Jackson and I think that most of my members agree that's probably an appropriate and good thing.

Comment 1
There is concern about the harvest level of 20 billion board feet that would tie into the concern about varies to research and also the additional economy and the ability to, you know lets face it, deriving revenue from the natural resource used that can be used for the research and the demonstration.

Obviously, the harvest level is so much below growth, how many opportunities of foreclosing, that is concern.

Comment 2
I heard a reference earlier about, we have heard multiple references about, even-aged management and it is one of those glass half full, glass half empty things. Twenty-four percent to twenty-six percent of the forest is available for even-aged management, that also means that three quarters of the forest is not available and also even-aged management does not necessarily mean clearcutting that is dealt with separately. So I wanted to throw out some words dynamism, resilience, and also environmental ethics. That we mention we are all consumers of intrinsic of commodity resources and so it is good to see this coming together in terms of some resolution past where we have been.

Comment 3
The emerging issues of carbon sequestration and the concern about global warming as well as the concern of the issue make Jackson that much more important that we get this right. The board doesn't have to pick any particular alternative, we have a new alternative that has surfaced and can work and it is now up to you all to chose and make the decision. I just want to conclude with a statement contributed to Abe Lincoln "you can please some of the people some of the time, but you can't please all of the people all of the time."

Response to Comment 1
Comments noted. Alternative G is expected to produce an average annual harvest between 20 and 25 million board feet. This level is expected to rise significantly over a 100-year planning period.

Response to Comment 2
Comments noted. Even-aged management will continue to be an important component of the management plan.

Response to Comment 3
Comment noted. The management of JDSF will progress in consideration of the global warming phenomenon and the need for carbon sequestration.

Lynce Hepburn: Good afternoon, I hope your not getting too hungry or too cranky. I am speaking as a member of the public who lives by a watershed and also enjoy recreational opportunities on the state forest, especially the easy access I got to Hare Creek by foot path outside of the property by my land. I am also a hydrologist that participated in watershed research on the state forest for twenty years.

Comment 1
I am in general support of Alternative G, although I haven't read the full detail, because it promotes the research role in Jackson Demonstration Forest, one that will maintain ecological processes and recreational opportunities. JDSF is unique in the redwood region in that it serves as the only publicly owned redwood, Doug fir forest that is managed for the public good while serving as a place for long term applied research can be performed. Neither industrial forest lands, nor state parks serve this function. The research opportunities that exist here are not available in other ownerships and redwood regions. The location and geography of JDSF make it particularly well suited for research related to the effects of climate change. A role that is sure to take on great accomplishments in the coming years. I am concerned that the limitations to harvest made be appropriate for JDSF, there should be alternative harvest prescriptions subject to research proposals for external peer review, and in the cases of experimental watersheds, interim harvests may impede in the most appropriate science based study site, thus compromising the potential to maximizing the new knowledge in this long-term, expensive watershed study. Am I okay for time? I believe creative none productive silviculture may be necessary to promote late seral forest development and I hope that such creativity will not be overly expunged by over rigid management guidelines. Forest management needs to be responsive to new information.

Comment 2
And two final things, increased road maintenance and road erosion control are very important and needed on the forest.

Comment 3
And finally, there is a proposal for signing of a waste management station on JDSF and I think this is an inappropriate use of forest resources and should not be permitted. Thank you.

Response to Comment 1
The Board concurs with these statements, and believes that the management plan is appropriately responsive to these concerns.

Response to Comment 2
The Board concurs and believes that these are important elements of the management plan.

Response to Comment 3
The siting of a waste management facility is speculative at this time.

Richard Mayer: Thank you. Richard Mayer. I'd like to get a hard copy of this Alternative G. Where might that be available?

Board Executive Officer Gentry: There is a notice of availability that is posted on the website that lists all the places that it is available.

Richard Mayer: Is there a copy I can take home with me or do I have to sit in a library?

Board Executive Officer Gentry: No, I will discuss it with you later.

Comment 1
My computer won't do these huge fast downloads and I would also like to add my thanks to all the people involved in this, especially Russ. There have been some great comments spoken by the people so far and I support Kathy Bailey's concept which I think is the interim period, is to combine the advisory groups into one of science and citizen's labor but the important concept of one advisory committee at least through the interim period. While important, the responses are going on and it looks pretty incredible that a consensus has been reached. I suggest you take Kathy and Vince Taylor's suggestions to heart. Thank you.

Response to Comment 1
Comments noted.

Bill Heil: Has the mic stopped working for a reason? My name is Bill Heil. I was a member of Mister Wilson's advisory committee. I was also involved in the campaign to restore Jackson Forest and I don't belong to the forest land owners association, but I am a member of the Jackson State Owners Association and as are all public citizens. I want to get a chance to talk to you about this new Alternative G. I like B at best, but I don't think you are going to go for that. It real exciting, it has been seven years working and we finally feel like we've got the ear of somebody who can do something about our concerns and that they have taken them seriously. That is really a break through, and it is really appreciated. I would like to thank the people who have been involved in that. If I said it was what I wanted, there have been a lot of people who have gone way too far, I wouldn't say that even if it were true. I wouldn't go into my criticisms; I would like to point out a few things that we sometimes forget.

Comment 1
I would like to use the analogy of the fellow who was talking about ringing the bell, that bell has been whacked way too hard, and it is probably broken. The research that we need isn't what happens when we do more clearcuts, it's what happens when the clearcuts that we have and the damage that was done and how can we best restore it and how can we get these forests back for productivity. I am really glad that you have a new land owner and next to you and we have a land from the conservation fund that is whacked pretty heavy and would be great place to do some research in what to do in those situations and I hope that the board of forestry and CDF will be involved in that.

Comment 2
Concluding, I want to say that money that is generated from Jackson state is first priority and needs to come back to Jackson state.

Comment 3
The other thing that I want to say is, it seems to me, from the beginning that one of the biggest threats to Jackson state is that it become Jackson State Park and the best way to keep that from happening is to get a really credible management system in there that allows for the recreation that people want here and that people feel good about what's going on here and that we can all be proud of. Thank you very much.

Response to Comment 1
The management plan proposes to conduct research on a broad range of management-related effects, including restoration and the impacts associated with a range of traditional stand management treatments, including clearcutting. The Board believes that there is much more to learn concerning the regeneration effects, as well as the watershed and habitat effects of clearcutting.

Response to Comment 2
The Board agrees that revenue generated at JDSF should be utilized for the future management of the Forest, however, the allocation of funding to various State programs and functions is determined by the Legislature. The Board is confident that funding for the management of JDSF will be sufficient to enable full implementation of the management plan.

Response to Comment 3
Comments noted.

Ailene Moorehead: My name is Ailene Moorehead and I am a recent member to Mendocino and I am representing myself.

Concern 1
As you can see from the photo being passed around my concern is with the recreation and health and safety of the people using Jackson State Forest. Specifically, there is target shooting constantly at the quarry on road 408. In my estimation it is really jeopardizing public health and safety. There are hikers being constantly being passed that, there is a Park is down there, people use it all summer long. The quarry in question is 6.2 miles East of Highway 1 and road 408. The quarry shooting site shows the road is directly adjacent to where they are shooting and is taking place in two directions. There is daily shooting early morning up until around, I would say, 7 pm of assault and automatic riffles. People have to wear head gear to protect their hearing. I have never been so threatened, as last week I went by there, and there was automatic weapon fire like World War III. An objective of Jackson state forest is to provide the study on conservation, protection and utilization of natural resources. It is an obligation of the Board of Forestry to maintain safe conditions in Jackson forest. This is not being done with regards to that situation at the quarry. The photo shows the sight is littered with thousands, and I am telling you, thousands of empty shells, casing, broken beer bottles, and pottery used for targets. The sight is littered with two newspaper boxes used as targets, old hot water heaters, and discarded ammunition boxes. The boxes clearly state the ammunition being used contains lead. The photo shows the direction of the shooting, as you can see, right in front of the path of the shooting. Some of the automatic weapons are shot directly towards the forest. Hikers of bikers may take the path and be directly in the line of fire. There are statues limiting use of state forest and one of them quotes "where it is necessary for public peace or safety the director with consent of the governor may order close of trapping, hunting, camping, the use of firearms any area, in any state park or state forest. The director shall post and enforce such closure and boarders in such area." In the interest in public safety and public protection the query should be closed to target shooting and thank you for your attention and all your hard work.

Response to Comment 1
The comment concerns the historic use of a rock pit adjacent to County Road 408 as a target shooting site. Shooting is an activity that is allowed in state forests under statute and the Department is limited in its ability to prohibit this use. The management plan recognizes that illegal use of the site is an issue, and will evaluate the potential environmental impacts associated with illegal shooting.

Recirculated Draft EIR Public Hearing, Ukiah, June 20, 2007

Bill Smith: My friends say that I am outspoken, but not by many, I've been a forester since 1943. As a teenager I worked for the forest service in the sierras on blister rust control and fire fighting. I've spent all but a few years as a forester, I've been retired for 22 years, but I have been a tree farmer up until about a week ago. I signed the escrow papers on my tree farm because I have been unable to take care of my old age with a timber harvest under the current forest practice rules and other agency controls. I have some notes here, maybe I'll. Basically, I've been an SAF member, Society of American Foresters, for 50 years and I have purchased timber sales off of Jackson State Forest and watched the progress of the changes in the harvesting methods and the management methods over the years to the point were they have been doing a great job in leading the forest products harvesting industry until they were cut off by mistaken legal ramifications.

Comment 1
As a small timber owner we needed all the information we could get from Jackson forest, but it is unavailable now, and the idea of Jackson Forest being a tourist draw like some of the proponents of locking up the forest. The road situation up at the bypass at Willits is a perfect example, it was 40 odd years before they finally came up with a 2 lane bypass and Jackson Forest is going to be the like the rest of this area, it's a beautiful place that you can't get there from here from the general population of California.

Comment 2
I'd like to have the board of Forestry tell me that legislative myopia, bureaucratic inertia, legal dysfunction and environmental purity don't trump common sense, economic and social needs. Mendocino county and the north coast is California's Appalachia right now. Somebody in one of the papers said that the end product of our area in marijuana is something like 5 billion dollars, it seems to me they have got too many zeros in there but it very well could be and we have a pot and methamphetamine problem here and you cannot take away any part of your additional economic benefits for this area without having negative social and economic results. Our county does not get the taxes anymore, the industry isn't here and the people that could be out there harvesting can't go out and buy the seven hundred and fifty thousand dollar tractors they need to run from time to time. This is sort of a disorganized presentation but we do need more than 20 million feet a year cut over there. The original purpose of that demonstration forest when it was purchased from Caspar lumber company was as demonstration forest and not a park.

Response to Comment 1
The Board agrees that JDSF should return to full demonstration function as soon as possible, in part to fulfill the informational needs of small timberland owners.

Response to Comment 2
The Board's intention for future management of JDSF is as a research and demonstration facility, and also as a recreational resource, while recognizing the value of JDSF for habitat and fishery values. The short-term harvest level is expected to fall within a range of 20 to 25 million board feet per year, but not to exceed 35 million board feet per year. It is expected that the future harvest level will increase, due to forest growth and intensive forest management efforts.

George Rau: I have been on Jackson State Forest when it first started and prior to that time, it was during the acquisition, Sill Barbolla and Swede Welling, were assigned there and they were there for a few months. It was strictly something new for the state to take over, for the division of forestry, to take over something like that and they had no preparation for doing so in a business like manor. The Mendocino woodlands recreation outfit was in operation there in the San Francisco clubs countered on that, they had some kind of an option on it to keep their recreation in tack and running and the first winter that I was there in 1948-49, all the toilets froze up and broke, it was the coldest winter in Mendocino county for I don't know how many years, and that was part of the project.

So, eventually, within a year or so, they dig up some more money to hire a caretaker down there and watch the place so there was some kind of maintenance to it and that took us a way from there to do a little timber cruising. We did check cruising on some of Goldie, a man by the name Goldsmith from the forest service, did a lot of the cruising and did the basic part of the cruising for the board to determine how much timber there was on the property. Caspar lumber company held in reserve about, possibly 3 or 4 years, I can't remember how many years of logging, to keep their mill at Caspar running even after the state owned the land. We were supposed to supervise that to a certain extent, not to hinder their logging, but we were required to burn the slash and I remember one of the first things we did, we burned up a main line that belonged to a logger and he was pretty much heated up about it, so I wasn't too popular. But anyway, we got along good with them after that and they were logging along Chamberlain creek and also in the north fork of big river below Highway 20 and Barry Gulch which was adjacent to Boyles camp and Boyles camp was the recreation area, it had never been logged, it was tied off. In some places it was tied off pretty heavy and some places they had quite a bit of timber left.

Anyway, I had one man as a helper and we did check some lines and ran some people off here and there that were in there cutting poles and cutting fish poles as well as some bigger poles too and also they were shaking the area down for all the stuff that they could find to sell to the tourists who came in Fort Bragg, like burls and anything that was an oddity and they had a free hand in it. So they were quite a problem to get rid of them and also the Finnish colony at Swansa La Gulch had quite an

option on the property, they thought, and they set fire when they wanted too and grazed their stock it was the little north fork of south fork, and I don't know what the name is, or what they call it now, but they had some fires there for quite a while and Emry O'Scolla was in charge of this area, he was the assistant ranger in charge of this area, and he was quite busy for a while. He was Finnish himself and he got along with them eventually and they cooperated pretty well after that.

There were no roads in the area that was North of the south fork and west of Kelly McGuires. It was all railroad logged, they had a couple of inclines to get the stuff on higher elevation, but it was all railroad logged. So when the prison camp came in we got organized there and we had a little more help, we had all the help we could use and in fact, our responsibility was to find work for them and to keep them busy and so we did. We built the first road around Rylle Ridge, which is connected, that's on the ridge between little north fork Nile and the main river and parallels the railroad. That was one of the first roads we built in there. We also improved some of the roads like 3 chalk road and open the country up a little bit for fire access. The railroad at that time when through camp 19 and ended at camp 20 and it was right along side the county road from camp 19, or just beyond camp 19, it was parallel to the county road, if you can imagine that, and went over Dunlap summit and down into camp 20. They did the repairs on the locomotives and all the repairs on the railroad equipment there.

When they finished logging we were somewhat prepared by then, there were 3 of us, and it was about the second or third year, and so we had one man that worked kind of on the west side and two of us were marking timber and trying to make up a logging sale and decide what was going to be done and keep within a reasonable operation. I say reasonable because it was different than anything that was being done in the county at that time, and we took, I forgot the footage on the first sale we had, it may have been around 6 million feet of old growth timber in Chamberlain creek and so we extended the road up there, designated were it went. We didn't fool with how it was logged, I mean it was logged with wheels and the logger, lets see Union Lumber company did the first year, Caspar took it the second year and I forgot who took it the third year, it was Union I guess. Anyways, that was all marked timber and we wood scaled that right behind the falling crew and that's how it was done. There was two of us, and we were busy, we were plenty busy. Then the third year we put in a scaling shed at the forks of Chamberlain Creek and the logging went on from there and that was my experience there.

The second growth at that time was considered to be a cull product and Kelly McGuire was doing the best he could to get his land opened up for sheep pasture and he had all kinds of ways to get Camp 19 to get rid of those stumps that were around Camp 19. There was more interest in his operation there than there was in the timber end of it. At that time, around 1953 or something, there was a kind of a depression in the timber business and they were fussy about the logs they got and there were also, not like second growth and second growth fir was not even considered as a product at all. I have had no experience logging second growth and Hank Land was my assistant there and came into the job as a forester, went to the University of Idaho and he had some experience in private forestry, somewhere over in the pine country and it worked out real well with the type of land that we had and the logging worked real well and he went right out into the second growth logging.

I kept in touch with him, I left and went to work for Union Lumber company in 1955, they took there railroad out and they were going to go to truck logging and I did mostly engineering for them. I laid out probably 100 miles of road on their property. They owned probably 250,000 acres at that time. I also built a couple of bridges on 10 mile and put in repairs on them and the main bridge that is still on the Noyo river, which is the first prestressed concrete bridge that I had ever heard of. It was used to log, practically all the timber that was logged off of Jackson State Forest.

I said I had no experience in second growth logging, I happen to own 60 acres of second growth logging close to Mendocino just East of town there and it had never been logged, it had been tied off and I logged that twice I guess and I used to take somebody around there and show them, what was happening. This was after second growth became a product and it was worth two dollars an acre if I remember what stumpage price was then. We had a neighbor there who was the general manager, no not general manager, he was the advertising manager for Homes and Gardens and he owned

some property there on the hill just East of Mendocino and we became like good friends and he was interested in what I did and he was interested in timber and old growth timber there on the hill and he thought of logging it at one time. So, I said "Well, you can come over and look at my place. I've logged this once and its not completed, but you can see what happens when a person logs. Its not a pretty sight for people that are not acquainted with the operation." So, he and his wife came over there to look at it and he said "We don't want anything like this, you'll knock the ferns down." They just couldn't stand it. So, anyway we were still good friends and they didn't end up coming over and shooting me so. But anyway, I did end up logging it twice and sold that to Fred Nicky and Fred Nicky logged it two more times and I don't know who owns it now, but that's the only experience that I've had.

I would just like to say this, it doesn't take a rocket scientist to see that second growth logging is a big mess, it makes a terrible mess for probably the first five year and its really a mess and it looks terrible, but also, it doesn't take the same rocket scientist to see that you are putting the growth on a bunch of material that will never be worth anything. You may have five thousand stems per acre, out of which, maybe few hundred will ever develop. So, what your doing is just raising a crop that is just going to be on the ground and its not necessarily wasted, but its not a good source of humus and it's a fire danger for the first five years after logging. After that, second growth logging can be a real nice looking job and there are some jobs around Mendocino county, one of which I helped get started, is the Drinkwater ranch, that's over there near Mendocino, and the Drinkwater's, I quit Union Lumber company after about 7 years and went to work for myself as a forester and I had my surveyors license by that time and so I was working as a surveyor and licensed forester, and anyway, the Drinkwater's are very happy with the way that that property is set up and seems very successful as a young growth operation. I would like to recommend that, if anything, if anybody wants to see what timber looks like its been logged and well treated. I guess that's about all that I have to say.

Response
No environmental concerns were expressed relative to JDSF management plan or EIR.

Jerry Garvie: I'm currently working as a forestry manager for Redwood Empire Sawmills, a mill located in Cloverdale, we've bought logs off the state forest in the past, I've lived in Mendocino county for about the last 15 years, I've had my RPF license since 1976, I've been a forester since I graduated from Iowa State University in 1969.

Comment 1
As a representative of a company that uses products off of the state forest, obviously we would like to see resumption of the harvesting levels. Personally, as a log buyer I would like to see more than the twenty million feet that we have talked about for this proposition, but I think that the goal of increasing the research and the efforts towards developing that part of the program is a good goal.

Comment 2
My fears are that the research is done, but the information never gets out to the people who really need to use it, the members of the forestry community as well as the other land managers and I hope that there will be some provision for making the information available on a more timely basis than perhaps what has gone on in the past.

Comment 3
Besides the low harvest level portion of this option another thing that concerns me personally is the possibility of the whole thing tilting towards more of a forest service model where there's what you call an analysis paralysis, where there is so much research going on that nothing ever gets done. I've worked for the forest service in the past and I've seen it kind of evolve into a none land management entity, its just a holding cell for a lot of people. Other concerns revolve around just the fate of the industry itself and Mendocino county and Northern California, were really close to the whole thing collapsing as happened in the Riverside, San Bernardino area back in the 50's when the last mills went out. LP mill and the Irmulco, I think, was the last mill down there and that disappeared in the

70's. One or two mills going down and it will pretty much be the end of it and anything that is done as R and D on the state forest will be for no purpose because there won't be anybody around that can use it. That pretty much sums up my thoughts and feelings today anyway, so thank you.

Response to Comment 1
The desire to see more than 20 million board feet per year harvested from JDSF is noted. The Board concurs with the desire to have harvesting resume, and increasing research and demonstration efforts.

Response to Comment 2
The Board and the Department are committed to making research and demonstration information available on a timely basis.

Response to Comment 3
The ADFMP provides for a robust research and demonstration program coincident to a viable long-term forest and timber management program. The Board is confident that JDSF will make a significant contribution to a viable timber industry in Mendocino County.

Mike Jani: Chief forester for Mendocino Redwood Company. Our group of residents, and interested people, have gotten together and will be providing the board yet another letter, which should go out today or tomorrow to clarify a few things that came up in the meeting in Fort Bragg, some questions, so my comments are not about that, my comments are not attached to the group that I have been participating with but are just my own and mostly in the form of a question. Is it, in an alternative, the appropriate place to look at some of these issues that have come up today in regards to the economic benefits to Mendocino county and to provide the public with examples of the type of research and demonstration that can be considered within the alternative?

Comment 1
I have to admit I haven't read the entire EIR and if in fact there are those things included in it I apologize for my question, but I think it would be of some benefit, if in fact, in the alternative portion of the EIR its appropriate to give members of the public some idea as to the types of research and demonstration and its impacts economically on the county. So, I pose it as a question because I don't know the appropriateness of it, or is that in fact something that will be more clearly vetted in the management plan. Thanks.

Response to Comment 1
The ADFFMP (Chapter 4) and the DEIR provide an overview of the types of research and demonstration that may be conducted on JDSF. The potential forms of research and demonstration will be subject to adjustment in the future, as the recognized needs for research and demonstration change and develop. Advisory entities will also make recommendations for desired research and demonstration.

Estimating the direct economic benefits of potential research and demonstration would be highly speculative, depending upon specifics of the projects and the individual or entity in receipt of the research. However, it is anticipated that several of the individual research projects and demonstrations will provide potential for economic benefit to landowners.

Julie Bawcom: I work on contract to CAL Fire, and I am an engineering geologist, but these comments are all basically my own and not representative of any body but myself. I was so happy that these gentlemen gave us a historical perspective, I think that we have lost our historical perspective in this process and its very important to see where we came from on Jackson State Forest. I'm relatively new to Jackson State forest, I've worked and reviewed timber harvesting for 21 years, compared to these gentlemen here. But, I have a unique perspective, because I have watched, and I was there before all this process began and I've seen several managers, forest managers work, and harvest timber out there. Jackson State forest has always been held to a

greater standard than the industry forestry, the private industry forestry and this was done by the forest managers, they where always held to a higher standard than the forest practice rules it was just standard of practice that the forest has always been maintained and I think we kind of forget that as we are going through this process.

I'm sorry that I haven't kept up with all the management plans and I have worked solely on the forest for the last seven years and I have done research projects and I just wanted to kind of mention a few of those, I helped write part of the management plan but I haven't kept up on all of this because its kind of frustrating and you kind of have to remove yourself and just do your work, so I'm not up on option G as well as I should be but there are a couple of comments that I want to make personally.

Comment 1
It appears to me that this, with the advisory board that wants to be formed all and the restriction it appears that we are taking away the science of the, the choices that the scientists, that the foresters and the other professionals have to make, with so many restrictions on harvesting and the type of harvesting. Those are even-aged and uneven-aged management and those are only 30% removal and this, that and there. There are reasons why foresters make those decisions in the health of the stand and fire hazard and all kinds of other things that I don't know, because I'm not a forester but it appears to me that we are taking away the options for the scientist to provide for a healthy forest when you put too many restrictions on.

Comment 2
It seems to me that this forest, it's the largest state forest in the state of California, and that means that we all work for the tax payers and the state of California and there are very few special interest in Mendocino County. People who are new to this area that think that its there own little project and they don't represent the whole state of California and I notice that the board of forestry there's are a lot of new members, so the learning curve for the new members of the board of forestry, it frightens me that they haven't seen enough of the forest, they haven't seen enough of the past management and how well its been managed in the past so I would encourage the new board members to spend more time with the forest manager and educating them selves about what was done in the past and have a look at the forest, and I know they took a tour recently but one day I don't think is enough.

Comment 3
My comment on the twenty million board feet per year which is fifty percent below growth, that bothers me because some years ago we got a road forester and I was going to be working with the road forester to survey all the road and I think we have about 500 miles of roads and as George spoke, a lot of them were built in the 60's, the 50's 60's and 70's, when our road practices weren't up to standard practices now and we have a lot of legacy problems. That's a lot of roads and that's going to take a lot of work and I did a research project and I mapped all the clearcuts on Jackson State Forest, which averaged less than 3, 4, 5 percent of the watersheds. There wasn't much in clear cutting even when there were no restrictions, except for Caspar Creek which is a research project. What I found was that all the landslides that occurred in and around all the clearcuts, all but one or two were all associated with old legacy roads and it is well documented in the literature that legacy roads are damaging our watershed health the most, more than anything else. Yet, we are only going to log fifty percent of what we grow on the forest and to manage a 50,000 acre forest takes a lot of money and to do a road inventory and to get our road forester back, to survey, prioritize, repair, decommission roads costs a lot of money and that's what we should be trying to do and that should be our priority on this state forest and to do that we need money and to do that we need to log and log, and log in a healthy way, like we always have. So that bothers me a little bit
.

Comment 4
So, I just think that management by popular opinion by a few special interest people, is wrong because the state of California owns it and that's all the tax payers and so I would hope that the board think about this when they are making these decisions and they are giving away more and more concessions to a small population of people who think they know what is good for the forest. Thank you.

Response to Comment 1
While the ADFMP will incorporate restrictions upon management of the forest, the forest will remain available for a very broad range of management forms and options. It is anticipated that forest health will be maintained. The commenter is not specific and the Board will not speculate as to the forest health issues that may arise as a direct result of management restrictions. However, the Department and the Board are capable of addressing new issues, and considering amendment of the management plan if and when considered necessary.

Response to Comment 2
The Board agrees that JDSF is a state-wide resource. The Board has had ample opportunity to become familiar with the management plan and EIR.

Response to Comment 3
The ADFMP provides for an average annual harvest within a range of 20 to 25 million board feet per year during the first decade. This level is expected to rise in future decades, toward the long term sustained yield level in excess of 50 million board feet per year. The Board agrees that forest management, and road management in particular, will require sufficient funding to maintain, improve, and decommission roadways. The Board and Department are dedicated to achieving an annual funding level to enable this valuable work to proceed. Please see the Road Management Plan in the ADFMP for more information on the management of the road system.

Response to Comment 4
The ADFMP reflects existing legislation, Board policy, and regulation, and was prepared by the Department in consideration of a very broad range on input from concerned citizens and public agencies. The Board agrees that JDSF is a public resource for the benefit of the entire state population.

Ike Heinzsturingor: This is in regarding to the Jackson State Demonstration Forest management draft plan. My response is to the amendment of the draft management plan to include:

Comment 1
One, to protect the ambient temperature in the forest to ensure the equilibrium between the body of trees and the water. There is a hot and cold pulsation going on day and night.

Comment 2
Two, protect mother trees for natural regeneration. Understory trees need shade cover to moderate influence, [this] leads to the uniform structure through out the whole period of tree growth.

Comment 3
Three, avoid small or large clearcuts, but rather individual select cut.

Comment 4
Four, reorient forest management towards protection of carbon sink. The state has the opportunity for reorientation of the construction sector more to steal and cable and glass away from the excess use of wood. There is other methods to do earthquake proof structures, in fact sky scrapers are not built out of wood.

Comment 5
Then five, the environmental effects such as noise, traffic, pollution and costs as esthetic degeneration, changes in fish and wildlife habitat, soil disturbances, reduction in water quality and flow are unacceptable, and that's from your own letter.

Comment 6
Six, citizens use the state demonstration forest recreationally and are aware of fire danger created by logging without a management plan. We can afford to protect our state treasure forest lands from fire.

Comment 7
To the adequacy of the additional DEIR of mitigating the environmental effects of timber management of the state, we are entering into a new era, no longer are the practice of the past to slash and burn are accepted.

Comment 8
The demonstration of timber managed alive is to be emphasized, live forest, not in some warehouse in form of boards. I live in an East slope mixed redwood forest myself in Redwood valley and through observance I know how fragile the forest is in our regularly dry climate.

Comment 9
All future predictions confirm that a local and global warming trend causes stress on our forest ecosystem. Plant protective tree covers, corridors for wildlife, you know plant protective tree cover. To emphasize my point I want to quote from Victor Shalvavors book, The Fertile Earth, in the chapter titled "Influence of Temperature and Water Movement", he states on page 55 "Under the protection of mother trees, natural regeneration and moderate heat influence, direct sunlight, leads to the formation and the close knit and uniform structure throughout the whole period of growth. Quality timber can thus thrive only in the way the nature intended, in the sheltered environment of mother trees. The earlier the young shade loving plants are exposed to direct sunlight, and the greater the frequency of exposure, the sooner its structural formation must deteriorate qualitatively as a result of unnatural growth." That's why they have bark, bark protects the tree from the sunlight, this is why all variety of light demanding timber protects their initial growth process from the sun by forming a thick layer of bark, which is not the case of shade demanding species.

Comment 10
The pine therefore will be the first to perish at the hands of a contemporary forest management.

Comment 11
The intent of Jackson State Forest in Mendocino county is to be protected from fire and the burning desire of pay back individuals connected to the state to taking trees with greed, guidance and directions from the public is available, lets hope that we are heard. Thank you.

Response to Comment 1
A reasoned response would call for speculation. The ambient temperature within a forest, and an equilibrium between the body of trees and the water, are both dynamic relationships, and constantly changing. The Board is unable to determine what the commenter is referring to with regard to an equilibrium between the body of trees and the water.

Response to Comment 2
The commenter requests that mother trees need to be protected for natural regeneration, and that understory trees require shade to moderate influence, which leads to uniform structure throughout the period of tree growth. This concern is not clear, and the Board will not speculate as to the nature of the concern. However, the Board can state that most trees found within JDSF are able to successfully regenerate and develop under a very broad range of shade conditions, although most tree species grow more rapidly when exposed to greater amounts of sunlight. The growth of trees is quite variable, not uniform, across the life span. This is due to variable influences of intra tree competition, forest canopy gaps, and species variability.

Response to Comment 3
The commenter's desire to avoid small or large clearcuts, and a desire to have individual tree selection is noted. No environmental concern was expressed by the commenter.

Response to Comment 4
The commenter requests that forest management be reoriented towards protection of carbon sink. The meaning of the comment is not clear. The Forest represents a very large carbon sink, and the level of carbon in storage is expected to increase in future decades. No environmental concern is expressed by the commenter.

From a greenhouse gas perspective, the sustainable use of wood in construction is vastly preferable to the use of steel, the production of which results in a very high level of energy consumption and carbon dioxide emission relative to the use of wood. In addition, wood is sequestered for several decades in structures, as more wood is grown in the forest.

Response to Comment 5
The Board agrees that significant impacts associated with noise, traffic, pollution, aesthetic degradation, changes in fish and wildlife habitat, soil disturbances, reduction in water quality and flow. The potential for significant impacts to these resources has been thoroughly considered, and no significant impacts are expected to occur (see DEIR Section VII for the analysis).

Response to Comment 6
No logging has or will occur in the absence of a management plan. The ADFMP includes multiple provisions to protect the state forest from fire damage.

Response to Comment 7
The ADFMP does not propose "slash and burn" management. However, it is possible that some harvest units may be burned on occasion, as part of a research or demonstration project designed to evaluate forest health or forest growth. This practice is not anticipated to occur frequently. No environmental concern is expressed by the commenter.

Response to Comment 8
While harvesting will occur as part of the management process, the management of the forest is intended primarily toward development of stands of live trees. The forest is very resilient and dynamic, having developed under a very broad range of natural and man-made disturbances.

Response to Comment 9
The forest products of this general area, and from the state forest, are quite valuable and in demand. The state forest will manage stands in many different ways as part of the research and demonstration program, in an effort to determine the effects of various forms of stand management upon tree growth, product values, habitat, watershed processes, and forest health. There is no evidence to suggest that individual tree growth must be uniform throughout the life of a tree in order to produce quality wood products.

The Board recognizes that there is potential for the global warming phenomenon to affect forest health. The state forest will remain a forested resource, with highly variable, yet abundant shade and cover for development of regeneration, and ample sunlight availability for individual tree growth. Please see DEIR Section VII.16 for an assessment of potential climate change effects. Significant impacts are not expected to occur.

Response to Comment 10
The concern is not clearly stated. The commenter suggests that pine will be the first to perish at the hands of contemporary forest management. Pine is normally referred to as a relatively shade intolerant species. This is due to the fact that many pine species do not regenerate or grow well under shade canopy. Most pine species develop a relatively thick bark, which tends to protect the tree from influences of both sunlight and fire.

Response to Comment 11

The concern is not clear. The commenter appears to express a desire that the Board take guidance from the public, and to avoid "pay back" of individuals connected to the state to take trees with greed. The Board fully considers public comment during the process of review of the management plan. JDSF is a public resource, intended by the legislature to serve as a demonstration of sustainable forest management.

VII. Corrections and Additions

Draft Environmental Impact Report (DEIR)

Alternatives

The paragraph on DEIR Page VI-7 and beginning “Given this policy conflict…” will be edited to state: “Given this policy conflict, and because recreational users of JDSF and the Mendocino Woodlands would have similar experiences (e.g. CAL FIRE management for late-seral conditions and absence of even-aged management within the Mendocino Woodlands Special Treatment Area is more similar to DPR management for natural and cultural values than on many other areas of JDSF), this alternative has been eliminated from further consideration. JDSF as a working forest operates under a variety of land treatment objectives, a subset of which approach those under which the DPR routinely operates.”

Aquatic Resources

Page VII.6.1-15, Microclimate;The Board agrees with DFG that the work conducted by Dr. James in the Judd Creek watershed in Tehama County may not be directly applicable to the coast redwood region in western Mendocino County. The following sentence shall be inserted at the end of the first paragraph:

> Studies such as those by Ledwith (1996) may be more likely to represent conditions found on JDSF than those reported on by James (2003).

Page VII.6.1-20, Channel Confinement and Refuge Habitat:
The Board agrees with DFG that: (1) the lack of connectively between floodplain and channel for the very limited Class I channel lengths that are unconfined and have channel gradients less than 2% are to a large extent related to legacy management impacts (i.e., historic logging practices), and (2) stream channel and riparian zone recovery will likely result in these floodplains becoming more temporally and spatially connected over long time periods. The following sentence shall replace the first paragraph:

> Stillwater Sciences (1997) found that 89% of the Class I channel length (that could be classified with air photos) was classified as confined, and that unconfined channels with gradients less than 2% (assumed to have the most valuable aquatic habitat for anadromous fishes) made up 3% of Class I channel length for the JDSF assessment area used by Stillwater Sciences.

Page VII.6.1-22: Figure VII.6.1.2, Sediment in Pools (V*) at Noyo River and Nearby Stream Sites (1992), is missing sampled stream names on the ordinate. From top to bottom they are: Hare Creek, Kass Creek, Pudding Creek, Parlin Creek, Brandon Gulch, North fork of South fork Noyo River, Little River, North Fork Caspar Creek- Lower. The Note at the bottom of the figure should be modified to remove Hare Creek and Brandon Gulch from the list of streams not in the chart.

Botanical Resources

Page VII.6.2.1, Setting:
The Board recognizes that the DEIR's description of the redwood series does not strictly conform to the CNDDB/Holland hierarchical classification or to the series described in Sawyer & Keeler-Wolf. The following will be inserted at the end of the second paragraph:

> JDSF upland forest vegetation descriptions have utilized a gradient approach. The majority of these forests have a substantial disturbance history and contain a mix of conifer, hardwood and understory species. Stands that have been typed as dominated by hardwoods have either or both Douglas-fir or redwood present in the stands. The JDSF gradient approach is listed below.
>
> Coniferous Upland Forest and Woodland:
> - Redwood dominated
> - Redwood /Douglas-fir
> - Redwood /Douglas-fir/Hardwood
>   - Redwood/Douglas-fir / Hardwood xeric
>
> A summary of the pertinent CNDDB and Sawyer & Keeler-Wolf hierarchical classification follows:
> - Coastal and Montane Douglas- Fir Forests and Woodlands
>   - Douglas Fir Forests (redwood common per Sawyer & Keeler-Wolf).
>   - Various associations with include species considered to be associated with costal forests (CNDDB lists no associations with redwood listed in the name)
>   - Various Douglas-Fir associations including more montane species such as White Fir. (CNDDB, Sawyer & Keeler-Wolf)
>   - Douglas-Fir/Tanoak Forests (redwood not common per Sawyer & Keeler-Wolf, CNDDB lists no associations with redwood listed in the name)
>
> - Coastal and Montane Redwood Forests
>   - North Coast Alluvial Redwood Forest (Sawyer & Keeler-Wolf)
>   - Upland Redwood Forest
>   - Various Redwood & Douglas-Fir or, tanoak or madrone CNDDB associations

Pages VII.6.2-8: Discussions of Bishop pine will include:

> Bishop pine forest should include Northern Bishop Pine Forest as a sensitive vegetation type. The Northern Bishop Pine Forest is very limited in distribution and is often poorly understood when within its range.

Page VII.6.2-7: Correct spelling of *Cupressus goveniana* ssp. *Pigmaea*

Page VII.6.2-7: Add the following to the first paragraph:

> Uncommon/Unique Species found in pygmy forest include; *Calamagrostis bolanderi*-Bolander's reed grass, *Ceanothus gloriosus var. exaltatus*- glory brush, *Cladina portentosa ssp. pacifica* -Pacific reindeer lichen, *Cornus Canadensis*-bunchberry,*Sphagnum* sp.- peat moss, *Veratrum fimbriatum*- corn lily.

Page VII.6.2-7: For the fifth paragraph add Northern Bishop Pine to the list of sensitive vegetation communities.

Page VII.6.2-12: & Appendix 7B Botany: Change text to note Cape ivy has undergone a taxonomic reclassification (change of genus) for (*Delairia odorata*)
Correct generic scientific name for pennyroyal (*Mentha* vs. *menthe*).

Page VII.6.2-13 In the second paragraph correct the spelling of Acacia.

Page VII.6.2-15: Table VII.6.2.2. Will be revised and updated to exclude: *Calamagrostis foliosa*, *Ceanothus gloriosus var. gloriosus*, *Collomia diversifolia*, *Hemizonia congesta ssp. tracyi*, *Linanthus acicularis*, and *Ribes victoris*; and include *Lotus formosissimus*.

Page VII.6.2-17: Add this information to the second paragraph:

> CEQA also provides for assessment of regional rare and unique species [CEQA § 15125(c)]. Also state rank is an important status factor in assessing whether a species meets the criteria of rare, threatened, or endangered under Section 15380 CEQA Guidelines.

Pages VII.6.2-17 and 18: The Native Plant Protection Act (NPPA) does not exempt timber operations from the California Endangered Species Act, CEQA, or the Forest Practice Act (Weburg Case 2003). The unmitigated salvaging of a rare or endangered plant would likely be considered a significant impact under CEQA. In addition, the NPPA does not apply to species not listed by the Fish and Game Commission as threatened, rare, or endangered. Hence application of the NPPA Section 1913 is not appropriate for determining the need to adequately assess sensitive botanical resources in the THP process. The most pertinent NPPA exemptions are prohibition of take and Fish and Game Code Section 2081 take permit.

In the last paragraph the discussion of the NPPA Section 1913(c) did not specifically include notes on the Weburg Case. This was an artifact of editing. Because NPPA Section 1913(c *salvage*) may now be confusing, reference to this section will be removed (last two sentences on page 17). CAL FIRE will continue to follow all relevant statutes and regulations, as well as recognize applicable case law.

Page VII.6.2.20 Add the Special Concern Area and following text:

> Sphagnum Bog -. The Sphagnum bogs occur within the Pygmy Forest at JDSF. Though the sphagnum bogs were not highlighted specifically for protection, both the Wetland and Pygmy Forest protection measures will apply.

Page VII.6.2.20 Cypress Groups: Background: The 2002 DFMP(pg 148) recognized and defined Cypress Groups as a Special Concern Area and provided direction. This vegetation type contains pygmy cypress but often has a majority of Bishop pine present. The Department of Fish and Game, Biogeographic Data Branch-Vegetation Classification and Mapping Program, produced in September 2003 the "List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database" It listed Northern Bishop Pine Forest as a series or association considered rare and worthy of consideration by CNDDB. "Pygmy Cypress Groups" and the "Northern Bishop Pine Forest" often refer to similar if not the same vegetation on the ground. The Response to Comment from the Department of Fish and Game discussed the vegetation in detail. The FMP Special Concern direction for the Pygmy Cypress Groups along with the necessity of project/site specific analysis would insure this vegetation receives appropriate consideration. The definition of Cypress Groups will be edited to add the text in highlight:

> *Cypress Groups*
>
> Cypress Groups, elements of bishop pine/pygmy cypress forest on unproductive soils (non-timberland), will not be subject to harvest. Some of this vegetation may

> also be considered Northern Bishop Pine Forest, a series or association considered rare and worthy of consideration by California Natural Diversity Data Base (dated 9/2003). Note that both Bishop pine and pygmy cypress can occur in redwood forest. In these areas (i.e. timberland) harvest may occur. As a special status plant species, effects to individual upland pygmy cypress will be evaluated on a project basis.

Page VII.6.2-44: Table VII.6.2.1 revisions will include the State and Global ranks for the species.

Page VII.6.2-31: In Table VII.6.2.3, robust monardella (*Monardella villosa* ssp. *globosa*) can be associated with upland forest openings and will moved to the
Upland North Coast Conifer – None to Moderate Canopy Closure block.

Page VII.6.2-34: To the sixth paragraph add: Forest microclimate was listed among the secondary impacts by Sholars and Golec (draft 3-22-2004).

Page VII.6.2-21 To address concerns about the objectives for any potential use of fire in the Pygmy forest, the first paragraph is replaced by:

> Habitat Management Practices: The concept of conducting control burns in the pygmy forest originated some years ago as an idea to benefit the Lotis blue butterfly and a host species coast hosackia (*Lotus formosissimus)*. Currently it is understood that other herbaceous members of the pea family may be hosts for the butterfly and that host plant habitat is not limited to pygmy forest. The concept of manipulating the rare pygmy forest for the possible benefit of the Lotis blue butterfly is not supported at this time. Local Botanists have supported the concept of carefully reintroducing fire into pygmy forest areas on JDSF. CAL FIRE recognizes that any proposal would be: research focused on improving understanding of the pygmy forest, limited in scope, based on sound ecological and botanical knowledge, supported by experts in the field, undergo appropriate CEQA analysis, and include appropriate survey, study, and monitoring.

Page VII.6.6-30: Table VII 6.6.5 – For the Low to Moderate Habitat Capability rows, blank cells should instead have a value of 10-100% for the Canopy Cover (Pct.) column

Page VII.6.2-35: Correct the text in the second paragraph to reflect:

> The Environmentally Sensitive Habitat Area (ESHA) designation for pygmy forest only applies to the Coastal Zone. A significant amount of pygmy forest acreage is outside the Coastal Zone and on private lands where future protection is not necessarily guaranteed.

Page VII.6.2-38**:** Change the discussion in the first paragraph to include:

> Species such as *Clintonia uniflora*, *Smilacina racemosa*, *S. stellata*, and *Trillium ovatum* have declined over 40% more in harvest areas than in retained forest aggregates (Nelson and Halpern 2005). That upon review, small sample size of old growth stands may have led to the classification of *Trillium ovatum* as a disturbance related species in the study conducted at JDSF. The more temperate climate in the redwood forests in contrast to the white fir forests studied by Jules (1997) may play a role as well. Trillium was present in clear-cut stands studied on JDSF, but did not appear to occur consistently enough to be used in the vegetation classification system.

Page VII.6.5.2 The Porter-Cologne Water Quality Act should be included in the discussion under *6.5.2 Regulatory Framework for the Protection of Wetlands.* The following will be inserted:

> "**Porter-Cologne Water Quality Act**". Water Code Section 13140-13147 states that "highest priority shall be given to improving or eliminating discharges that adversely affect any of the following: (1) Wetlands, estuaries, and other biologically sensitive sites." The Act prevents unpermitted filling of wetlands as well."

Page VII 6.6-53, Marbled murrelet - Distribution: The following sentence should be added at the end of the paragraph:

> At sea surveys conducted off the Mendocino Coast in recovery Zone 5 noted approximately 290 murrelets in 2005 (J. Hunter USFWS pers. comm.. 3/29/06).

Page VII 6.6-53, Marbled murrelet – Local Distribution: The following sentence should be added at the end of the second sentence, first paragraph:

> The use of radar to detect Marbled Murrelets is dependent on several variables including flight speed of the radar target, target size, flight path, and observed flight time.

Page VII 6.6-53, Marbled murrelet – Local Distribution: The following sentence should be added at the end of the second sentence, first paragraph:

> Marbled Murrelets at inland detections have been documented using both radar and ground-based audio-visual surveys.

Page VII 6.6-54, Marbled murrelet – Local Distribution: The following correction should be made in paragraph 1: "Wheatfield Creek" should be "Wheatfield Fork of the Gualala River."
Also at at the end of this sentence add, "and South Fork Eel River (California Natural Diversity Data Base)."

Page VII 6.6-55, Marbled murrelet - Distribution: The following sentence shall be added to the end of paragraph 1:

> Horsetail Gulch and Gulch 16 (1.5 miles east of Horsetail Gulch) are two known occupied sites on Campbell Timberland Management lands in the Ten Mile drainage (Middle Fork) as identified using protocol audio-visual surveys.

Pages VII.6.6-56 and 57, Table VII 6.6.8 - Regarding murrelet survey protocols, the following changes shall be added to footnote "a": This protocol has been revised several times and is currently reported in Evans and Mack (2003).

Tables VII.6.6.8, 9 and 11 footnotes text is changed to:

> No recommended USFWS protocol was available at this time. Surveys may or may not have been done to the general protocol used at the time of survey and as indicated in the Table.

Table VII.6.6.8 on page VII.6.6-57 under "Location" "Noyo, The Worm 2":

> Under "Source" column change text to: "Uncertain murrelet vocalizations were detected by surveyor. Additional year of follow-up survey resulted in no murrelet detections."

Table VII.6.6.9 on page VII.6.6-64 Under "Source" column change text to: "Uncertain murrelet vocalizations were detected by surveyor. Additional year of follow-up survey resulted in no murrelet detections."

Table VII 6.6.9, page VII.6.6-66. The following footnote is added: (c) No protocol exists for murrelet radar surveys that is endorsed by the Marble Murrelet Technical Committee.

Page VII 6.6-72, Forest Detectability Methods: To clarify the Evans Mack, et al. (2003) paper, the first sentence of the first paragraph is replaced by:

> The 2003 inland survey protocol describes 2 basic survey types: intensive auditory and visual surveys and radar surveys (Evans Mack et al. 2003).

The last sentence is added to the end of the first paragraph: No radar protocol exists for surveying murrelets.

Page V11 6.6-75, Habitat Characteristics - To clarify diameter of nest branches in California as reported in Hamer and Nelson (1995a) the fourth sentence is changed to: The average diameter of nest branches as measured at the tree trunk is 13.8 inches.

Page VII.6.6-114 – Large Woody Debris: To clarify monitoring needs, the following sentence is added at the end of the paragraph: Periodic sampling will be utilized to monitor LWD density and composition as part of the CFI Inventory System.

Page VII.6.6.115 – Species Surveys: To clarify what "project" refers to the following sentence is added to the end of the paragraph:

> "Project" in this context is loosely defined as any activity that JDSF undertakes. Scoping focus is project-specific and driven by potential habitat impact expected from the activity either individually or cumulatively.

Page VII.6.6.116: The suggested edit will be implemented by using DFG endorsed protocols when appropriate and other protocols when they address the specific survey needs. This information will added to paragraph 2 to help clarify the intent.

Page VII.6.6-123: In paragraph two the Lotus Blue Butterfly account will be edited based on CDFG comment as follows: Lotus blue butterflies have a close association with coast hosackia (*Lotus formosissimus*) and potentially other members of the pea family. "Disturbed early successional wetland habitats" is omitted and replaced with "open wetland habitats."

Page VII.6.6-126: Osprey – The third sentence: remove the reference to the USFWS.

Page VII.6.6-127: Marbled murrelet - Add the following sentence to the end of the second paragraph: Potential mitigation measures for occupied murrelet habitat include avoidance of disturbance or habitat alteration.

Page VII 6.6-127: Marbled murrelet - Add as the fourth sentence of the first paragraph the following sentence:

> Marbled Murrelets have also been infrequently documented nesting in second-growth forest with single residual conifers with suitable nest platforms or in mature forest stands with scattered residuals with platforms.

Page VII.6.6-135: MRC - To clarify the CWHR modeling, the following sentence is added at the end of the paragraph:

> The 7% represents a large number of classes with a relatively small amount of acreage. They were modeled using the most closely associated CWHR type from the 93% that were individually modeled. This was a parsimonious approach that considered the types, resolution of modeling effort, and speculative nature of forecasting other ownership future behavior.

Page VII.6.6-219: The Total Edge Index (TECI) category and definition is changed to: Total Edge (TE) - measure of the total edge distance (in meters) from a patch to the nearest neighboring patch of the same type.

Appendix 7 B-1 page 1 Add the information: *Catoneaster lactea* is the most common species.

Appendix 7B-2 page 2: The Mendocino County USGS 7.5' quadrangles for *Boschniakia hookeri* will be updated to include for Elk the date "(CNDDB 2005)"

Appendix 7B-2, Page 2: The spelling will be corrected for Thurber's reed grass *Calamagrostis crassiglumis.*

Wildlife and Wildlife Habitat

The first sentence of the paragraph under "Habitat Modification Impacts" (DEIR page VII.6.6-121) is deleted and replaced with the following:

> For determination of impact significance to listed threatened, endangered, and rare wildlife species, impacts would be considered significant if they were to result in direct mortality, permanent habitat loss, habitat modification that reduces its suitability, reduced reproductive success, or a "take" as defined under FESA or CESA. Populations of candidate, sensitive, or special-status species generally are more secure than for listed species, and therefore can tolerate somewhat greater impacts. Therefore, impacts to candidate, sensitive and special-status species are considered significant if they would result in population or habitat loss, detrimental habitat modification, or impairment of reproduction that would apply to a substantial portion of the population on JDSF lands or in the surrounding region.

The Central California Coast coho was upgraded from threatened to endangered in the final rule published June 28, 2005 with the effective date being August 29, 2005. DEIR pages VII.6.1-2, VII.6.1-60, and VII.6.1-88 will be updated to reflect this development.

Page VII.10-17, 4th paragraph, will reflect the following edit:

> Central California Coast Coho:
> federal endangered
> State endangered
> California Coastal Chinook:
> federal threatened

Northern California Steelhead:
federal threatened

Section 6.1.6 Regional Salmonid Population Status DEIR page VII.6.1-53 and prior to the Coho Salmon subsection will be augmented with the recommended Federal Endangered Species Act excerpts.

The Administrative Draft Final Forest Management Plan includes language indicating that flood prone areas within JDSF will be managed according to procedures included in the Riparian Protection Committee's Final Report, which was produced by a committee that included several fisheries biologists and licensed geologists. See response to comment 21 in the March 1, 2006 NMFS letter.

In response to comments regarding survey protocol, the RDEIR and FMP will provide this direction:

> For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (California Department of Fish and Game 2000). In addition, JDSF will conduct periodic floristic survey in some areas to gain a better understanding of the relationships between the local plants, their distribution, and their habitats.

The Final EIR will include language indicating that the evaluation of flood prone areas within JDSF will be guided by procedures included in the Riparian Protection Committee's Final Report, which was produced by a committee that included several DFG biologists and was endorsed by DFG. This approach is incorporated into the proposed Forest Management Plan. See response to comment 5 in the Department of Fish and Game's March 1, 2006 letter

If management is proposed within a watercourse's 20-year recurrence interval event floodplain. CAL FIRE will use as a guide in the evaluation of potential flood-prone areas the procedures developed by a multi-agency team that included DFG and is described in the final report titled "Flood Prone Area Considerations in the Coast Redwood Zone (Cafferata and others 2005). This will specifically be stated in the FEIR. See response to comment 6 in the Department of Fish and Game's March 1, 2006 letter.

The FEIR will state that studies such as those by Ledwith (1996) may be more likely to represent conditions found on JDSF than those reported on by James (2003). See response to comment 9 in the Department of Fish and Game's March 1, 2006 letter.

In response to comments regarding survey protocol, the RDEIR and FMP will provide this direction:

> For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (California Department of Fish and Game 2000). In addition, JDSF will conduct periodic floristic survey in some areas to gain a better understanding of the relationships between the local plants, their distribution, and their habitats.

The FEIR will state that studies such as those by Ledwith (1996) may be more likely to represent conditions found on JDSF than those reported on by James (2003).

The FEIR will be corrected and state that Stillwater Sciences (1999) found that 89% of the Class I channel length (that could be classified with air photos) was classified as confined, and that

unconfined channels with gradients less than 2% (assumed to have the most valuable aquatic habitat for anadromous fishes) made up 3% of Class I channel length for the JDSF assessment area used by Stillwater Sciences.

If there is field evidence of floodplain connectively for storm events with return intervals of 20 years or less in areas that are proposed for timber management, CAL FIRE will be guided by the guidelines developed by CDF, DFG, NCRWQCB, and CGS in the document titled "Flood Prone Area Considerations in the Coast Redwood Zone (November 2005).

The following correction will be added to the FEIR:

> In Figure VII.6.1.2, the indicated stream names, from top to bottom, should be Hare Creek, Kass Creek, Pudding Creek (outside of assessment area), Parlin Creek, Brandon Gulch, North Fork of the South Fork of Noyo Creek, South Fork Caspar Creek below the weir, North Fork of Caspar Creek below the weir.

The FEIR will not duplicate all the descriptive and background text from the DEIR, they are incorporated by reference. CDFG comments include extensive comments intended to make additions to the DEIR text that do not represent changes or corrections of fact. Where changes or corrections are appropriate these will be incorporated into the FMP or the Errata found in the FEIR. Some additions will occur as well to expand understanding of specific resources.

The FEIR Errata will include the description of the Douglas-fir series and explain the relationship of the JDSF types to the Sawyer & Keeler-Wolf types. This will present information to individuals who understand CNDDB/Holland hierarchical classification.

Page VII.6.2-7: note the correct spelling of *Cupressus goveniana* ssp. *pigmaea*, and sensitive plants frequently associated with Mendocino pygmy cypress forest are:

Rare Species:

1. *Arctostaphylos mendocinoensis* pygmy manzanita
2. *Boschniakia hookeri* small groundcone
3. *Campanula californica* swamp harebell
4. *Carex californica* California sedge
5. *Cupressus goveniana ssp. pigmaea* pygmy cypress
6. *Juncus supiniformis* hair-leaved rush
7. *Lilium maritimum* coast lily
8. *Pinus contorta* ssp*. bolanderi* pygmy pine
9. *Rhynchospora alba* white beaked-rush
10. *Usnea longissima* long-beard lichen

Uncommon/Unique Species:

1. *Calamagrostis bolanderi* Bolander's reed grass
2. *Ceanothus gloriosus var. exaltatus* glory brush
3. *Cladina portentosa ssp. pacifica* Pacific reindeer lichen
4. *Cornus Canadensis* bunchberry
5. *Sphagnum* sp. peat moss
6. *Veratrum fimbriatum* corn lily

Page VII.6.2-12: Reference the taxonomic reclassification (change of genus) for Cape ivy (*Delairia odorata*), this name is noted in Appendix 7B Botany. Also correct generic scientific name for pennyroyal (*Mentha* vs. *menthe*).

Page VII.6.2-104: Table VII.6.2.1 should cite the State ranks for the species as many of these species also have State sensitive status (in particular S1 and S2 ranks). Another relevant rank is the global rank, which is similarly assigned as the State rank but is reflective of the world status. The State ranking system is a separate system for assigning status and provides additional status information for a species. The FMP will contain an updated table which adds state and global rank.

Page VII.6.2-15: Table VII.6.2.2. will be revised and updated to exclude: *Calamagrostis foliosa*, *Ceanothus gloriosus var. gloriosus*, *Collomia diversifolia*, *Hemizonia congesta ssp. tracyi*, *Linanthus acicularis*, and *Ribes victoris*; and include *Lotus formosissimus*. The Administrative Draft Final Forest Management Plan will contain an updated table with additions and deletions.

Page VII.6.2-17: add the following:

> CEQA also provides for assessment of regional rare and unique species [CEQA § 15125(c)]. Also state rank is an important status factor in assessing whether a species meets the criteria of rare, threatened, or endangered under Section 15380 CEQA Guidelines.

Pages VII.6.2-17 and 18: The Native Plant Protection Act (NPPA) does not exempt timber operations from the California Endangered Species Act, CEQA, or the Forest Practice Act (Weburg Case 2003). The unmitigated salvaging of a rare or endangered plant would likely be considered a significant impact under CEQA. In addition, the NPPA does not apply to species not listed by the Fish and Game Commission as threatened, rare, or endangered. Hence application of the NPPA Section 1913 is not appropriate for determining the need to adequately assess sensitive botanical resources in the THP process. The most pertinent NPPA exemptions are prohibition of take and Fish and Game Code Section 2081 take permit.

A THP or CEQA document must still consider the potentially significant effects to any species regardless of the exemption or whether the species is listed or not. The DEIR text already alludes to this in the partial paragraph found at the top of DEIR page VII.6.2.18:

> Regardless of the exemption allowed to THPs under Fish and Game Code Section 1913, it is the stated intent of JDSF to address sensitive plants and their habitats on a project basis through scoping in consultation with CDFG, surveys according to appropriate survey guidelines where indicated by the results of scoping, assessment of potential impacts, and avoidance or mitigation to reduce impacts to a level less than significant.

To clarify the DEIR with respect to the issue raised in this comment, the FEIR Errata will note this correction and therefore modify the DEIR. Inclusion of this section without notes on the Weburg Case represents an artifact of editing, not a decision by the Board to rely on this approach for protection of rare plants. Because NPPA Section 1913(c) may now be confusing, reference to this section will be removed via corrections in the Errata. CAL FIRE will continue to follow all relevant statutes and regulations, as well as recognize applicable case law.

Sphagnum Bog -The special concern areas and unique habitats are based on those listed in the DFMP. On page 14 of the DFMP under Unique Habitat types, sphagnum bogs were listed as a sensitive community but not described in detail. The Sphagnum bogs occur within the Pygmy Forest at JDSF. A section has been added to the proposed FMP to clarify that though the sphagnum bogs were not highlighted specifically for protection, both the Wetland and Pygmy Forest protection measures will apply.

The Northern Bishop Pine Forest's status will be noted in the Final Management Plan by an addition to the discussion of Pygmy Cypress Groups. In addition, the discussion of "Cypress Groups" will note this vegetation may refer to "Northern Bishop Pine Forest". The text is shown below in context

> *Cypress Groups*
>
> Cypress Groups, elements of bishop pine/pygmy cypress forest on unproductive soils (non-timberland), will not be subject to harvest. Some of this vegetation may also be considered Northern Bishop Pine Forest, a series or association considered rare and worthy of consideration by California Natural Diversity Data Base (dated 9/2003). Note that both Bishop pine and pygmy cypress can occur in redwood forest. In these areas (i.e., timberland) harvest may occur. As a special status plant species, effects to individual upland pygmy cypress will be evaluated on a project basis.

The text of the DFMP and DEIR have been changed to clarify that the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (California Department of Fish and Game 2000) will be followed for THPs and other large projects.

Floristic surveys: for Alternative C1 and C2 the wording regarding surveys will be clarified as follows: For timber harvesting plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (California Department of Fish and Game 2000). This will result in floristic surveys for the effected areas. This language is contained in Chapter 3 of the proposed FMP. On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.

Table VII.6.2.3 is a hierarchical arrangement of Functional Groups. As stated in the DEIR at page VII.6.2-30, "Species that could fall within more than one group are included within the first appropriate group in the hierarchy. The first group in the sequence has a higher potential for negative effects from disturbances such as timber harvest." The DEIR acknowledges that species can fall within more than one functional group. Cumulative effect analysis focused on the long term changes in vegetation. This table's objective was to help place the rare plants in context of potential impacts of the changes. It was not indented as an information source for specific rare plant habitat preferences; DEIR Appendix 7B-2 contains this information. Because moving robust monardella (*Monardella villosa* ssp. *globosa*) from the Closed Cone Forest or Openings Group would list one more species in the Upland North Coast Conifer Group, this change will be reflected in the errata. In Table VII.6.2.3, for the Upland North Coast Conifer Functional Group the legend includes "The plants included would be expected to found in upland actively managed porions of JDSF but may occur in other habitats as well." The Board recognizes that this "worst case" arrangement may not list that the plants also are found in more protected habitat.

Page VII.6.2-34: Forest understory species dependent on shade and moist forest microclimate are also sensitive to canopy removal. This information will be added to the FEIR via the errata.

In response to other concerns about use of fire in the pygmy forest the paragraph starting on page VII.6.2-21 is replaced by:

> Habitat Management Practices: The concept of conducting control burns in the pygmy forest originated some years ago as an idea to benefit the Lotis blue butterfly and a host species coast hosackia (*Lotus formosissimus)*. Currently it is understood that other herbaceous members of the pea family may be hosts for the butterfly and that host plant habitat is not limited to pygmy forest. The concept of manipulating the rare pygmy forest for the possible benefit of the Lotis blue butterfly is not supported at this time. Local Botanists have supported the concept of carefully reintroducing fire into pygmy forest areas on JDSF. CAL

> FIRE recognizes that any proposal would be: research focused on improving understanding of the pygmy forest, limited in scope, based on sound ecological and botanical knowledge, supported by experts in the field, undergo appropriate CEQA analysis, and include appropriate survey, study, and monitoring.

Page VII.6.2-35: The Environmentally Sensitive Habitat Area (ESHA) designation for pygmy forest only applies to the Coastal Zone. A significant amount of pygmy forest acreage is outside the Coastal Zone and on private lands where future protection is not necessarily guaranteed.

Page VII.6.2-38: It is possible that upon review, small sample sizes of old growth stands may have led to the classification of *Trillium ovatum* as a disturbance related species in the study conducted at JDSF. The more temperate climate in the redwood forests in contrast to the white fir forests studied by Jules (1997) may play a role as well. Trillium was present in clear-cut stands studied on JDSF, but did not appear to occur consistently enough to be used in the vegetation classification system.

Page VII 6.5-2: add the following language:

> Porter-Cologne Water Quality Act Water Code Section 13140-13147 states that "highest priority shall be given to improving or eliminating discharges that adversely affect any of the following: (1) Wetlands, estuaries, and other biologically sensitive sites." Also, the Porter-Cologne Water Quality Act prohibits the nonpermitted filling of wetlands.

Tables VII 6.6.3 and 6.6.4 will be edited such that cells with a value of 0 will instead exhibit a dash (-).

Page VII.6.6-30, Table VII 6.6.5. Where appropriate, the table will be edited such that 10-100% appears in the currently blank cells for the Low to Moderate Habitat Capability Habitat row.

In the DEIR at page VII.6.6-53, paragraph 1, add the following at the end of the paragraph: At sea surveys conducted off the Mendocino Coast in recovery Zone 5 noted approximately 290 murrelets in 2005 (J. Hunter USFWS pers. comm.. 3/29/06).

In the DEIR at page VII.6.6-53, paragraph 2, add the following at end of the second sentence second paragraph: The use of radar to detect Marbled Murrelets is dependent on several variables including flight speed of the radar target, target size, flight path, and observed flight time.

In the DEIR at page VII.6.6-53, paragraph 2, add the following at end of sentence:
Marbled Murrelets at inland detections have been documented using both radar and ground-based audio-visual surveys.

In the DEIR, correct "Wheatfield Creek" in paragraph 1, page VII.6.6-54 to "Wheatfield Fork of the Gualala River." Add at the end of this sentence "and South Fork Eel River (California Natural Diversity Data Base)."

Add to the DEIR at page VII.6.6-55, paragraph 1 the following sentence: Horsetail Gulch and Gulch 16 (1.5 miles east of Horsetail Gulch) are two known occupied sites on Campbell Timberland Management lands in the Ten Mile drainage (Middle Fork) as identified using protocol audio-visual surveys.

Under footnote "a" to Table VII.6.6.8 add the following text: This protocol has been revised several times and is currently reported in Evans and Mack (2003).

Change the text of footnotes in Tables VII.6.6.8, 9 and 11: Change "No USFWS protocol was available at this time" to "No recommended USFWS protocol was available at this time. Surveys may or may not have been done to the general protocol used at the time of survey and as indicated in the Table."

Make Correction to Table VII.6.6.8 on page VII.6.6-57 under "Location" "Noyo, The Worm 2": Under "Source" column change * text to: "Uncertain murrelet vocalizations were detected by surveyor. Additional year of follow-up survey resulted in no murrelet detections."

Make same correction as above to the same entry in Table VII.6.6.9 on page VII.6.6-64.

Add footnote to Table VII.6.6.9 to indicate that "No protocol exists for radar surveys that is endorsed by the Marble Murrelet Technical Committee."

Page VII 6.6-72, Par.1: The first sentence of the first paragraph will be edited to remove "recommends" and replaced with "describes". The sentence, "No radar protocol exists for surveying murrelets," will be added to the paragraph.

Page VII.6.6-123: edit as follows: Lotis blue butterflies have a close association with coast hosackia (*Lotus formosissimus*) and potentially other members of the pea family. "Disturbed early successional wetland habitats" is omitted and replaced with "open wetland habitats."

Page VII.6.6-126: Regarding osprey, remove statement to the effect that the USFWS exerts specific jurisdiction of this species relative to the FPRs.

Page VII.6.6-127: The sentence: "Potential mitigation measures for occupied murrelet habitat include avoidance of disturbance or habitat alteration" will be added to the second paragraph.

Page VII 6.6-127, Par.3: The sentence, "Marbled Murrelets have also been infrequently documented nesting in second-growth forest with single residual conifers with suitable nest platforms or in mature forest stands with scattered residuals with platforms," will be added as the fourth sentence of the paragraph.

Page VII.6.6-135: add the following text to the DEIR to clarify the paragraph: The 7% represents a large number of classes with a relatively small amount of acreage. They were modeled using the most closely associated CWHR type from the 93% that were individually modeled. This was a parsimonious approach that considered the types, resolution of modeling effort, and speculative nature of forecasting other ownership future behavior.

Page VII.6.6-219: The edge measure TECI indicated in the DEIR is incorrect; it should be Total Edge (TE) and is expressed in meters.

Appendix 7B-2, Page 2: the Mendocino County USGS 7.5' quadrangles for *Boschniakia hookeri* will be updated to include Elk (CNDDB 2005)

Appendix 7B-2, Page 2: the "s" on the species scientific name has been dropped for Thurber's reed grass (*Calamagrostis crassiglumis*) in miscellaneous locations in the body of the DEIR.

Add the following table to section VII.6.6 in order to explain more directly why certain species were not analyzed: Table. Rationale for Identifying Species with No Potential for Significance Effects Under Any Alternative and Therefore Not Addressed in Detail in the JDSF EIR.

Species	**Project Area Occurrence and Habitats**	**Basis for Determination of Effects**	**Impacts and Significance of Plan Alternatives**
Pomo bronze shoulderband snail	Found on lands adjacent to JDSF. Associated with dense redwood forest in riparian habitats and other mesic areas.	All current old growth forest habitats protected. Riparian habitats to be managed to increase late successional character.	Minor or no direct effects. Potential for habitat enhancement. Overall effects less than significant
Fringed myotis Long-legged myotis Pacific big-eared bat	No reported occurrences on or adjacent to JDSF. Breeding and roosting uses are mostly associated with building, caves, but may use hollow trees and other substrates	Breeding and roosting habitat will not be affected. Rangewide declines likely associated with disturbance at roosting and nesting sites (Williams (1986). Species are not likely to be sensitive to vegetation treatment with protection and creation of large snags. Old growth habitat with large snags to be protected and extent of late successional forest to be increased on JDSF	Little or no effects on species or habitat. Impacts less than significant, likely beneficial over long term
Great Blue Heron Great Egret, Double-crested Cormorant	Species are not known to regularly occur, but are observed occasionally onsite or are present on adjacent lands.	Species populations are stable or increasing in the state. If they occur at JDSF, they are localized. Existing FPR nest site protections applied on a project level during timber harvest are effective. Nesting habitat may improve through riparian management	Less-than significant; potentially beneficial in the long-term
Northern Harrier	Primarily a species of wetlands and grasslands. Seldom use shrub or forested areas, even following even aged timber harvest. No known occurrences on or adjacent to JDSF, but winters and may breed in grasslands on nearby Coastal plain.	Likely occurs only as an irregular or localized migrant or wintering species. Uses grassland and other very open areas (e.g Keiffer 1993) generally on flatter terrain, which are limited at JDSF JSDF of low importance to species.	No impacts

Species	Project Area Occurrence and Habitats	Basis for Determination of Effects	Impacts and Significance of Plan Alternatives
Sharp-shinned Hawk	Known to occur	Species has increased substantially through most of its range (Sauer et al. 2005). Not considered a state species of special concern (SSC) in draft revision of SSC list (Shuford, in prep.). Readily uses younger forest stands.	Less than significant or no impact
Merlin	No reported occurrences of the species on or adjacent to JDSF, although likely occurs in low density. Uses open areas and edge habitats for foraging. A wintering species only.	Former threat was pesticide contamination (Remsen 1978). Species has increased over most of breeding range (Sauer et al. 2005), so likely has increased as a wintering species in California. Not considered a SSC in draft revision of list (Shuford, in prep.) Likely not limited by wintering habitat	No impact.
Tricolored Blackbird	No occurrences; found locally on adjacent lands. Requires combination of marsh or wet meadow with dense cover (frequently blackberry) for nesting with grassland for foraging	Limited marsh and meadow habitat at JDSF will not affected by management actions. Not known to forage in forested habitat, even recently cleared areas. Few breeding records in Mendocino County (Keiffer 1993, Beedy and Hamilton	Less than significant or no impact
Yellow-breasted Chat	Known to occur on adjacent lands. Uses well-developed riparian areas dominated by hardwoods. Likely to be locally distributed if present	Suitable habitats will be protected through riparian management	Less than significant or no impact

References

Beedy, E.C. and W. J. Hamilton III. 1997. Tricolored blackbird status update and management guidelines. U. S. Fish and Wildlife Service, Portland, OR, and California Department of Fish and Game , Sacramento, CA.

Keiffer, R. J. 1993. Field checklist of the bires of Mendocino County, California. Hopland, CA.

Remsen, J. V., Jr. Bird Species of Sepcial Concern in California. Wildlife Managemnt Branch Admin. Rept. 78-1. California Department of Fish and Game, Sacramento CA.

Sauer, J. R., J. E. Hines, and J. Fallon. 2005. The North American Breeding Bird Survey, Results and Analysis 1966 - 2004. Version 2005.2. USGS Patuxent Wildlife Research Center, Laurel, MD.

Shuford, D. (Ed.) in preparation. Bird Species of Special Concern in California. California Department of Fish and Game, Sacramento, CA.

Williams, D. F. 1986. Mammalian Species of Special Concern in California. Wildlife Management Division Admin. Rept. 86-1.California Department of Fish and Game, Sacramento CA.

Hydrology and Water Quality

The Administrative Draft Final Forest Management Plan has added these additional objectives to Goal #3:

Protect all beneficial uses of water, comply with water quality objectives in accordance with the Water Quality Control Plan for the North Coast Region (Basin Plan), and implement required TMDL measures.

Comply with other relevant regulations of the North Coast Regional Water Quality Control Board, including the Anti-degradation Policy, TMDL Implementation Policy statement, the Nonpoint Source Policy, and other relevant current regulations, as well as any additional relevant regulations that may be implemented over time.

Section VII.10.5: add the following table to section VII.10.5 of the DEIR to provide a listing of beneficial uses within the DEIR:

Table VII.10.4A. Basin Plan Designated Beneficial Uses for the Noyo and Big Rivers.

Beneficial Use	Basin	
	Noyo River	Big River
Municipal and Domestic Supply	E	E
Agricultural Supply	E	E
Industrial Service Supply	E	E
Industrial Process Supply	P	P
Groundwater Recharge	E	E
Freshwater Replenishment	E	E
Navigation	E	E
Hydropower Generation	E	P
Water Contact Recreation	E	E
Non-Contact Water Recreation	E	E
Commercial and Sport Fishing	E	E
Cold Freshwater Habitat	E	E
Wildlife Habitat	E	E
Rare, Threatened, or Endangered Species	E	E
Migration of Aquatic Organisms	E	E
Spawning, Reproduction, and/or Early Development	E	E
Estuarine Habitat	E	E
Aquaculture	E	P
E = existing; P = potential		

Add the following to Appendix 11:

> We agree with the comments of the North Coast Regional Water Quality Control Board staff, per the TMDL documents for the Noyo and Big Rivers, that both legacy practices and current practices contribute sediment that is delivered to stream channels during a given period of time. That being said, it appears that a major portion of this comment relates to disagreement over the conclusions of the South Fork Noyo River sediment study produced by Koehler and others (2001). Dr. Lee Benda, Graham Matthews, and Rich Koehler all agree that sediment trapped in long-term storage along the South Fork Noyo River channel is transported downstream in high-discharge events, and that this sediment increases the overall suspended sediment load. If the source is not properly accounted for, this suspended sediment could be incorrectly attributed to recent upslope sources, which would lead to an overestimation of the sediment generated by contemporary upslope management practices. This distinction is important, particularly because some scientists believe that remobilized historic or legacy sediment-derived increases in suspended sediment load are likely to be a significant, unrecognized sediment source. This view is shared by Graham Matthews, who wrote the sediment source area analysis reports that the Big and Noyo River TMDL documents were based on, and was a co-author of the South Fork Noyo Report (Koehler and others 2001).

After review of the document, the Board agrees with the NCRWQCB staff that there are some places in Appendix 11 where there is inaccurate usage of terms. The Board does not believe that the inconsistent use of terms resulted in incorrect findings being made.

Table 3, Appendix 12, MWAT Thresholds and Standards. After reviewing the literature the Board has made corrections to the table as follows:

MWAT Thresholds and Standards		
Temperature (C)	Descriptions	Temperature (F)
26	Upper end of range of acute thresholds (considered lethal to salmonids)	78.8
25		77.0
24	Lower end of range of acute thresholds (considered lethal to salmonids)	75.2
23		73.4
22		71.6
21		69.8
20		68.0
19	Steelhead growth reduced 20% from maximum (Sullivan and others, 2000).MWAT metric USEPA (1977) growth MWAT for rainbow trout Coho growth reduced 20% from maximum (Sullivan and others, 2000), MWAT metric	66.2
18	USEPA (1977) growth MWAT for coho	64.4
17	Steelhead growth reduced 10% from maximum.	62.6
16.8	NMFS MWAT threshold.	62.2
16.7	Welsh and others (2001) MWAT threshold for coho presence/absence in the Mattole	62.1
16	Oregon Dept. of Environmental Quality Standard for salmonids (equivalent MWAT calculated from 7-day max.)	60.8
15	EPA Region 10 Recommended MWAT. Threshold for Coldwater Salmonid Rearing	59.0
14.8	Coho growth reduced 10% from maximum (Sullivan and others, 2000), MWAT metric	58.6
14.6	Upper end of preferred rearing range of coho	58.3
14.3	Washington Dept. of Ecology standard (equivalent MWAT calculated from annual max.)	57.7
14		57.2
13	Upper end of preferred rearing range for steelhead.	55.4
Note: A 16.5 C MWMT corresponds with a 10% reduction in growth of coho.		

References

The table below contains added literature references that were missing in the DEIR, or corrections to references.

Section	Page	Reference Correction, Explanation	Reference Used in Document
V	12	online Database http://cain.nbii.gov/calwater/	Calwater (version 2.2)
V	15	Rutland, Robert. 2003. Big River Watershed Assessment Report for the North Coast Watershed Assessment Program (DRAFT). California Department of Forestry and Fire Protection, Sacramento.	Rutland, 2003
VII.5	11	This is The Toxic Air Contaminant Identification and Control Act (AB 1807), and should be cited as such. Tanner introduced the bill to the assembly in 1983.	Tanner, 1983
VII.6.1	6	Welsh, H.H., A.J. Lind, L.M. Ollivier, G.R. Hodgson and N.E. Karraker. 1998. Comments on the PALCO HCP/SYP and EIS/EIR with regard to the maintenance of riparian, aquatic and late seral ecosystems and their associated amphibian and reptile species. Unpublished.	Welsh, 1998 (listed as et al.)
VII.6.1	6	Williams. R.N. J.A. Stanford, J.A. Lichatowich, M.S., W.J. Liss, C.C. Coutant, W.E. McConnaha, R.R. Whitney, P.R. Mundy, P.A. Bisson and M.S. Powell. 2006. Return to the river: strategies for salmon restoration in the Columbia River basin. p 629-666. In Return to the River. R. Williams (ed). Elsevier Inc. 720p.	Williams et al, 1999 CORRECT YEAR TO THAT BELOW Williams et al, 2006
VII.6.1	13	Brazier, J.R. and G.W. Brown. 1973. Buffer strips for stream temperature control. Research Paper 15, Oregon State University Forest Research Lab, Corvallis, OR. 9 p.	Brazier and Brown, 1973
VII.6.1	15	James, C.E. 2003. Southern exposure research project: a study evaluating the effectiveness of riparian buffers in minimizing impacts of clearcut timber harvest operations on shade-producing canopy cover, microclimate, and water temperature along a headwater stream in northern California. Unpublished Ph.D. dissertation. University of California, Berkeley. 382 p.	James, 2003
VII.6.1	16	Ambrose, R.F. 2000. Wetland mitigation in the United States: Assessing the success of mitigation policies. Wetlands (Australia) 19:1-27.	Ambrose, 2000
VII.6.1	16	California Department of Forestry and Fire Protection. 1999. Draft habitat conservation plan and sustained yield plan for Jackson Demonstration State Forest. Prepared by Stillwater Sciences, Berkeley, California.	CDF, 1999

Section	Page	Reference Correction, Explanation	Reference Used in Document
VII.6.1	25	Shirazi, M. A., and W. K. Seim. 1979. A stream system evaluation - an emphasis on spawning habitat for salmonids. U.S. Environ. Prot. Agency, EPA -600/3-79-109, 36 p. Corvallis Res. Lab. Corvallis, Oreg.	Shirazi & Seiu, 1979
VII.6.1	29	Valentine, B. 1996. Stream temperatures on Jackson Demonstration State Forest, Mendocino County, California during summer of 1995. California Department of Forestry and Fire Protection, Santa Rosa.	Valentine, 1996
VII.6.1	32	North Coast Regional Quality Control Board. 2004 (preliminary draft). Big River Water Quality Assessment. Report compiled for the North Coast Watershed Assessment Program. North Coast Regional Quality Control Board, Santa Rosa. Draft utilized with permission of R. Klamt, Chief of Timber Harvest Division, North Coast Regional Water Quality Control Board.	NCWAP, 2004
VII.6.1	34	M Berbach, P Cafferata, T Robards, B Valentine. 1999. Forest Canopy Measurements in Watercourse and Lake Protection Zones: A Literature Review. California Dept. of Forestry and Fire Protection, Sacramento, CA. 23 p.	Berbach, 1999
VII.6.1	42	Welsh, H.H., G.R. Hodgson, B.K. Harvey and M.E. Roche. 2001. Distribution of juvenile coho salmon in relation to water temperatures in tributaries of the Mattole River, California. North American Journal of Fisheries Management 21:464-470.	Welsh, 2001
VII.6.1	46	Mendocino Redwood Company, 2003	Mendocino Redwood Company, 2002
VII.6.1	54	Federal register notice.	Schiewe, 1996a fide NOAA, 2003
VII.6.1	57	Anderson, J.J. 1995. Decline and Recovery of Snake River Salmon. Information based on the CRiSP research project. Testimony before the U.S. House of Representatitives Subcommittee on Power and Water, June 3.	Anderson, 1995
VII.6.1	57	Fry, D. H., Jr. 1973. Anadromous fishes of California. California Department of Fish and Game. 111 pp.	Fry, 1973
VII.6.1	57	Leidy, R. and G. Becker. 2001. Letter to Dennis McEwan, California Department of Fish and Game. FIDE http://www.dfg.ca.gov/nafwb/pubs/2002/2002_04_coho_status.pdf Status Review of California Coho Salmon North Of San Francisco	Leidy and Becker, 2001
VII.6.1	57	Lucoff, W. 1980. The distribution of six selected species from the genera Oncorhynchus, Salmo, and Salvelinus in California. Unpublished M.S. Project, California State University, Hayward.	Lucoff, 1980
VII.6.1	57	Snyder, J.O. 1931. Salmon of the Klamath River, California. Division of Fish and Game, Bulletin No. 34.	Snyder, 1931

Section	Page	Reference Correction, Explanation	Reference Used in Document
VII.6.1	60	Federal register notice.	NOAA Fisheries, 2001
VII.6.1	60	Federal register notice.	NOAA, 2003
VII.6.1	63	Smith, J.J. 1992. "Distribution and abundance of juvenile coho and steelhead in Waddell, Scott and Gazos Creeks in 1992." Department of Biological Sciences, San Jose State University. Unpublished report, 8 pp.	Smith, 2001
VII.6.1	64	Busby, P. J, T. C. Wainwright, G. J. Bryant, L. J. Lierheimer, R. S. Waples, F. W. Waknitz, and I. V. Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California. U.S. Dep. Commer., NOAA Tech. Memo NMFS-NWFSC-27, 261 p. (Available online at: http://www.nwfsc.noaa.gov/publications/techmemos/tm27/tm27.htm).	Busby et al., 1996
VII.6.1	68	Healey, M.C. 1991. Life history of chinook salmon (Orncorhynchus tshawytscha). Pp 311-393 in C. Groot and L. Margois (eds.) Pacific salmon life histories. Univeristy of British Columbia Press, Vancouver.	Healey, 1991
VII.6.1	71	Wahle, R. J., and R. E. Pearson. 1987. A listing of Pacific coast spawning streams and hatcheries producing chinook and coho salmon. U.S. Dep. Commer., NOAA Tech. Memo. NMFS F/NWC-122, 109 p.	Wahle and Pearson, 1989
VII.6.1	79		USFS, 1996
VII.6.1	81	Everest, F.H. 1987. Salmonids of western forested watersheds. Pages 3-8 in E.O. Salo and T.W. Cundy. editors. Streamside management: forestry and fishery interactions.	Everest, 1987
VII.6.1	84	Gallagher, S. P. 2000. DRAFT. Results of the winter steelhead (Oncorhynchus mykiss) spawning survey on the Noyo River, California with comparison to some historic habitat information. California Department of Fish and Game. Steelhead Research and Monitoring Program. Fort Bragg, CA. 29 pp	Gallagher et al, 2000
VII.6.1	85	Keithley, C. 1999. Evaluating Stream and Watershed Conditions in Northern California. Prepared for the California Department of Forestry, Fire and Resource Assessment Program. Sacramento, CA. 17 pp.	Keithley, 1999
VII.6.1	86	Federal register notice.	NOAA Fisheries, May 5, 1999
VII.6.1	87	Federal register notice.	NOAA Fisheries, September 2, 2005
VII.6.1	104	Valentine, B. 1994 Stream temperatures on Jackson Demonstration State Forest, Mendocino County, California during summer of 1994.California Department of Forestry and Fire Protection,	Valentine, 1994 Unpublished

Section	Page	Reference Correction, Explanation	Reference Used in Document
		Santa Rosa.	
VII.6.1	22,	Brown, L. R., P. B. Moyle, and R. M. Yoshiyama. 1994. Historical decline and current status of coho salmon in California. North American Journal of Fisheries Management. 14(2):237-261. [426kb]**	Brown, 1994 (page 22 states Brown et al. 1994)
VII.6.2	13	RareFind is an on-line computerized inventory of California's rarest species and natural communities maintained by the California Department of Fish and Game: http://www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp	CDFG, 2001
VII.6.2	40	Halpern, Charles B. and Thomas A. Spies. 1995. Plant Species Diversity in Natural and Managed Forests of the Pacific Northwest. Ecological Applications 5 4:913-934.	Halpen and Spies', 1995 (Halpern [spelling])
VII.6.3	3	California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, 2003. The changing California: Forest and Range 2003 Assessment.	CDF, 2003
VII.6.4	21	Sanborn, S.R. 1997. Tree Notes, Number 3. July 1996. Controlling Bark Beetles in Wood Residue and Firewood.	Sanford, 1996
VII.6.6	2	Mayer, K.E. and W.F. Laudenslayer, Jr., eds. 1988. A guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection, Sacramento.	Mayer and Laudenslayer 1988
VII.6.6	14	Evans, D.M. and D.M. Finch. 1994. Relationships between forest songbird populations and managed forests in Idaho. Pp. 308-314 in W.W. Covington and L.F. DeBano (tech. cords.) Sustainable ecological systems: implementing an ecological approach to land management. USDA For Serv. Gen. Tech. Rept. RM-247. 363 pp.	Evans and Finch 1994
VII.6.6	18	U.S. Forest Service and BLM. 1994. Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl. USDA Forest Service and USDI Bureau of land Management, Portland.	USFS and BLM 1994
VII.6.6	19	Barbour, M. G., and J. Major, eds. 1977. *Terrestrial Vegetation of California.* Wiley- Interscience, reprinted by the California Native Plant Society 1988, Sacramento, California.	Barbour and Major 1977
VII.6.6	19	Cafferata, P.H. and F.A. Yee. 1991. A comparison of techniques to control sprouting hardwoods on harsh sites in western Mendocino County. California Forestry Note No. 105. California Department of Forestry, Sacramento, CA. 15 p.	Cafferata and Yee 1991
VII.6.6	21	Laudenslayer, W. F., Jr. 1991. A check-list of the amphibians, reptiles, birds, and mammals of California. Calif. Fish & Game 77: 109-141.	Laudenslayer 1991
VII.6.6	29	Beardsley, D.E. and B. Schwind, 2000. Vegetation map accuracy report. USDA Forest Service, Region 5 Remote Sensing Lab, Sacramento, CA.	Beardsley and Schwind 2000

Section	Page	Reference Correction, Explanation	Reference Used in Document
VII.6.6	30	Department of Fish and Game Northern Spotted Owl database:	Gould 2000
VII.6.6	41	U.S. Fish and Wildlife Service. 1996. Endangered and threatened wildlife and plants; determination of threatened status for the California red-legged frog, final rule. Federal Register 61:25813-25833. U.S. Government Printing Office, Washington, D.C.	USFWS 1996a
VII.6.6	43	U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife; notice of 1-year petition finding on the western pond turtle. Federal Register 58:153. U.S. Government Printing Office, Washington, D.C.	USFWS 1993
VII.6.6	44	Harris, S. 1996. Wildlife surveys. California Department of Fish & Game.	Harris 1996
VII.6.6	44	Town, Pamela. 2000. Distribution, Habitat Requirements, and Movements of Western Pond Turtles on Jackson Demonstration State Forest	Town's 2000a (spell TOWN not TOWN's 2000a and 2000 same)
VII.6.6	44	US Fish and Wildlife Service. 1998a. Endangered and threatened wildlife and plants: notice of 12-month finding on a petition to list the northern goshawk in the contiguous United States west of the 100th meridian. Federal Register 63:35183-35184.	USFWS 1998a
VII.6.6	45	Pious, M. 1995 Home range and habitat use of spotted owls in managed Redwood/Douglas fir forests, California. Louisiana-Pacific Corporation, Forestry Department, Calpella, CA.	Reynolds 1992
VII.6.6	47	Boal C W; Mannan R W . 1998. Nest site selection by Cooper's hawks in an urban environment. The Journal of Wildlife Management; 62(3): 864-871.	Boal and Mannan 1998
VII.6.6	49	U.S. Fish and Wildlife Service. 1986. Pacific Bald Eagle Recovery Plan. U.S. Fish and Wildlife Service, Portland, OR.	USFWS 1986
VII.6.6	49	California Department of Fish and Game. 2001. The Status of Rare, Threatened, and Endangered Plants and Animals of California. Combined CDFG Annual Report for 2000. California Department of Fish and Game, Sacramento,	CDFG 2001
VII.6.6	52	US Fish and Wildlife Service. 1996b. Endangered and threatened wildlife and plants: final designation of critical habitat for the marbled murrelet. Federal Register 61:26256-26320.	USFWS 1996b
VII.6.6	89	US Fish and Wildlife Service. 1997. Recovery plan for the threatened marbled murrelet (*Brachyramphus marmoratus*) in Washington, Oregon and California. Portland, Oregon.	USFWS 1997
VII.6.6	91	U.S. Fish and Wildlife Service. 1992. Draft Recovery Plan for the Northern Spotted Owl. U.S. Fish and Wildlife Service, Portland.	USFWS 1992c
VII.6.6	91	Resource Management International (RMI). 1996. Jackson Demonstration State Forest northern spotted owl timber sale area survey results - 1994-1995. Final report prepared for California Department of Forestry and Fire Protection, Jackson Demonstration State Forest, Fort Bragg.	RMI 1996
VII.6.6	91	Roberts, K.N., S. Bunnell and T. W. Wooster. 1991. The activities and distribution of the northern spotted owl (Strix occidentalis caurina) in managed second-growth redwood/Douglas-fir forests at	Roberts et al. 1991

Section	Page	Reference Correction, Explanation	Reference Used in Document
		Jackson Demonstration State Forest, Mendocino County, California, 1989-1992. Progress report. California Department of Fish and Game, Environmental Services Division.	
VII.6.6	91	Roberts, K.N., S. Bunnell and T. W. Wooster. 1992. The activities and distribution of the northern spotted owl (Strix occidentalis caurina) in managed second-growth redwood/Douglas-fir forests at Jackson Demonstration State Forest, Mendocino County, California, 1989-1992. California Department of Fish and Game, Environmental Services Division.	Roberts et al. 1992
VII.6.6	91	US Fish and Wildlife Service. 1994b. Endangered and threatened wildlife and plants: determination of critical habitat for the northern spotted owl. Federal Register 57:1796-1837.	USFWS 1994b
VII.6.6	94	Robert, K.N., S. Bunnell, and T. Wooster. 1993. The Activities and Distribution of the Northern Spotted Owl (*Strix occidentalis caurina*) in Managed Second-Growth Redwood/Douglas-fir Forest of Jackson Demonstration State Forest, Mendocino County, California—1989-1992 Progress Report. Environmental Services Division, California Department of Fish and Game, Sacramento, CA.	Roberts et al. 1994
VII.6.6	97	Martin, T. E. 1996. Life history evolution in tropical and south temperate birds: what do we really know? Journal of Avian Biology 27:263–272. or Martin, J.S. 1996. Analysis of Bell's Vireo in southern South Dakota. University of South Dakota. Vermillion, SD.	Martin 1996
VII.6.6	98	Pious, M. 1994. Nesting and roosting habitat of spotted owls in managed Redwood/Douglas-fir forests, California. Louisiana-Pacific Corporation, Forestry Department, Calpella, CA. Pious, M. 1995 Home range and habitat use of spotted owls in managed Redwood/Douglas fir forests, California. Louisiana-Pacific Corporation, Forestry Department, Calpella, CA.	Pious 1994, 1995
VII.6.6	100	Shuford, W.D. 1993. The Marin County breeding bird atlas: a distributional and natural history of coastal California birds. Bushtit Books, Bolinas, CA.	Shuford 1993
VII.6.6	106	Golightly, R.T. Jr, 1997. Fisher (Martes pennanti) ecology, conservation and management. Pages 7-16 in J.E. Harris and C.V. Ogan, editors. Mesocarnivores of northern California: biology, management and survey techniques. Workshop manual. The Wildlife Society, California North Coast Chapter, Arcata.	Golightly 1997
VII.6.6	109	Zielinski, W.J., and R.T. Golightly. 1996. The status of marten in redwoods: is the Humboldt marten extinct? Pages 115-119 in: LeBlanc, John, ed., Conference on Coast Redwood Forest Ecology and Management, 1996 June 18-20, Humboldt State University, Arcata, CA.	Zielinski and Golightly 1996
VII.6.6	116	Wildlife Science Committee. 1994. Approaches to wildlife cumulative effects assessment and analysis. A report prepared for the California Board of Forestry, September 2, 1994. 13p.	Wildlife/Science Committee 1994

Section	Page	Reference Correction, Explanation	Reference Used in Document
VII.6.6	216	Freemark, K. E., J. B. Dunning, S. J Hejl, and J. R. Probst. 1995. A landscape ecology perspective for research, conservation and Management. Pages 381-427 in T. E. Martin and D. M. Finch, eds. Ecology and management of Neotropical migratory birds: A synthesis and review of critical issues. Oxford Univ. Press, New York, N. Y.	Freemark et al. 1995
VII.7	3	Kilbourne, R. T. (1986) Geology and slope stability of the Fort Bragg area. California Geol. 39(3), 58-68.	Kilbourne 1986
VII.10	23	Merrill, B.R. and E. Casaday. 2003. Best management practices for road rehabilitation. Final Report. California State Parks, North Coast Redwoods District. Eureka, California. 25 p.	Merrill and Cassaday 2003
VII.11	8	California Department of Forestry and Fire Protection. 2002. California Forest Practice Rules.	CDF 2002
VIII	47	Benda, L.E., Bigalow, P., and Worsley, W. 2002. Recruitment of instream large wood in old-growth and second-growth redwood forests, northern California, U.S.A. Can. J. For. Res. **32**: 1460–1477.	Benda et al. 2002
VIII	52	Ligon, F., A. Rich, G. Rynearson, D. Thornburgh, W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resource Agency of California and the National marine Fisheries Service, Sacramento, CA. 92 p. + 7 appendices.	The Scientific Review Panel 1999
VIII	54	See: California Department of Forestry and Fire Protection 1999.	CDF 1999
VIII	54	Ligon, F., A. Rich, G. Rynearson, D. Thornburgh, W. Trush. 1999. Report of the Scientific Review Panel on California Forest Practice Rules and Salmonid Habitat. Prepared for the Resource Agency of California and the National marine Fisheries Service, Sacramento, CA. 92 p. + 7 appendices.	SRP 1999
VIII	62	Hill, Norm and Wendy Wickizer. 2002. Environmental Effects of Herbicide Related to Timber Harvesting. California Department of Forestry and Fire Protection. Sacramento, California.	Hill and Wickizer 2002
VIII	73	Flosi, G., S. Downie, J. Hopelain, M. Bird, R. Coey, and B. Collins. 1998. California salmonid stream habitat restoration manual. 3rd edition. California Department of Fish and Game, Sacramento, California.	Flosi et al. 1998
VIII	76	Rutland, Robert. 2003. Big River Watershed Assessment Report for the North Coast Watershed Assessment Program (DRAFT). California Department of Forestry and Fire Protection, Sacramento.	Rutland 2003
VIII	77	California Department of Fish and Game (CDFG). 1959. Big River stream survey, 27 July 1959. CDFG unpublished file memo by S.N. Nye or J. Morehouse. Yountville, CA. 5 pp.	CDFG 1959

Section	Page	Reference Correction, Explanation	Reference Used in Document
VIII	77	California Department of Fish and Game (CDFG). 1959b. Daugherty Creek (South Fork Big River tributary) stream survey, 10 August 1959. CDFG unpublished file memo by J. Morehouse. Yountville, CA. 6 pp California Department of Fish and Game (CDFG). 1966c. Snuffins Creek (Daugherty Creek tributary) stream survey, 9 June 1966. CDFG unpublished file memo by J.L. Thomas. Yountville, CA. 7 pp.	CDFG 1959b, 1966c
VIII	77	Taylor, S.N. 1978. The status of salmon populations in California coastal rivers. California Department of Fish and Game. Salmon/Steelhead Program, Anadromous Fisheries Branch. 14 pp.	Taylor 1978
VIII	78	Mangelsdorf, A. and L. Clyde. 2000. Draft Assessment of Aquatic Conditions in the Mendocino Coast Hydrologic Unit. Chapter 4: Ten Mile River.	Mangelsdorf and Clyde 2000
VIII	79	Barnard K., and S. McBain. 1994. Standpipe to determine permeability, dissolved oxygen, and vertical particle size distribution in salmonid spawning gravels. U. S. Fish and Wildlife Service Fish Habitat Relationships Technical Bulletin *Currents* 15:1-12	Barnard and McBain 1994
VIII	80	Kondolf, G.M. 2000. Assessing Salmonid Spawning Gravel Quality. Trans. Am. Fish. Soc. 129:262-281.	Kondolf 2000
VIII	80	U.S. Environmental Protection Agency (USEPA). 1998. (Final) Garcia River sediment total maximum daily load. Dated 16 March 1998 . USEPA, Region IX . San Francisco, CA . 51 pp	US EPA 1998
VIII	80	U.S. Environmental Protection Agency. 2001. Big River Total Maximum Daily Load for Sediment. Region IX, San Francisco, CA. http://www.epa.gov/region09/water/tmdl/big/bigfinaltmdl.pdf	US EPA 2001
VIII	81	North Coast Regional Quality Control Board. 2004 (preliminary draft). Big River Water Quality Assessment. Report compiled for the North Coast Watershed Assessment Program. North Coast Regional Quality Control Board, Santa Rosa. Draft utilized with permission of R. Klamt, Chief of Timber Harvest Division, North Coast Regional Water Quality Control Board.	NCWAP 2004, Appendix B
VIII	82	North Coast Watershed Assessment Program. 2003. Big River Watershed Assessment Report for the North Coast Watershed Assessment Program (DRAFT). California Department of Forestry and Fire Protection, Sacramento.	NCWAP 2003

Recirculated Draft Environmental Impact Report (RDEIR)

Executive Summary, page I-5, second bullet point:

The correct size of the additional area devoted to development of late-seral forest habitat primarily for the benefit of the marbled murrelet is 1,549 acres.