

# Old Berry THP

## Summary of the Proposed Timber Harvest Plan



### Project Description

The Old Berry THP is a single tree selection (OFDA, LSD, Special Treatment, and Matrix) harvest plan that covers 294 ac. The primary yarding method will be tractor yarding, with approximately 35% of the area designated for cable yarding. There are silviculture and bird survey demonstrations associated with this plan.

### Location & Topography

The western end of the THP area is located approximately 5.8 miles northeast of the community of Mendocino, California. The entire plan is located with the Berry Gulch Planning Watershed. It is adjacent to the Berry Gulch and Thompson Gulch, a tributary to Big River. It is bounded by Roads 730 and 740, the property line to the west and south and Berry Gulch to the north. The elevation ranges from 74 feet to 970 feet above sea level. The aspect of the project area is variable, but generally north facing in Units 1 and 2 (Berry Gulch Unit) and southwest facing in Units 3 and 4 (Thompson Gulch Unit). Slopes vary between <5 and 85%.

### Harvest History and Stand Condition

The THP area was harvested in the 1915 while under the ownership of the Caspar Lumber Company. Most merchantable trees were felled, the logs bucked, and the area then broadcast burned to clear the slash and burn off the thick redwood bark. The Berry Gulch Unit was harvested in the 1960's with a heavy selection targeting the residual old growth redwood and Douglas fir and the larger second growth redwood with a diameter limit of ~24 inches. The Thompson Gulch Unit has not been harvested since the 1910's.

The harvest area is primarily Site Class III in the Berry Gulch Unit, and Site Class II timberland in the Thompson Gulch Unit. Since there are essentially two different stands that are very different in composition, the stand information is broke up into Berry Gulch Unit and Thompson Gulch Unit.

The Berry Gulch Unit has better growing ground on the ridges. There are scattered residual Old Growth (both redwood and Douglas-fir trees) throughout the Berry Gulch Unit and the youngest age cohort being around 40 years old. This stand has almost 100% canopy closure and is dominated by Douglas-fir, whitewood species, and tanoak, with redwood being scattered and in clumps throughout the stand. This stand could be considered stagnate. There is very little understory vegetation and snags and cull trees are increasing. Downed wood debris is abundant. The 2017 FRI data, along with a cruise, was to determine stand composition. Redwood makes up 33% of the total basal area in the Berry Gulch Unit.

#### Berry Gulch Unit

	QMD	TPA	BA/ac	MBF/ac
<b>Conifer</b>	11	355	239	49
<b>Hardwood</b>	11	167	117	18
<b>Total</b>	11	523	356	68

\*\*The QMD is so low because of the large number of smaller trees that were present in the cruise (see stand table provided). When the data was run for merchantable young redwoods, the QMD of the stand was 20.8.

The Thompson Gulch is much better growing ground all around compared to the Berry Gulch Unit. This stand is an even-aged stand where the trees are 100-110 years old with a few scattered residuals. The overstory is dominated by redwood, Douglas-fir, and tanoak. Western hemlock, grand fir, madrone, and chinquapin are minor overstory species. Tanoak trees are prevalent in the understory and overstory and has normal understory vegetation conditions. Snags and cull trees are increasing, yet relatively rare. Downed woody debris is lacking. The 2017 FRI, along with a cruise, was used to determine stand composition. The Thompson Gulch Unit has about 77% redwood total basal area.

Thompson Gulch Unit

	QMD	TPA	BA/ac	MBF/ac
<b>Conifer</b>	15	218	293	56
<b>Hardwood</b>	10	117	74	5
<b>Total</b>	14	335	367	62

**Silviculture**

The plan falls within the Matrix, Old Forest Development Area (OFDA), Special Treatment Zone and Late Seral Development (LSD) as designated by the Forest Management Plan. Trees will be selected individually, with the focus on reducing competition between residual trees and increasing sunlight to promote increased growth rates to understory second and third growth conifers and newly created redwood stump sprouts. Trees with superior spacing, live crown ratios, form and high vigor will be considered for retention. Hardwood trees will be harvested where they are directly competing with residual conifers.

<u>Management Allocation</u>	<u>Acres</u>	<u>Conifer Pre-Harvest Basal Area*</u>	<u>Conifer Post-Harvest Basal Area**</u>
OFDA	39.2	200 ft <sup>2</sup> /acre	120 ft <sup>2</sup> /acre (Site II)
Matrix – Berry Gulch	136.4	182 ft <sup>2</sup> /acre	125 ft <sup>2</sup> /acre (Site II)
LSD/Special Treatment	118.4	293 ft <sup>2</sup> /acre	190 ft <sup>2</sup> /acre (Site II)

\*Pre-harvest volumes are an estimate from 2017 forest inventory data.

\*\*Option A retention target

The Berry Gulch Unit dominated by Douglas-fir, white woods (hemlock and grand fir), and tan oak, with smaller redwoods in the understory. There was very little understory vegetation within the stand indicating a lack of light. This stand has almost 100% canopy closure in many places. The purposes to the Matrix and OFDA Prescriptions were to open the stand up, remove predominately the Douglas-fir and white woods with a few redwoods for sprout recruitment, and to promote the growth of big trees. The 120 ft<sup>2</sup> and 125 ft<sup>2</sup> basal area retention will allow light to enter the stand, release the younger redwoods and allow for more understory vegetation which will increase biodiversity. The RPF is recommending planting redwood between the residual clumps to move the stand back into a stand with a higher percentage of redwood.

The Thompson Gulch Unit is dominated by redwoods with tan oak in the understory. This unit was designated as LSD and it is part of the Mendocino Woodlands State Park Special Treatment Zone. The goals of LSD management are to move the even-aged stand into a multi-aged, complex structured stand with old growth forest characteristics. Trees with wildlife habitat characteristics, such as large limbs, or sheltered flat topped trees, will be retained within the stand. The larger Douglas-fir (32"+) would be retained as well since they mature more quickly and will provide snag recruitment. Redwoods between 18-28" DBH will be targeted for removal with the option to remove smaller or larger if the stand would benefit from it. Cull logs will be dragged back out into the stand for Large Wood Debris and nurse log recruitment.

**Research and Demonstration**

Every forest management project is, by default, demonstrating the application of the Forest Management Plan. The goal of the proposed project is to develop another age class, increase growth rates, improve conifer spacing, improve habitat and ecosystem functions, provide opportunities for research and demonstration, and realize commercial volume to support State Forest infrastructure. OFDA and LSD management are both proposed in this THP. The LSD management will help connect the late seral stand characteristics of the older second growth forest of the Woodlands State Park to the LSD areas throughout the rest of the Forest, creating a continuous habitat landscape.

The second demonstration will be looking at bird populations before and after harvesting within the LSD management area. This demonstration can act as a pilot study for determining who a lighter touch harvest can affect bird populations, if at all.

**Fuels Management and Fire Planning**

JDSF's Fire Protection and Preattack Plan provides guidance for projects to reduce wildfire risks across the forest.

JDSF Roads 740 and 730 will be lopped up to 100 feet within the plan area. Postharvest (post-THP completion) treatments such as prescribed fire and further fuels treatment along JDSF Road 740 and 730 may be used to treat the ground level logging slash during seasons of the year when conditions will result in a low intensity ground fire with little potential for

damage to the retained stand of trees. Other treatment options include mechanical mastication, pruning, piling, and hand lopping. The Thompson Gulch Unit will not utilize prescribed fire as a fuel treatment.

### **Recreational and Aesthetic Considerations**

JDSF Road 552 is frequented by local mountain bikers as well as Road 730. The THP is also adjacent to Mendocino Woodland State Park which is a popular camp and recreational area. The portion of the plan that is directly next to the state park will be treated with a 200 foot single tree selection buffer as well as being zoned as LSD per the Forest Management Plan. JDSF will utilize Road 552 during operations and then pull all the temporary crossings.

The areas will be closed to the public for about 2 years. JDSF will time closures to coincide with other trail openings and to the extent feasible, work with the Licensed Timber Operator to have progressive closures. JDSF plans to have a 1000 foot noise buffer to minimize noise disturbance on the portion of the plan adjacent to Mendocino Woodland State Park. This noise buffer will be in affect and restricting active timber operations occurring between July 1 and Labor Day within 1000 feet of campgrounds (Camp 2) to weekday and non-holidays.

Road 730 will remain open only as for Mendocino Woodlands State Park emergency access road. It will be closed for other users during operations. Recreationalists are welcome to continue to use the road after operations are complete and the area is open to the public. Unit 1 borders County Road 408 and is treated with a visual buffer for the road and trail corridor.

### **Harvesting System and Roads**

The THP will utilize existing road systems. The State Forest road inventory database will be utilized as a foundation for assessing roads within the THP area. JDSF Road 552 will be utilized and the crossings will be pulled at the end of operations. Many crossing upgrades or replacements and road drainage improvements will be a necessary component of this plan, mostly on Road 552. Approximately 3 miles of new temporary roads are planned. These new temporary roads will allow for cable yarding as well as tractor yarding where appropriate.

The majority of the plan area will be logged using tractors with the option to be cable yarding. About half the tractor area will be utilizing existing intact tractor roads from the 1960's harvest. The rest of the plan area is proposed cable yarding due to steeper slopes and geology concerns.

### **Watershed and Stream Conditions**

The proposed harvest plan is adjacent to Berry Gulch and Thompson Gulch, both tributaries to Big River and a fish bearing stream containing anadromous salmonids. Early harvesting activities in the drainage utilized railcar transportation systems, which left the stream in a highly modified condition generally lacking in large woody debris and containing significant sediment loads. Fisheries habitat shelter in adjacent reaches of Big River are generally poor, while gravel composition, temperature, and canopy density were in the desirable range for salmonid species.

Numerous non-fish bearing streams are found throughout the harvest area. These streams appear to be highly seasonal with little to no water present in the late summer and early fall. Larger streams which support non-fish aquatic life are generally of a low gradient and appear to flow predominantly subsurface if at all during non-winter months. Smaller streams which are highly seasonal and do not support aquatic life appear to be mostly stable and evidence of active downcutting was not observed. These streams express higher stream gradients and occur on steeper slopes within the harvest area.

### **Wildlife and Botanical**

The plan contains habitat suitable for the Northern Spotted Owl (*Strix occidentalis caurina*). Activity center (AC) MEN 164 is located north-east of the plan in Berry Gulch Watershed. Northern Spotted Owls surveys are currently being conducted as required by protocol and appropriate buffers will be provided if NSO are found.

Potential MAMU habitat, was found in both the Berry Gulch and Thompson Gulch Unit. A consultation with CDFW and JDSF's biologist identified the trees and survey sites in mid-March of 2021. 21 survey sites were agreed upon. Surveys will begin in 2021.

A full botanical survey will be conducted and amended into the harvest plan, along with any necessary mitigation.

### **Conclusion**

The Old Berry THP harvest methods, silviculture, and special species protection measures are consistent with the guidelines in the Forest Management Plan.