West Chamberlain 2011 THP

Area: 518 acres

Silvicultural Prescription: Late Seral Development on 150 acres, Commercial Thinning on 368 acres.

Units	Acres	Conifer Preharvest Basal Area	*Estimated Conifer Post harvest Basal Area
Late Seral	150	216 ft^2/acre	140-160 ft^2/acre
Commercial Thin	368	225 ft^2/acre	150-160 ft^2/acre
hardwood preharvest basal area averages 32 ft^2/acre and will be reduced by ~5% in the Commercial Thin area			

- Commercial Thinning:
  Goal is to improve spacing, maintain and increase growth potential, increase conifer site occupancy, maintain or increase QMD, maintain approximately 70% of pre-harvest conifer basal area. Preserve options for future management. Generally thin from below, with some thinning of codominant canopy to improve spacing and individual tree vigor, and to adjust species composition to foster growth of redwood.

- Late Seral Development:
  Implementation of "gap selection" silviculture (on 125 of the 150 acres dedicated to late seral development) to further the development of late seral structural elements; a gap is approximately 1/5 of an acre in size (radius of 50 ft.); the majority of trees will be removed within the gap, preferably in areas of higher stand density and multiple redwood clumps. Approximately 5 acres total area will be encompassed in gaps randomly located within the 125 acre area. Commercial thinning will be implemented between gaps focusing on enhancing and maintaining the structural elements of late seral stands. Existing structural elements of late seral stands will be identified and maintained; this includes large diameter trees, large standing snags, deformed trees, larger trees with cavities, large down logs, and multiple canopy stand structures to increase vertical and horizontal stand diversity. Hardwoods may be marked for felling in association with gaps only.

  The remaining 25 acres in the northern section along Road 330 will be commercially thinned, with the objective of maintaining and increasing late seral structural elements as described in the previous paragraph.

Stand Description

Topography/Soils

The plan area lies on the slope between Three-Chop Ridge and the west fork of Chamberlain Creek. Elevations range from 720 feet along Gulch Sixteen to 1,550 feet on Three-Chop Ridge. The general aspect of the plan area is east, with north and south facing slopes within tributary drainages. Two prominent spur ridges run southeast from Three-Chop through the plan area and one smaller ridge runs northeast near the northern plan boundary. The bulk of the new road construction occurs on these ridges. Slopes are steep adjacent to watercourses with few exceptions. Streams are generally deeply incised on the lower slopes, and vary from deeply to barely incised on the middle and upper slopes. Soils are from the Coastal belt Franciscan formation, site class ranges for both Redwood and Doug-Fir from Site II (southern portion) to III and IV (central portion). Erosion hazard ratings for the THP area are moderate and high.

Inner gorge conditions occur in places along the first 100 to 200 feet of slope above the west fork of Chamberlain Creek.

Vegetation and Stand Conditions

The old growth timber in the plan area was harvested using railroad and steam donkey technology during the 1920's. There has been no harvesting to date in the second growth stand. The timber stand to the east of the plan boundary, between the plan area and West Chamberlain Creek, was harvested in successive entries between the late 1940's and the early 1970's. In 2008, a fire burned through the majority of the area. The 2008 fire resulted from a lightning strike and was primarily an under-burn with isolated pockets where tree crowns torched.

The second growth stand is stocked by commercial conifer species, including redwood and Douglas-fir. Grand fir is a minor stand component. Hardwoods, primarily tanoak, comprise about 12 percent of the total stocking by basal area (stems 12"+ DBH)). Stand data for the entire plan area is summarized in the following table (stems 12"+ DBH):

Species	Basal Area (sq. ft./acre)	Gross Conifer Volume (bd. ft./acre)
Young Redwood	136	20.200
Young Douglas-fir	88	19.100
Whitewoods	<1	.10
Hardwoods	32	--------
Conifer Totals	224	39,400

The understory is relatively open throughout most of the plan area except for the occasional huckleberry patch. The primary species in the understory include huckleberry, rhododendron, and fern.

Watershed and Stream Conditions

The Chamberlain Creek watershed has been impacted by logging of the old growth which began during the 1920's. Ground-lead cable logging by steam donkey brought logs to the railroad located on Three Chop Ridge. Steam donkeys were also used along the railroad grade which extended from the town of Caspar, arriving at Camp 20 near the mouth of Chamberlain Creek in 1939. Stream courses were often used as cable ways to facilitate yarding of logs downslope to the rail. Early tractor yarding downslope of the proposed THP area also utilized stream courses as log skidding paths, in addition to excavated trails on steep slopes. Tractors were utilized to skid logs from the hillsides to early truck roads constructed along the lower slopes near the major watercourses, including Chamberlain Creek.

A stream habitat inventory of the West Chamberlain Creek sub-watershed was conducted by DFG in 1997, and JDSF staff has been monitoring water temperature in selected locations for many years.

Watercourse Protection:

- There are no Class I streams within the Timber Harvest Plan boundary.
- Class II streams have a 100 foot minimum WLPZ. No trees will be harvested in the first 50 feet of WLPZ, and a light harvest in the remaining 50'.
- All Class II and Class III watercourses are located within areas that will be cable yarded. No new stream crossings planned.

Roads

- Approximately 2.4 miles of seasonal road will be constructed.
- Seasonal roads will be constructed with an outsloped surface, and without a berm or ditch. Rolling dips may be constructed on road grades of 10% or less.
- Hauling restrictions apply any time of year that it rains 1/4" as measured in Fort Bragg.

Wildlife and Botany

- Northern Spotted Owl: The plan contains habitat suitable for Northern Spotted Owl. There are no NSO activity centers within 1,000 feet of the plan. MEN 258 is just outside of 1,000 feet near Waterfall Grove.
- Marbled Murrelet: There is no potential murrelet habitat within the plan area. Potential murrelet habitat (Old Growth patch) is found within 0.25 miles north of the THP boundary to the north off Road 200 at Waterfall Grove. The Waterfall Grove has been surveyed twice using the 2003 Pacific Seabird Protocol with no murrelet detection (4 years of survey) and is currently cleared through 2014.
- Several botanical surveys have been completed for the plan area. The initial botanical survey was conducted in 2005 and the area revisited in 2007. A second botanical survey was conducted in 2010 to revisit areas affected by the Indian Fire. No state or federally threatened or endangered CNPS list 1 or 2 plants have been found.
- Sudden Oak Death survey completed, none found. Current mitigation measures will be part of plan.
- Fish: There are no Class I streams in the plan area.

Demonstration:

- Gap selection to accelerate the late seral development in unmanaged second growth stand.
- Increase growth and value of second-growth forest.
- Maintain aesthetic qualities adjacent to selected roads, campground and trails by retention and post harvest treatments (expanded slash reduction adjacent to forest roads).

Recreational Considerations:

- The rustic Indian Springs camp-site is located near the plan boundary along Road 330. An aesthetic buffer exists around the camp site. Road realignment and construction will take place nearby.
- Nearby and adjacent forest roads are available for public recreational access, including hiking, bicycle riding, and equestrian use, including Roads 200, 330, and 310.

Aesthetic Considerations:

- Views from nearby and adjacent forest roads. Resultant stand conditions in highly visible areas.
- Logging slash considerations.
- New road construction.
- Timber yarding methods.

Additional Projects Associated with the THP:

- Decommission 0.5 miles of Gulch Sixteen WLPZ road and remove a barrier to fish passage (36-inch diameter culvert) at the confluence of an unnamed tributary and Gulch Sixteen.

Heritage Resources:

- Sites have been recorded and measures will be incorporated within the THP to protect significant sites.