



## Joint Timber Management Plan

For

**Richard and Sally French**



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165 South Fortuna Blvd  
Fortuna, CA 95540  
707-725-1897  
707-725-0972 Fax  
[trc@timberlandresource.com](mailto:trc@timberlandresource.com)

# TIMBER MANAGEMENT GUIDE

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**JOINT TIMBER MANAGEMENT GUIDE****1. CURRENT PROPERTY OWNERS:**

Parcel A, B, C, and D  
 Richard and Sally French  
 12051 Wilder Ridge Road  
 Ettersburg, California 95558

**2. PROJECT DESCRIPTION**

A Joint Timber Management Plan (JTMP) applies to "division" of land into assessor parcels containing less than 160 acres of Timber Production Zone (TPZ). Parcel is defined as "that portion of an Assessor's parcel that is timberland". Activities that may result in such a division include subdivision, lot line adjustment and conveyances of existing land units (e.g. land patents) underlying an Assessor's parcel zoned TPZ, when any conveyance contains less than 160 acres of TPZ land.

The project involves a Lot Line Adjustment involving four separate parcels resulting in four parcels. A merger of a parcel (APN 108-011-015) is also included per a conditional certificate of compliance for this parcel. Also, a six acre parcel (APN 108-063-002) will be merged into Parcel A and rezoned from Unclassified to Timber Production Zone. Prior to the Lot Line Adjustment, three of the four parcels involved contained less than 160 acres of Timber Production Zone with two containing less than 40 acres of Timber Production Zone (6.75 acres and 7.84 acres). Following the Lot Line Adjustment and Merger, only two of the parcels (Parcel A and B) will contain less than 160 acres of Timber Production Zone, with one containing less than 40 acres (Parcel A 38.90 acres). Parcel C will not include any Timber Production Zone acreage.

**AREAS (ACRES) BEFORE LOT LINE ADJUSTMENT**

<b>PARCEL (APN#)</b>	<b>TPZ</b>	<b>AE</b>	<b>FR-B-5(40)</b>	<b>UNCLASSIFIED</b>	<b>TOTAL</b>
108-063-018	44.35	39.59	0	0	83.94
108-062-015, 108-062-016, 221-211-010	6.75	33.76	0	118.53	159.04
221-211-011	7.84	33.41	0	0	41.25
108-011-005, 108-011-015, 108-011-021, 108-016-012, 108-062-017, 108-063-015, 108-063-016, 108-063-017, 108-063-019, 108-064-003, 108-064-004, 108-065-001, 221-201-029, 221-211-021, 221-211-022, 221-211-023	1,687.44	422.97	93.84	0	2,204.25

**AREAS (ACRES) RESULTING FROM LOT LINE ADJUSTMENT / MERGER**

<b>PARCEL</b>	<b>TPZ</b>	<b>AE</b>	<b>FR-B-5(40)</b>	<b>UNCLASSIFIED</b>	<b>TOTAL</b>
PARCEL A	38.90	43.97	0	0	82.87
PARCEL B	57.88	49.44	0	0	107.32
PARCEL C	0	47.78	0	29.52	77.30
PARCEL D	1655.60	388.54	93.84	89.01	2,226.99

The Lot Line Adjustment is intended by the landowner to reconfigure the three smaller parcels so that each of their three children can be gifted a piece of property each, that they can own and where they can build their homes and remain on the family ranch (Parcels A, B, and C). When complete, they intend to put the remainder of the ranch, which includes the large parcel (Parcel D), into an LLC that will be owned by the members of the family in shares. The area of land proposed to be adjusted between the four parcels is not expected to significantly impact the future viability of the TPZ zoned portions of the parcels for future timber management. Acres for this JTMP were derived using the tentative Lot Line Adjustment & Merger Map prepared by a licensed surveyor, Michael O'Hern.

The purpose of the Joint Timber Management Plan is to provide a management guide for harvesting timber for all parcels affected by the division of land. This Joint Timber Management Plan includes both a "*Timber Management Plan*" and a "*Timber Management Guide*". The objective of the "*Timber Management Plan*" is to identify joint access, rights-of-ways and the minimum stocking requirements of the Forest Practice Rules required to maintain viable timber producing management units. The objective of the "*Timber Management Guide*" is to provide a descriptive document that describes the property and outlines the management opportunities to the landowners.

### 3. MANAGEMENT OBJECTIVES

The timber management objectives are to achieve a maximum sustained production of high quality timber products while retaining aesthetic, recreational, watershed, wildlife, and fisheries resources. Approximately 60% of the TPZ portion of the JTMP area contain stands that are predominantly stocked with hardwood with a minor component of second growth Douglas-fir. Approximately 35% of the TPZ portion of the JTMP area contain stands that are stocked with a near even mix of Douglas-fir and hardwoods. Approximately 5% of the TPZ contain stands that are stocked with predominately Douglas-fir. Consequently, any management in the near-term will likely consist of even-aged regeneration methods and/or intermediate and rehabilitation methods. The retention of aesthetic, recreational, watershed, wildlife, and fisheries resources shall be met by following the California Forest Practice Rules. The long-term JTMP management objective is to balance growth and harvest over time to obtain a sustainable periodic return and this may occur using either even-aged or uneven-aged prescriptions.

### 4. LEGAL DESCRIPTION

Management Unit A (Parcel A) – Upon completion of the Lot Line Adjustment and Merger, the Management Unit A will be located in the west half of the northeast  $\frac{1}{4}$  of Section 1, Township 4 South - Range 1 East, H.B.M. This area prior to the Lot Line Adjustment is located in portions of APNs 108-063-017 and 018, which are zoned Agriculture Exclusive and Timber Production Zone. It also includes the Merger of a 6 acre parcel (108-063-002) that is being rezoned from Unclassified to Timber Production Zone. After the lot line adjustment, Management Unit A will have a mixed zone of Agriculture Exclusive (43.97 acres) and Timber Production Zone (38.90 acres). Its total acreage is 82.87 acres. Management Unit A is located on the Honeydew 7.5' quadrangle.

Management Unit B (Parcel B) – Upon completion of the Lot Line Adjustment, the majority of Management Unit B will be located in the south half of the northeast  $\frac{1}{4}$  of Section 7, Township 4 South - Range 2 East, H.B.M. Additionally, a portion is also located in the southeast  $\frac{1}{4}$  of the northwest  $\frac{1}{4}$  of Section 7, Township 4 South – Range 2 East, H.B.M. This area is currently in APN 221-211-022 which is zoned both Timber Production Zone and Agriculture Exclusive. After the lot line adjustment, Management Unit B will have a mixed zone of Timber Production Zone (57.88 acres) and Agriculture Exclusive (49.44 acres). Its total acreage will be 107.32 acres following the Lot Line Adjustment. Management Unit B is located on the Ettersburg 7.5' quadrangle.

Management Unit C (Parcel C) – Upon completion of the Lot Line Adjustment, the majority of Management Unit C will be located in the southwest  $\frac{1}{4}$  of the northwest  $\frac{1}{4}$  and the northwest  $\frac{1}{4}$  of the southwest  $\frac{1}{4}$  of Section 7, Township 4 South – Range 2 East, H.B.M. Additionally, a portion is also located in the southeast  $\frac{1}{4}$  of the northeast  $\frac{1}{4}$  of Section 12, Township 4 South – Range 1 East, H.B.M. This area is currently in APNs 108-062-016, 221-211-010, and 221-211-011. These parcels contain two separate areas of Timber Production Zone on two separate parcels (221-211-010 - 6.75 acres and 221-211-011 - 7.84 acres), Agriculture Exclusive, and Unclassified. After the lot line adjustment, Management Unit C will have a mixed zone of Agriculture Exclusive (47.78 acres) and Unclassified (29.52 acres). Its total acreage will be 77.30 acres. Following the Lot Line Adjustment, Management C will not include Timber Production Zone areas. The Timber Production Zone portions will be included in Management Unit D. Management Unit C is located on the Ettersburg and Honeydew 7.5' quadrangles.

Management Unit D (Parcel D) - Upon completion of the Lot Line Adjustment, Management Unit D will be located in portions Sections 35 and 36, Township 3 South – Range 1 East, H.B.M.; Sections 1, 2, 11, and 12, Township 4 South – Range 1 East, H.B.M.; and Sections 6, 7, and 8, Township 4 South – Range 2 East, H.B.M. Upon completion of the Lot Line Adjustment, it will make up the remainder of the ranch. It will contain a mixed zone of 1,655.6 acres of Timber Production Zone, 388.54 acres of Agriculture Exclusive, 93.84 acres of Forest Recreation (FR-5-B(40)), and 89.01 acres of Unclassified. Its total acreage will be 2,226.99. Management Unit D is located on the Ettersburg, Honeydew, Shelter Cove and Briceland 7.5' quadrangles.

## 5. GENERAL LOCATION AND ACCESS

The JTMP area is located in Ettersburg, CA and extends approximately 1 to 2 air miles south, west, and northwest. The JTMP area is accessed by, and contains the county roads, Ettersburg Road, Wilder Ridge Road, French Ranch Road, Etter Ranch Road. Management Unit A is accessed by private permanent and seasonal roads off of Wilder Ridge Road. Management Unit B is accessed by private permanent and seasonal roads off of Ettersburg Road. Management Unit C is accessed by Etter Ranch Road and connecting private permanent and seasonal roads. Management Unit D is accessed by all of the named county roads above as well as numerous private permanent and seasonal roads. Many of the existing roads which access the management units are rocked surfaced. Many of the roads appear suitable for non-winter log hauling and year round passenger vehicle or four-wheel drive access. The grade of the existing seasonal roads are generally less than 16% with some steeper pitches. The road grades are suitable for hauling logs from the management units. The access roads should be adequately drained using a combination of outsloping, insloping with cross drains, water bars and rocked rolling dips to avoid concentrated runoff that may cause erosion. The road system within the JTMP area is adequate for servicing the property for timber management activities, however minor spur road construction may be needed to increase efficiency. Roads shown as "Potential New Logging Access Road" in Management Unit A is shown in locations where additional access roads may be necessary. If any new roads are deemed necessary in the future, they should be established in the best possible location as determined by an RPF. Landowners should consult with an RPF prior to the establishment of any new roads. Any road construction occurring within the JTMP area should be permitted under an approved THP or will be subject to Humboldt County's Grading Ordinance. [http://co.humboldt.ca.us/planning/building/documents/grad\\_ord.pdf](http://co.humboldt.ca.us/planning/building/documents/grad_ord.pdf)

See the "*Timber Management Plan*" for a description of access required for timber management.

## 6. HARVEST METHODS

With a few exceptions, the entire JTMP area can be yarded using a combination of ground based and cable based yarding. Exceptions would be corners and areas confined by large watercourses and property lines. The JTMP Map shows the areas of tractor or cable yarding within the two management units that contain less than 160 acres of Timber Production Zone (Management Unit A and B). Management Unit C does not contain Timber Production Zone nor timbered areas so yarding methods are not shown. For the remainder, Management Unit D, ground based and cable yarding will access most of the timbered areas. Due to its large size, ground based and cable yarding areas were not differentiated on the JTMP Map. Generally, ground based yarding occurs on slopes less than 50% and cable yarding on slopes in excess of 50%. The JTMP area was logged in the past utilizing ground based methods which established a skid trail network that led down to roads located adjacent to the major drainages. The majority of these old existing skid trails and roads are located very close to the major watercourses, some of which have been washed out many years ago. Also, many of these legacy logging roads do not provide access for hauling logs to the current road system. For future tractor and cable yarding operations, it may be necessary for some new truck roads or skidtrails to be established or reopened across management unit boundaries. To effectively yard the management units, truck roads or skid trails may be required to cross watercourses. The crossing of watercourses by truck roads and skid trails requires permitting under the CDFW 1600 process. The CDFW 1600 process is required when any substantial change is made to the bed and/or bank of a watercourse, regardless if such operations are associated with timber harvesting or not.

Cable yarding generally occurs on areas that are not accessible by tractors due to steep topography, watercourses and/or property lines. Although most of the areas designated as cable yarding were logged in the past using ground based equipment, today's standards favor that these areas be harvested using cable yarding systems. Within the areas suitable for cable yarding, roads are positioned to provide cable yarding settings that provide adequate deflection and access to the cable yarding areas of the JTMP. However, as previously noted, minor spur road construction may be needed to increase efficiency. Within the cable yarding areas, tractor operations, limited to the use of a few designated skid trails, may be required to access long corners, and/or to bunch logs.

When cable yarding is required, all management units should consider harvesting concurrently to alleviate the cost of multiple entries and the filing of separate Timber Harvest Plans.

## 7. PHYSICAL DESCRIPTION

The major soil series type identified in the JTMP area is the Hugo (812) Series. A minor amount of Josephine and Laughlin soils occur within the JTMP area as well as a minor amount of unclassified soils. Hugo surface soil has grayish brown loam topsoil and pale brown clay loam subsoil. The parent material is sandstone and shale. The soil has moderately rapid permeability with good to excessive drainage. These soils are generally 20 to 40 inches deep to a restrictive layer. Its suitability for timber production is high. Josephine soil is a deep, well drained, fine loam with a moderately slow permeability. Its suitability for timber production is high. Laughlin is a brown, fine-loamy soil that is 20 to 30 inches deep. It is well-drained, has medium to very rapid runoff, and moderate permeability. It is not suitable for timber. It is covered by grass openings and open stands of oaks. *The Soil-Vegetation Map* (Sheets 28D-1 & 4 and 29C-2 & 3) show the majority of the JTMP Area (Hugo and Josephine soils) as Site Class III with one small area shown as Site Class II. The Laughlin soils are shown as Site Class V.

The majority of the JTMP area is underlain by Undifferentiated Coastal Belt. Small areas around Ettersburg are underlain by Alluvial Terrace that is older and in a raised position with respect to recent flood plains. The Geomorphic Features Map reveals the presence of Amphitheater Slopes, Dormant Translational/Rotational Slides, and Active Slides too small to delineate within the JTMP area. Field observations confirmed that some of these mapped features are indeed "unstable areas" per 14 CCR 895.1. Based upon the presence of these features, future timber operations may have the potential to affect slope stability through the displacement of soil, division or concentration of drainage, reduction in interception or transpiration and/or reduction in root strength. Therefore, future THP/NTMPs may require input from a licensed geologist.

## 8. TIMBER HARVEST HISTORY

Based upon aerial imagery and information from the French Family, timber harvesting occurred over the majority of the French Ranch between 1950 and 1955. During this time, the majority of the old growth and mature Douglas-fir was harvested. Timber was generally skidded downhill to landings and road networks that were in or alongside the Mattole River, Bear Creek, some of the larger tributaries. In the early to mid 1960s a second timber harvest occurred in the ranch over the parts that hadn't been logged during the first harvest. Logging used similar methods as the prior harvesting. Like the earlier harvest, most of the old growth and mature Douglas-fir was harvested with the exception of a few patches that were less than desirable at the time, and the limby, open grown timber around the prairie edges. Since this time, large scale logging operations haven't occurred on the ranch. From this period until the present, timber would be harvested on a much smaller scale, primarily under dead and dying exemptions. There are no records of Timber Harvesting Plans occurring on the ranch in the last 25 to 30 years after a search of the available CALFIRE online database.

## 9. PRESENT TIMBER STAND DESCRIPTION and VOLUME SUMMARIES

The JTMP area following the Lot Line Adjustment and the Merger is 2,494.48 total acres and is broken into four Management Units / Parcels with mixed zoning classifications. Management Unit A is a mixed zone parcel with 38.9 acres of Timber Production Zone and 43.97 acres of Agriculture Exclusive. Management Unit B is also a mixed zoned parcel with 57.88 acres of Timber Production Zone and 49.44 acres of Agriculture Exclusive. Management Unit C does not contain Timber Production Zone and is made up of 47.78 acres of Agriculture Exclusive and 29.52 acres of Unclassified. The remainder is included in Management Unit D that is made up of 1,655.60 acres of Timber Production Zone, 388.54 acres of Agriculture Exclusive, 93.84 acres of Forest Recreation, and 89.01 acres of Unclassified. A timber cruise was conducted over the portions of the management units that are zoned TPZ and that total less than 160 acres. This includes 38.9 acres of Timber Production Zone within Management Unit A and the 57.88 acres of Management Unit B. Management Unit C does not contain Timber Production Zoned land, is covered by open grass covered lands, scattered oak trees, and an old fruit tree orchard, and therefore not cruised. Also Management Unit D contains well in excess of the 160 acres of Timber Production Zone and therefore was not included in the timber inventory as part of this JTMP.

Management Unit A: The TPZ zoned portion of Management Unit A contains 38.9 acres of Douglas-fir / tanoak. This area was divided into two separate timber stands, Stand A1 and Stand A2. Stand A1 is approximately 12 acres and has a species composition of approximately 49% Douglas-fir, 39% tanoak, and 12% Pacific madrone and other hardwoods. The average basal area of conifer is 80 square feet per acre and 85 square feet per acre of hardwood. The average age of the second growth conifer is 60 to 65 years old. Conifer diameters of trees cruised ranged from 10 to 48 inches with an average of 19 inches for all trees 10 inches DBH and greater. The stand structure is best described as semi-even aged with a dominant overstory of Douglas-fir and tanoak. Residuals left from original logging are found sparingly within the stand. Most contain significant defect such as conk. The understory is generally moderate to dense and consists of conifer and hardwood regeneration and huckleberry.

Stand A2 is approximately 27 acres and has a species composition of approximately 81% Douglas-fir, 12% tanoak, and 7% Pacific madrone. The average basal area of conifer is 140 square feet per acre, 20 square feet per acre of tanoak, and 13 square feet per acre of Pacific madrone. The average age of the second growth conifer is 60 to 65 years old. Conifer diameters of trees cruised ranged from 10 to 40 inches with an average of 18.5 inches for all trees 10 inches DBH and greater. The stand structure is best described as even aged with a dominant overstory of Douglas-fir. Residual trees left from original logging are found sparingly within the stand. The understory is generally light and consists of pockets of conifer and hardwood regeneration and huckleberry.

<u>Management Unit A (Stand A1 – 12 acres)</u>	
Average conifer diameter:	19 inches
Average hardwood diameter:	14 inches
Average conifer basal area/acre:	80 square feet
Average hardwood basal area/acre:	85 square feet
Conifer volume/acre:	13,057 board feet
Hardwood volume/acre:	63.2 green tons

<u>Management Unit A (Stand A2 – 27 acres)</u>	
Average conifer diameter:	18.5 inches
Average hardwood diameter:	15.7 inches
Average conifer basal area/acre:	140 square feet
Average hardwood basal area/acre:	34 square feet
Conifer volume/acre:	25,154 board feet
Hardwood volume/acre:	27.4 green tons

<u>Management Unit A – 39 acres total</u>	
Total Conifer Volume:	835,842 board feet
Hardwood Volume:	1,498.2 green tons

Management Unit B: The TPZ zoned portion of Management Unit B contains 57.88 acres of Douglas-fir / tanoak. This area was divided into two separate timber stands, Stand B1 and Stand B2. Stand B1 is approximately 48 acres and has a species composition of approximately 21% Douglas-fir, 42% tanoak, and 14% Pacific madrone, and 23% canyon live oak and other hardwoods. The average basal area of conifer is 29 square feet per acre and 109 square feet per acre of hardwood. The average age of the stand is approximately 50 to 60 years. Overstory trees are dominated by tanoak and hardwoods with a minor component of Douglas-fir. Conifer diameters of trees cruised ranged from 10 to 74 inches with an average of 21.6 inches for all trees 10 inches DBH and greater. The stand structure is best described as even aged with a dominant overstory of tanoak. Residuals left from original logging are found sparingly within the stand. Most contain significant defect such as conk. The understory is generally dense huckleberry and hardwood regeneration.

Stand B2 is approximately 10 acres and has a species composition of approximately 72% Douglas-fir, 19% tanoak, and 9% Pacific madrone and other hardwoods. The average basal area of conifer is 143 square feet per acre, 38 square feet per acre of tanoak, 10 square feet per acre of Pacific madrone, and 8 square feet of other hardwoods. The average age of the dominant Douglas-fir is approximately 80 years old. Conifer diameters of trees cruised ranged from 10 to 68 inches with an average of 27 inches for all trees 10 inches DBH and greater. The stand structure is best described as even aged with a dominant overstory of Douglas-fir with a minor component of hardwoods. The understory is generally light and consists of pockets of conifer and hardwood regeneration and huckleberry.

<u>Management Unit B (Stand B1 – 48 acres)</u>	
Average conifer diameter:	21.6 inches
Average hardwood diameter:	17.5 inches
Average conifer basal area/acre:	29 square feet
Average hardwood basal area/acre:	109 square feet
Conifer volume/acre:	5,194 board feet
Hardwood volume/acre:	88.5 green tons

<u>Management Unit B (Stand B2 – 10 acres)</u>	
Average conifer diameter:	27.0 inches
Average hardwood diameter:	16.4 inches
Average conifer basal area/acre:	143 square feet
Average hardwood basal area/acre:	55 square feet
Conifer volume/acre:	28,362 board feet
Hardwood volume/acre:	45.5 green tons

<u>Management Unit B – 58 acres total</u>	
Total Conifer Volume:	532,932 board feet
Hardwood Volume:	4,703.0 green tons

Management Unit C: No TPZ zoned lands and thus was not included in the timber cruise.

Management Unit D: Contains well in excess of 160 acres of TPZ and thus was not included in the timber cruise.

#### 10. CRUISE METHODOLOGY AND VOLUME DETERMINATION

The JTMP area was sampled in 2013 using the system described below:

- a. The timber stands were inventoried using a nested variable plot sampling system.
- b. The TPZ zoned portion of Management Unit A and Management Unit B were cruised using a 7.5-chain grid and a BAF of 40.
- c. At every plot, sample trees were determined using a 40 BAF prism and all trees were tallied by species and measured for DBH to the nearest two inches, with a subsample of heights. Total heights were recorded at every three plots to the nearest foot. Visible defect was noted and deducted accordingly by percentage of the entire tree
- d. The gross Scribner board foot volumes for conifers were calculated using Wensel & Krumland's board foot volume equation coefficients from the publication Volume & Taper Relationships for Redwood, Douglas-fir, & Other Conifers in California's North Coast (University of Ca., Bulletin 1907).



## 11. FUTURE YIELD

The projected growth estimates for the JTMP area are based upon published yield tables for evenaged stands of young-growth Douglas-fir in the Pacific Northwest. (Schumacher, 1930). Yield is in board feet, Scribner rule, for trees larger than 12 inches DBH to an 8-inch top. The yield scenarios below assume no harvesting and that stocking rates remain relatively constant.

Stand A1 is approximately 77% of what would be considered "fully stocked". As such the table below shows a 23% reduction in current and future yields relative to the projections made for evenaged stands.

Stand A1 Site Index 150	2013		2023		2033		2043	
	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre
12 acres	157.2	13.1	272.4	22.7	391.2	32.6	500.4	41.7

Stand A2 is approximately 84% of what would be considered "fully stocked". The table below shows a 16% reduction in current and future yields.

Stand A2 Site Index 175	2013		2023		2033		2043	
	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre
27 acres:	677.7	25.1	963.9	35.7	1,231.2	45.6	1,449.9	53.7

Stand B1 is approximately 80% of what would be considered "fully stocked". The table below shows a 20% reduction in current and future yields.

Stand B1 Site Index 150	2013		2023		2033		2043	
	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre
48 acres:	244.8	5.1	652.8	13.6	1,132.8	23.6	1,632	34.0

Stand B2 is approximately 62% of what would be considered "fully stocked". The table below shows a 38% reduction in current and future yields. Should efforts be made to improve stocking on parcel 2, future yields would increase significantly.

Stand B2 Site Index 140	2013		2023		2033		2043	
	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre
10 acres:	283	28.3	341.	34.1	363	36.3	430	43.0

## 12. SILVICULTURAL RECOMMENDATIONS

The long-term management objective is to increase the conifer component and decrease site occupancy of hardwoods in order to maximize the stand density of Douglas-fir within the JTMP area. The applicable silvicultural prescriptions will be based on the existing stand type and management objective of the landowner. The timber stands located within the JTMP area are mainly stands of 2<sup>nd</sup> growth and mature stands of hardwoods mixed with 2<sup>nd</sup> growth Douglas-fir trees and widely scattered residual Douglas-fir. Scattered residual Douglas-fir remaining on the parcels are usually located near a watercourse or was left due to excessive defect.

The JTMP area could initially be managed using a mix of the rehabilitation along with even-aged and un-even aged silviculture methods. The rehabilitation prescription could be prescribed over the areas where hardwood component is the highest. Commercial rehabilitation in a THP/NTMP may only occur in areas where the overall stocking of conifers is less than 50 square feet per acre.

Rehabilitation is designed to remove the existing hardwood component and replace it with conifer species. Following harvest of the hardwood stands, the logged areas should be site prepped and planted with conifer seedlings to a minimum of 435 seedlings per acre. Following planting, an intermediate hardwood treatment such as "hack and squirt" may need to be implemented in order to keep hardwoods from regenerating the site. The next commercial harvest entry will likely not occur for 30 to 40 years later. When the rehabilitated stands reach a stand age of 30 to 40 years old and are a merchantable size, they can be commercially thinned to remove defect

and mortality while establishing ideal spacing to promote growth on the residual stand. Following commercial thinning, the stand could be shifted into a unevenaged stand structure using selection or group selection prescriptions.

Within the portions of the JTMP that meet or exceed stocking with conifers, silviculture methods can be either evenaged or un-evenaged. In an evenaged scenario, stands that meet age requirements could be used to remove mixed stands of conifer and hardwood, as allowed in the Forest Practice Rules. Site preparation and planting would then take place to regenerate conifer. Alternatively, single tree selection or group selections could be conducted. Under this scenario, hardwoods should be removed relative to conifer removal. If group selection is used, artificial regeneration is advised in small group clearings created.

In order to maximize potential growth, it is recommended to harvest trees that have mechanical damage or disease. Removal of as many hardwoods as feasible will provide growing space for conifers from natural and artificial regeneration. Site preparation by mechanical means may be undertaken where slopes allow, or by broadcast burning or "yum" yarding on the steeper slopes. Planted areas should be monitored to determine the need for intermediate treatments such as browse protection, inter-planting, and pre-commercial thinning.

The aforementioned silvicultural recommendations are for permitted THP/NTMP projects. However, there are several things that individual landowners can do to enhance their timber stands in between commercial operations. These practices on this JTMP area could include precommercial thinning. Precommercial thinning should focus on removing competing vegetation, in this case, tanoak regeneration from around conifer regeneration. Additionally, pruning of limbs in timber stands can be undertaken on a small management unit scale and will enhance the quality of wood while allowing sunlight to reach the forest floor to promote regeneration in the understory. It is also recommended that inter-planting be encouraged within the management units to supplement the existing conifer and increase Maximum Sustained Production.

### 13. CONSERVATION AND PROTECTION MEASURES

**Roads:** The existing permanent and seasonal roads are in good condition and provides good timber harvesting access to the management units for future timber operations. These roads are currently used for ranching access. Trails shown on the JTMP maps are a combination of jeep trails and skid trails which can accommodate ATVs and in some places 4-wheel drive pick-up trucks. These trails are used for ranching purposes and in some cases could be used or upgraded as part of future timber harvesting plans. Many of the logging roads used in the 1950s and 1960s are now considered legacy roads or no longer exist. Future timber harvesting may require some new road construction and / or watercourse crossings to be installed or replaced in order to access timber areas that were once accessed by legacy roads that are no longer serviceable. Future timber harvesting will require that the roads and crossings be maintained to present standards, which in part, are enforced by the Forest Practice Act (CALFIRE), Clean Water Act (WQ), and the Endangered Species Act (CDFW & NMFS). The landowner is encouraged to consult with an RPF prior to conducting any road maintenance activities that are not associated with a permitted timber operation.

**Soil Conservation:** Soil is the basic resource that allows a forest to grow, and measures should be taken now and in the future to protect this resource. Soil erosion potential is increased with concentration of runoff on bare mineral soil. Dispersion of water from roads and landings are the key to limiting erosion after logging. The landowner is encouraged to maintain all existing drainage structures and facilities on truck and skid roads. Most of these erosion control structures and facilities observed are adequately functioning, but nevertheless should still be periodically checked prior to the winter period to ensure that they are functional. Future timber harvesting will likely re-use these existing truck roads and skid roads, and their maintenance will be important for successive harvests and future management activities.

**Fire Risk:** This property is in a High Fire Hazard Severity Zone. The warm dry summers lead to conditions conducive to fire, and many of the abundant brush and hardwood species add to the rate of spread. Potential sources of ignition can come from lightening strikes or human sources. The Paradise Fire in 2008 was caused by a lightening strike. Existing fuel breaks along the main ridges within the JTMP are maintained over time. One is located along the main ridge between Jewett Creek and French Creek. Other prevailing ridges within the ownership may be considered for fuel breaks in the future.

Commercial logging generally removes the least flammable portion of trees (their main stems or trunks) while leaving behind their most flammable portions (their needles and limbs) directly on the ground. Untreated logging slash can adversely affect fire behavior for up to 30 years following the logging operations. Commercial logging reduces the "over story" tree canopy, which moderates the "microclimate" of the forest floor. This reduction of the

tree canopy exposes the forest floor to increased sun and wind, causing increased surface temperatures and decreased relative humidity. This in turn causes surface fuels to be hotter and drier, resulting in faster rates of fire spread, greater flame lengths and fire-line intensities, and more erratic shifts in the speed and direction of fires. Small diameter surface fuels are the primary carriers of fire. Current fire-spread models such as the BEHAVE program do not even consider fuels greater than three inches in diameter, because it is mainly the fine-sized surface fuels that allow the fire to spread.

Because forest management and timber operations have the potential for increasing the risk of fire; it is important that all timber harvest operations be conducted in compliance with State and local fire rules and regulations. For the residences located on the property, the Forest Practice Rules require hazard reduction (treating logging slash) within 200 feet of a residence. In addition, when the option of burning piles or concentrations of slash is chosen to meet the slash treatment requirements as specified in these rules, such burning shall be done as follows: (a) Piles and concentrations shall be sufficiently free of soil and other noncombustible material for effective burning. (b) The piles and concentrations shall be burned at a safe time during the first wet fall or winter weather or other safe period following piling and according to laws and regulations. Piles and concentrations that fail to burn sufficiently to remove the fire hazard shall be further treated to eliminate that hazard. All necessary precautions shall be taken to confine such burning to the piled slash.

**Wildlife:** The JTMP area contains habitat for numerous plant and animal species. Timber operations have the potential to directly or indirectly impact fish, plants, and wildlife species. 14CCR 898.2(d) states that one of the Special Conditions under which the Director can disapprove a THP or an NTMP is when "Implementation of the plan as proposed would result in either a "taking" or finding of jeopardy of wildlife species listed as rare, threatened or endangered by the Fish and Game Commission or Fish and Wildlife Service, or would cause significant, long-term damage to listed species. Consequently, any future timber harvesting that has the potential to impact wildlife will require an impact assessment, which may include consultation with the Department of Fish and Wildlife, US Fish and Wildlife Service and National Marine Fisheries Service.

**Pest and Disease:** *Phytophthora ramorum* (P. ramorum), is the pathogen that causes the disease known as Sudden Oak Death (SOD). Sudden Oak Death is a new and virulent disease affecting hardwood forests in coastal California. The pathogen, *Phytophthora ramorum*, has reached epidemic levels in several California forests. The pathogen also colonizes the foliage of several other overstory and understory hosts without killing them. *Phytophthora ramorum*, has been found in Humboldt County. The Oak Mapper (<http://www.suddenoakdeath.org/>) website shows the closest location of SOD as being approximately 4,500 feet from Ettersburg, CA. Due to the presence of SOD in Humboldt County and nearby Ettersburg, CA, the JTMP area is assumed to be infected with SOD. Future THP and NTMPs are required to incorporate protection measures designed to mitigate potential negative effects of SOD. Mitigation & management recommendations are taken from Sudden Oak Death Guidelines for Forestry at <http://nature.berkeley.edu/comtf/pdf/ForestryGuideNov2006.pdf>.

List of known host species: *Acer macrophyllum* (big-leaf maple), *Acer pseudoplatanus* (planetree maple), *Adiantum aleuticum* (western maidenhair fern), *Adiantum jordanii* (California maidenhair fern), *Aesculus californica* (California buckeye), *Aesculus hippocastanum* (horse chestnut), *Arbutus menziesii* (madrone), *Arctostaphylos Manzanita* (manzanita), *Calluna vulgaris* (Scotch heather), *Camellia* (camellia), *Castanea sativa* (sweet chestnut), *Fagus sylvatica* (European beech), *Frangula californica* (California coffeeberry), *Frangula purshiana* (cascara), *Fraxinus excelsior* (European ash), *Griselinia littoralis* (griselinia), *Hamamelis virginiana* (witch hazel), *Heteromeles arbutifolia* (toyon), *Kalmia* (mountain laurel), *Lithocarpus densiflorus* (tanoak), *Lonicera hispidula* (California honeysuckle), *Laurus nobilis* (bay laurel), *Maianthemum racemosum* (false Solomon's seal), *Michelia doltsopa* (michelia), *Parrotia persica* (Persian ironwood), *Photinia fraseri* (red tip photinia), *Pieris spp.* (Andromeda), *Pseudotsuga menziesii* (Douglas-fir), *Quercus agrifolia* (coast live oak), *Quercus cerris* (European turkey oak), *Quercus chrysolepis* (canyon live oak), *Quercus falcata* (southern red oak), *Quercus ilex* (Holm oak), *Quercus kelloggii* (California black oak), *Quercus parvula* var. *shrevei* (Shreve's oak), *Rhododendron* (rhododendron), *Rosa gymnocarpa* (wood rose), *Salix caprea* (goat willow), *Sequoia sempervirens* (redwood), *Syringa vulgaris* (lilac), *Taxus baccata* (European yew), *Trientalis latifolia* (western starflower), *Umbellularia californica* (pepperwood), *Vaccinium ovatum* (huckleberry), *Viburnum* (all species) ([http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/pram/downloads/pdf\\_files/usdaprlst.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/usdaprlst.pdf))

**Plants:** The JTMP area contains habitat for numerous special status plants (rare, threatened and endangered plants) and plant communities. Special status plants are limited to those that have been listed by state and federal agencies but include any plants that, based on all available data, can be shown to be rare, threatened, or endangered. Rare plant communities are those communities that are of highly limited distribution. These communities may or may not contain special status plants. The *California Natural Diversity Database's List of California Terrestrial Natural Communities* is used as a guide to the names and status of communities. Future timber operations will likely require botanical surveys utilizing *The Department of Fish and Wildlife's (CDFW) Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*.

**Fish:** The JTMP area contains a segment of the Mattole River and some of its larger Class I tributaries such as Bear Creek and Jewett Creek. The Mattole River drains into the Pacific Ocean. In August 2002, the State Fish & Game Commission found that coho salmon from Punta Gorda to the Oregon border warranted listing as threatened. In March 2005 coho salmon were listed under CESA as threatened north of Punta Gorda to the Oregon border. The Board of Forestry has approved rule language for the Forest Practice Rules that will enhance protection of anadromous salmonids and their habitat. The rule language provides a regulatory procedure for the issuance of incidental take permits for coho salmon that is integrated with the Forest Practice Act and the Forest Practice Rules. Without such an integrated approach, in addition to applying to the Cal Fire for approval of timber harvesting plans, timberland owners would have to engage in a lengthy, separate process for obtaining incidental take permits for coho salmon from CDFW for any timber operations and activities that would result in take of the species. This would involve separate environmental review processes and related costs to both the permit applicant & CDFW.

**Water Quality:** The JTMP area is located along the Mattole River and several of its large tributaries. As such the JTMP is located in four different planning watersheds, Big Finely, North Fork of Bear Creek, Eubank Creek, and Sholes Creek. The Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act section 303(d) has listed the Mattole River as an "impaired" waterbody. The listed pollutants are excessive sedimentation and excessive temperatures. The basis for listing cited by the EPA is impairment due to roads, timber harvesting, mining, and natural causes. The EPA contends that the factors listed above have resulted in impairment of fisheries and aquatic habitat. The mechanisms for impairment are large scale and are associated with numerous past and present activities, both natural and anthropogenic, such as development, roads, timber harvesting, mining, landsliding, flooding, and point source pollution. Given the broad pattern of impacting activities, the contribution of any given forest management activity or timber operation toward the impairment cited by the EPA for the Mattole River, appears to be minor. However, the sum of management and harvest impacts over time may exceed an as yet unidentified and unquantified threshold and become a significant mechanism of impairment in the future. It is this potential for a cumulative adverse impact, that has led to the adoption of specific forest practice regulations by the Board of Forestry, and appropriate mitigation measures in THP's/NTMP's, designed to lessen the likelihood of impact.

The Forest Practice Rules focus on the protection of watercourses through the installation and maintenance of erosion controls and silvicultural restrictions resulting in the retention of vegetation across a landscape over time. These practices represent the best currently available techniques for limiting possible project associated mechanisms of impairment.

The THP process, which is implemented by Cal Fire, may trigger one or more permits or other entitlements to carry out the project and ensure the protection of water quality. The range of permits needed depends on the type of action. There are also numerous federal requirements that only apply where an action is "federalized" due to funding or the need for a federal permit. All potential permits or entitlements are summarized below.

- A Section 1602 or 1611 Streambed Alteration Agreement is required through the California Department of Fish & Wildlife when an alteration to a bed, channel, or bank of a stream will occur, such as a crossing installation.
- The California Endangered Species Act (CESA) requires consultations with the California Department of Fish and Wildlife to determine if an activity is likely to affect or result in the take of a plant or animal (fish) listed by the State as threatened or endangered. Similar to CESA, the Federal Endangered Species Act (FESA) requires formal or informal consultation with the US Fish and Wildlife Service or the NOAA Fisheries where it is likely that the project could affect federally listed threatened or endangered species.
- Section 401 of the federal Clean Water Act requires that State water quality standards not be violated by the discharge of fill or dredged material into "Waters of the United States." The owner or operator of any facility or activity that discharges, or proposes to discharge, waste that may affect groundwater quality, or from which waste may be discharged in a diffused manner (for example, erosion from soil disturbance), must first obtain waste discharge requirements (WDRs) from the Regional Water Quality Control Board (RWQCB) pursuant to

Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Act. Some THP activities in the North Coast Region are covered by a categorical waiver.

**Archaeology:** The project area lies within an area known to be inhabited in the past by local Native American tribes. Archaeological resources are one of the many resources considered significant to California. Native American cultural resources are commonly situated on ridgelines and associated spurs; saddles; midslope terraces; at vegetative ecotones; at confluences of drainages, and areas adjacent to seasonal and perennial watercourses including springs. Given the presence of many of the aforementioned features within the JTMP area it is likely that resources associated with Native Americans may be found within the project area. In addition to Native American resources the FPR also require surveying for the presence of historic resources. Within the JTMP boundary, the Frenches and Etters began homesteading as early as the 1890s. Old cabin sites and can and glass bottle dumps are examples of the types of artifacts that could be found in the JTMP area. The project area was logged in the late 1950s. Tractors were used primarily at this time. In light of this, one could expect to find artifacts associated with this sort of operation, such as discarded wire rope chokers, tractor parts, oil cans, fuel containers, wedges, drag saw parts, spring boards, saw blades, axes, soda and liquor bottles, or canteens. Some of these types of artifacts have been found on the on the property within the JTMP. Regardless, the FPRs require that these resources be surveyed for, disclosed when found and protected from future timber operations as appropriate. Currently, these surveys can be conducted by trained resource personnel (Trained RPFs), however in the future these resources may need to be surveyed for by a professional archaeologist.

#### 14. MANAGEMENT PLAN UPDATES

It is highly advised that the Joint Timber Management Guide be updated on a periodic basis, to revise growth predictions and specific changes to the timberland. Updates should include recommendations to improve the current stand conditions such as commercial thinning or salvage operations, and treatments for pre-commercial stands such as pre-commercial thinning and brush control. The forest landowners are advised to retain professional guidance concerning forest management decisions to take advantage of the best information on current practices and markets. Meeting the objectives of the landowners is a necessary function of these updates and their participation is encouraged.

#### 15. MANAGEMENT COST

Cost that will be incurred for management activities could include but are not necessarily limited to the following: road maintenance, surveying, forest protection, tree planting, timber stand improvement and related harvesting costs. These costs will not necessarily coincide with revenues received from harvests. Landowners should be prepared for these costs that are necessary to maintain a productive, healthy forest ecosystem.

#### 16. LEGAL REQUIRMENTS

The landowner should be aware that harvest activities will require a State approved Timber Harvest Plan (THP) or equivalent document and that all timber operations are subject to regulations included in the Forest Practice Act and the current California Forest Practice Rules including compliance with US Fish and Wildlife Service Northern Spotted Owl survey protocols and protection measures. Other permits that also may be required are Department of Fish and Game Stream Alteration Agreement and a Water Quality Waste Discharge Permit.

# JTMP MAPS

# French Ranch JTMP General Location Map

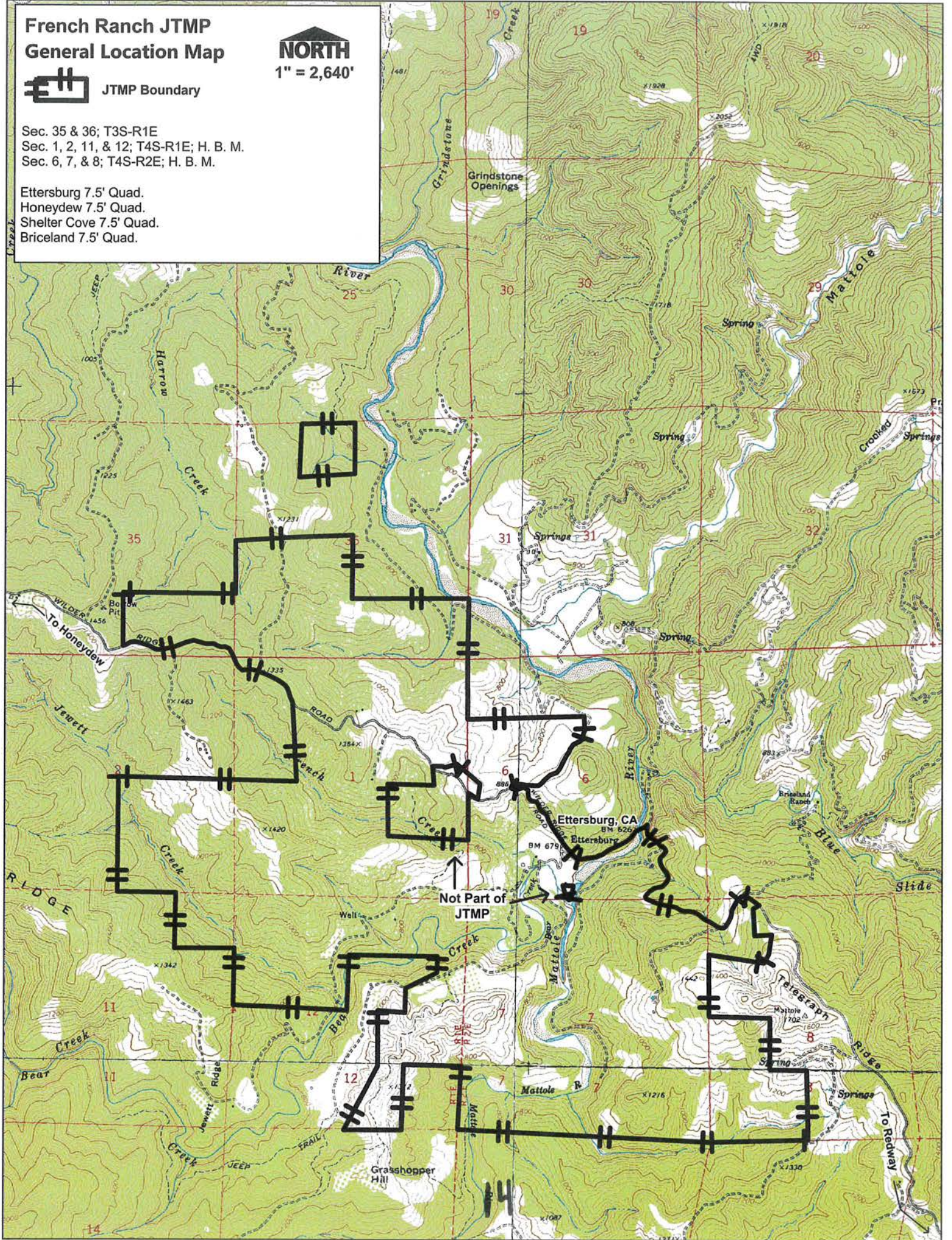
**NORTH**  
1" = 2,640'



JTMP Boundary




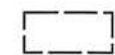
Sec. 35 & 36; T3S-R1E  
Sec. 1, 2, 11, & 12; T4S-R1E; H. B. M.  
Sec. 6, 7, & 8; T4S-R2E; H. B. M.

Ettersburg 7.5' Quad.  
Honeydew 7.5' Quad.  
Shelter Cove 7.5' Quad.  
Briceland 7.5' Quad.

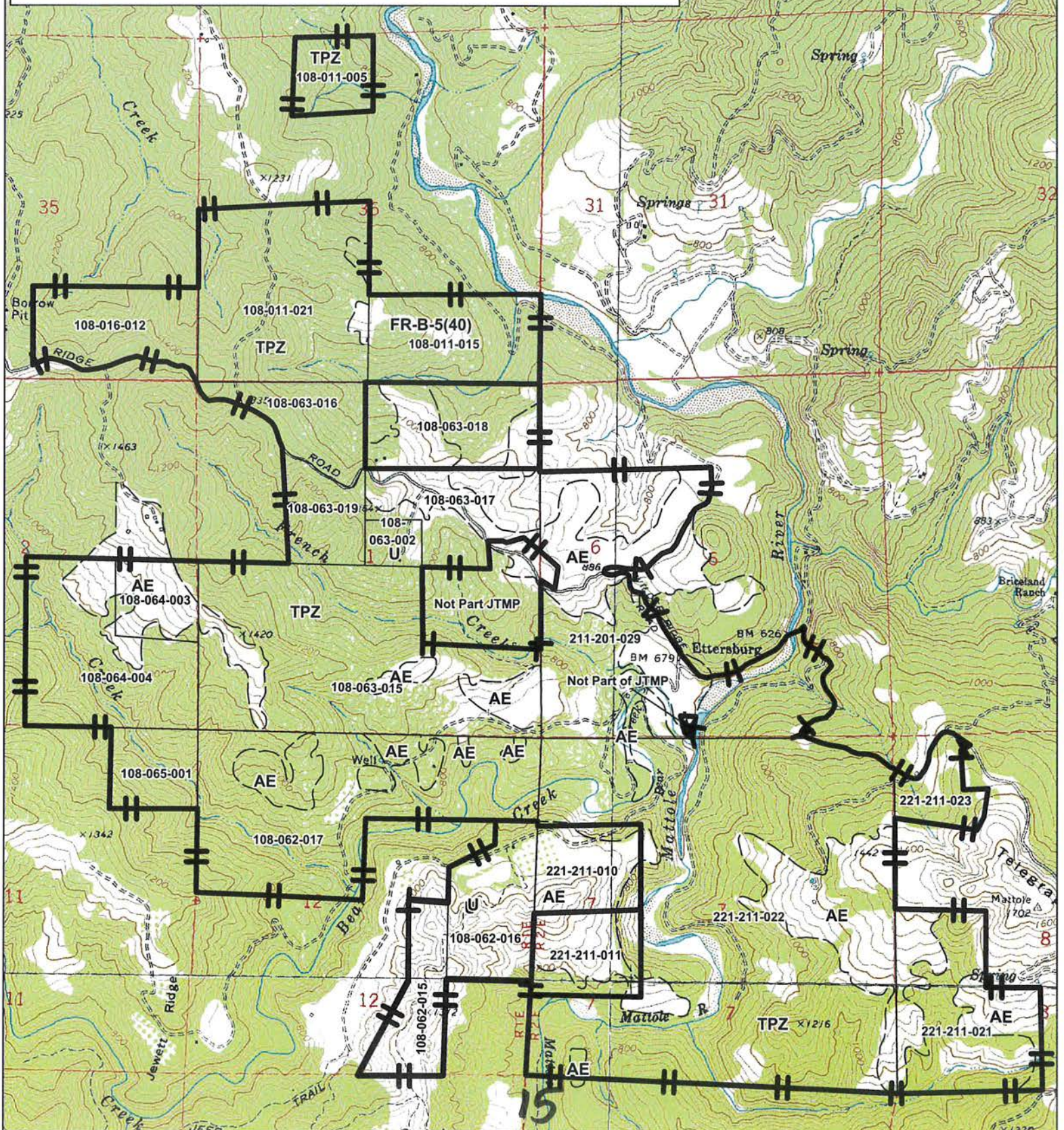


**French Ranch JTMP**  
**APN Locator Prior to LLA and Merger**

**NORTH**  
 1" = 2,000'

-  JTMP Boundary
-  Parcels Prior to Lot Line Adjustment
-  Interior Assessors Parcel Lines
-  Zoning Boundary

Sec. 35 & 36; T3S-R1E; H. B. M.  
 Sec. 1, 2, 11, & 12; T4S-R1E; H. B. M.  
 Sec. 6, 7, & 8; T4S-R2E; H. B. M.





# French Ranch JTMP

## Lot Line Adjustment / Merger - Resulting Parcels / Management Units Map

**NORTH**  
1" = 2,000'



JTMP



Resulting Parcel Boundary



Zoning Boundary

### Resulting Parcels / Management Units After LLA / Merger

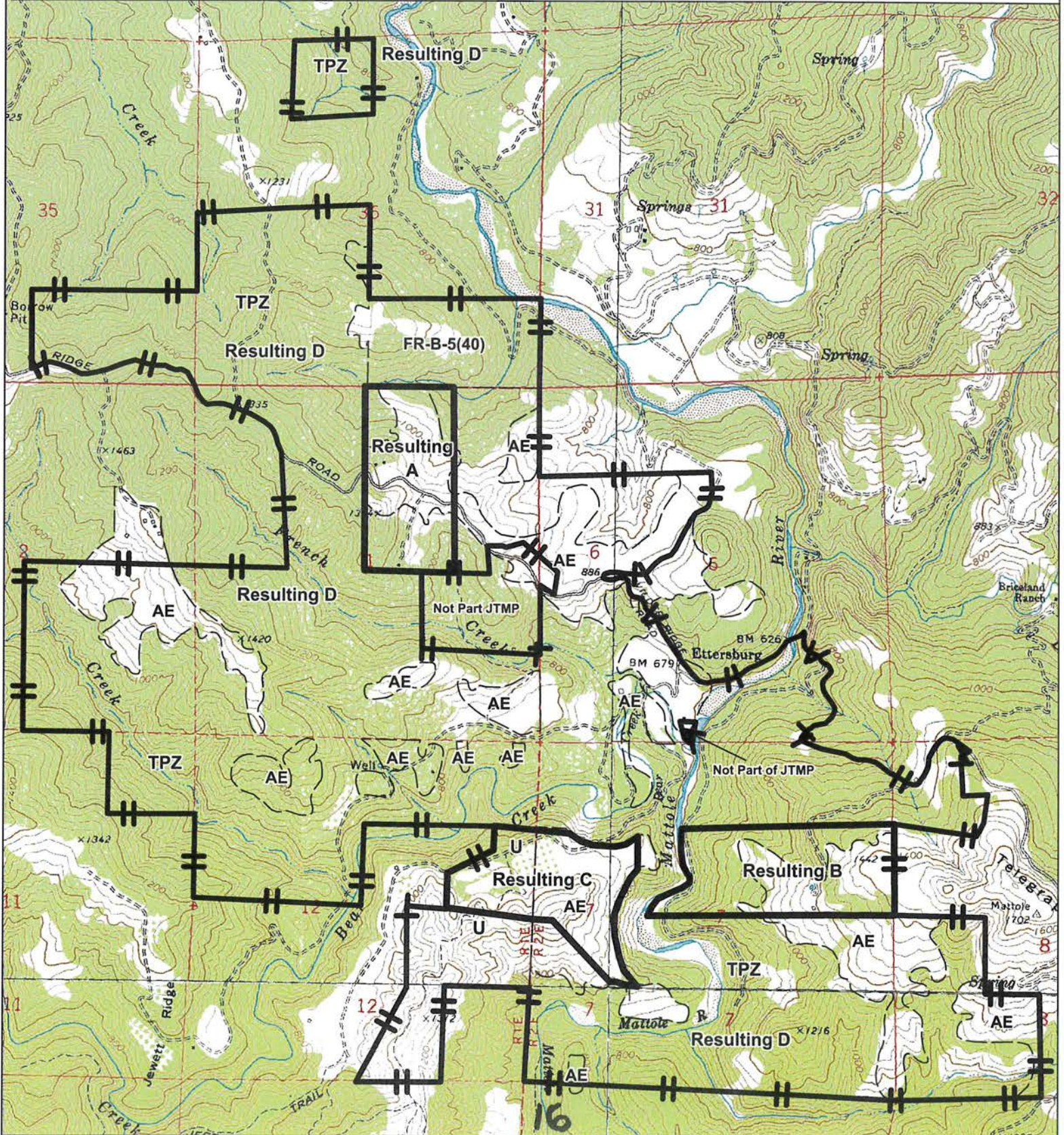
Resulting A TPZ-38.9 ac; AE-43.97 ac; Total 82.87 ac

Resulting B TPZ-57.88 ac; AE-49.44 ac; Total 107.32 ac

Resulting C TPZ-0 ac; AE-47.78 ac; U-29.52; Total 77.30 ac

Resulting D TPZ-1,655.60 ac; AE-388.54 ac; FR-B-5(40)-93.84 ac; U-89.01 ac; Total 2226.99 ac

Sec. 35 & 36; T3S-R1E; H. B. M.; Sec. 1, 2, 11, & 12; T4S-R1E; H. B. M.; Sec. 6, 7, & 8; T4S-R2E; H. B. M.



# French Ranch JTMP

## Lot Line Adjustment / Merger - Resulting Parcels / Management Units Map

**NORTH**  
1" = 2,000'



JTMP

### Resulting Parcels / Management Units After LLA / Merger

Resulting A TPZ-38.9 ac; AE-43.97 ac; Total 82.87 ac

Resulting B TPZ-57.88 ac; AE-49.44 ac; Total 107.32 ac

Resulting C TPZ-0 ac; AE-47.78 ac; U-29.52; Total 77.30 ac

Resulting D TPZ-1,655.60 ac; AE-388.54 ac; FR-B-5(40)-93.84 ac; U-89.01 ac; Total 2226.99 ac

 Resulting Parcel Boundary

 Zoning Boundary

Sec. 35 & 36; T3S-R1E; H. B. M.; Sec. 1, 2, 11, & 12; T4S-R1E; H. B. M.; Sec. 6, 7, & 8; T4S-R2E; H. B. M.



# French Ranch JTMP

JTMP MAP (1 of 3)



Parcel A / Management Unit A  
Tractor and Tractor Longlining

**NORTH**  
1" = 1,320'



JTMP Boundary

## JTMP Roads

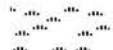
- County Road
- Permanent
- Seasonal
- Trail
- Legacy

## Watercourses

- Class I
- Class II
- Class III



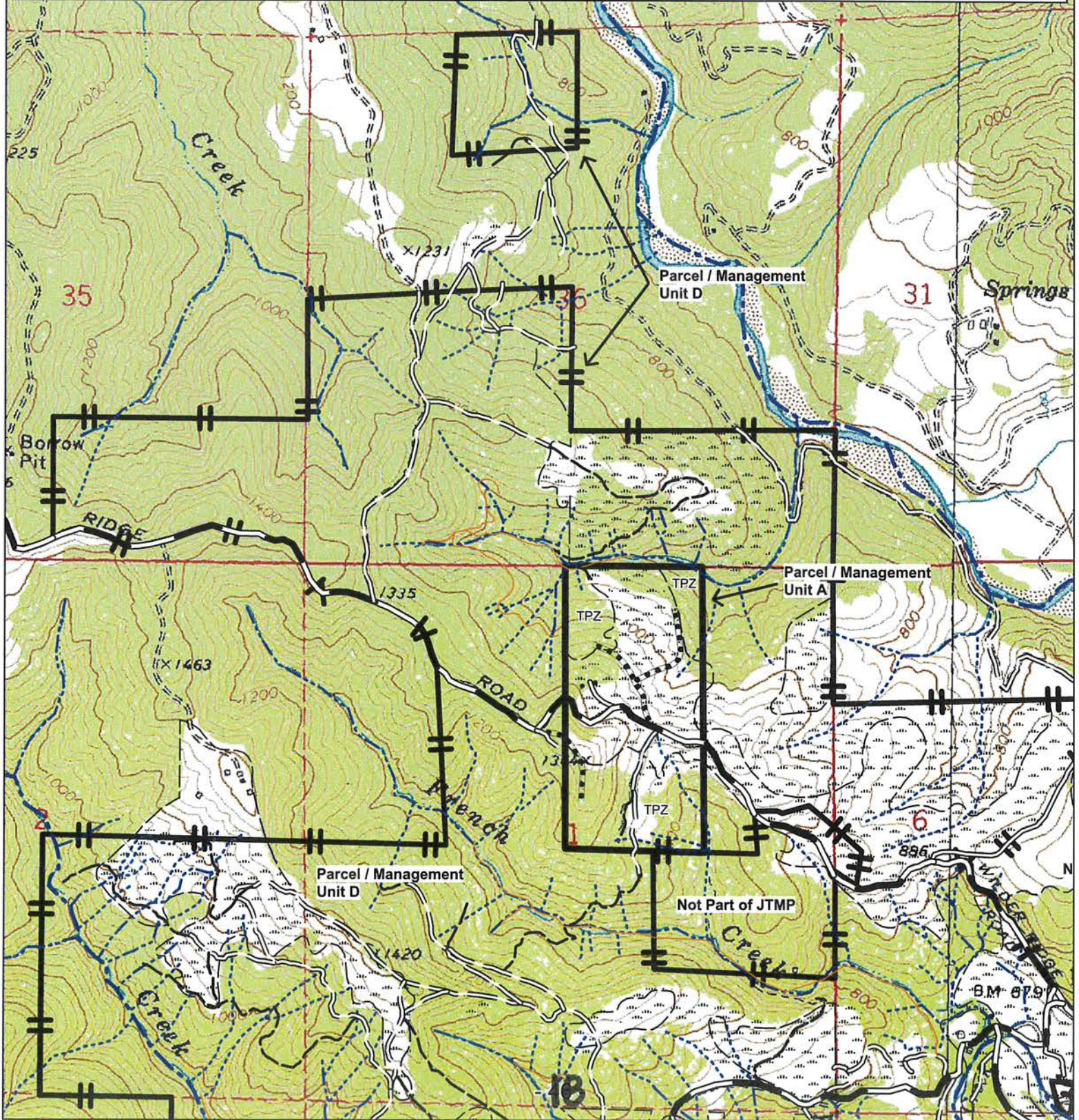
Zoning Boundary



Grass / Open Areas

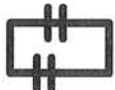
- Potential New Logging Access Road (Parcel A)

Sec. 35 & 36, T3S-R1E, H. B. M.; Sec. 1, 2, 11, & 12, T4S-R1E, H. B. M.; Sec. 6, 7, & 8, T4S-R2E, H. B. M.

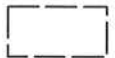


# French Ranch JTMP

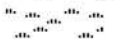
## JTMP MAP (2 of 3)



JTMP Boundary



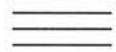
Zoning Boundary



Grass / Open Areas



Parcels B and C / Management Units B and C  
(No TPZ Acres in C)



Parcel B - Cable Yarding Areas  
(Remainder is Tractor or Tractor Longline)

### Watercourses

Class I

Class II

Class III

### JTMP Roads

County Road

Permanent

Seasonal

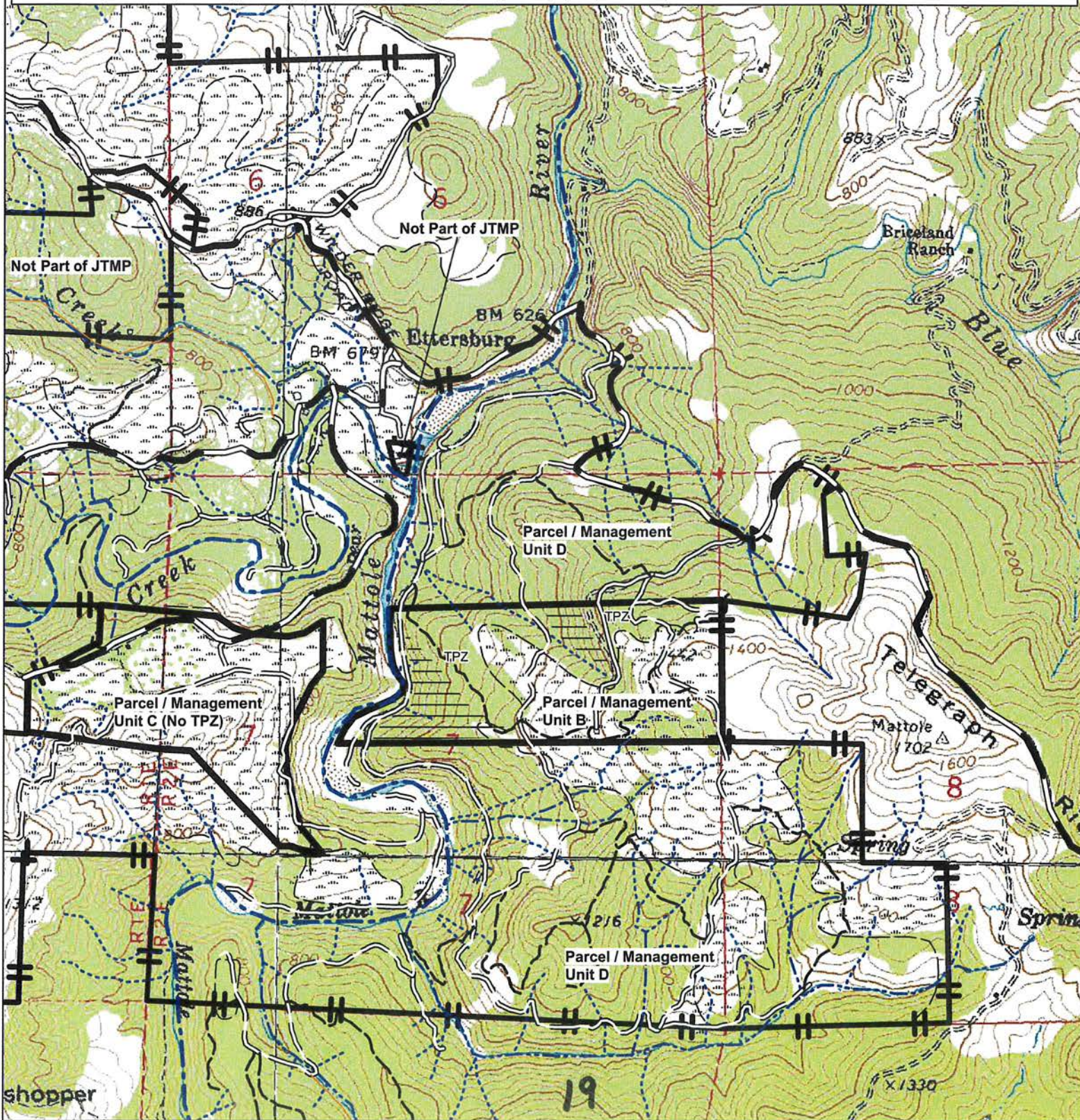
Trail

Legacy

**NORTH**

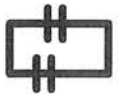
1" = 1,320'

Sec. 35 & 36, T3S-R1E, H. B. M.; Sec. 1, 2, 11, & 12, T4S-R1E, H. B. M.; Sec. 6, 7, & 8, T4S-R2E, H. B. M.



# French Ranch JTMP

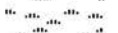
## JTMP MAP (3 of 3)



JTMP Boundary



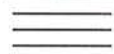
Zoning Boundary



Grass / Open Areas



Parcels A, B, and C / Management Units A, B, and C  
(No TPZ Acres in C)



Parcel B - Cable Yarding Areas  
(Remainder is Tractor or Tractor Longline)

### Watercourses

Class I

Class II

Class III

### JTMP Roads

County Road

Permanent

Seasonal

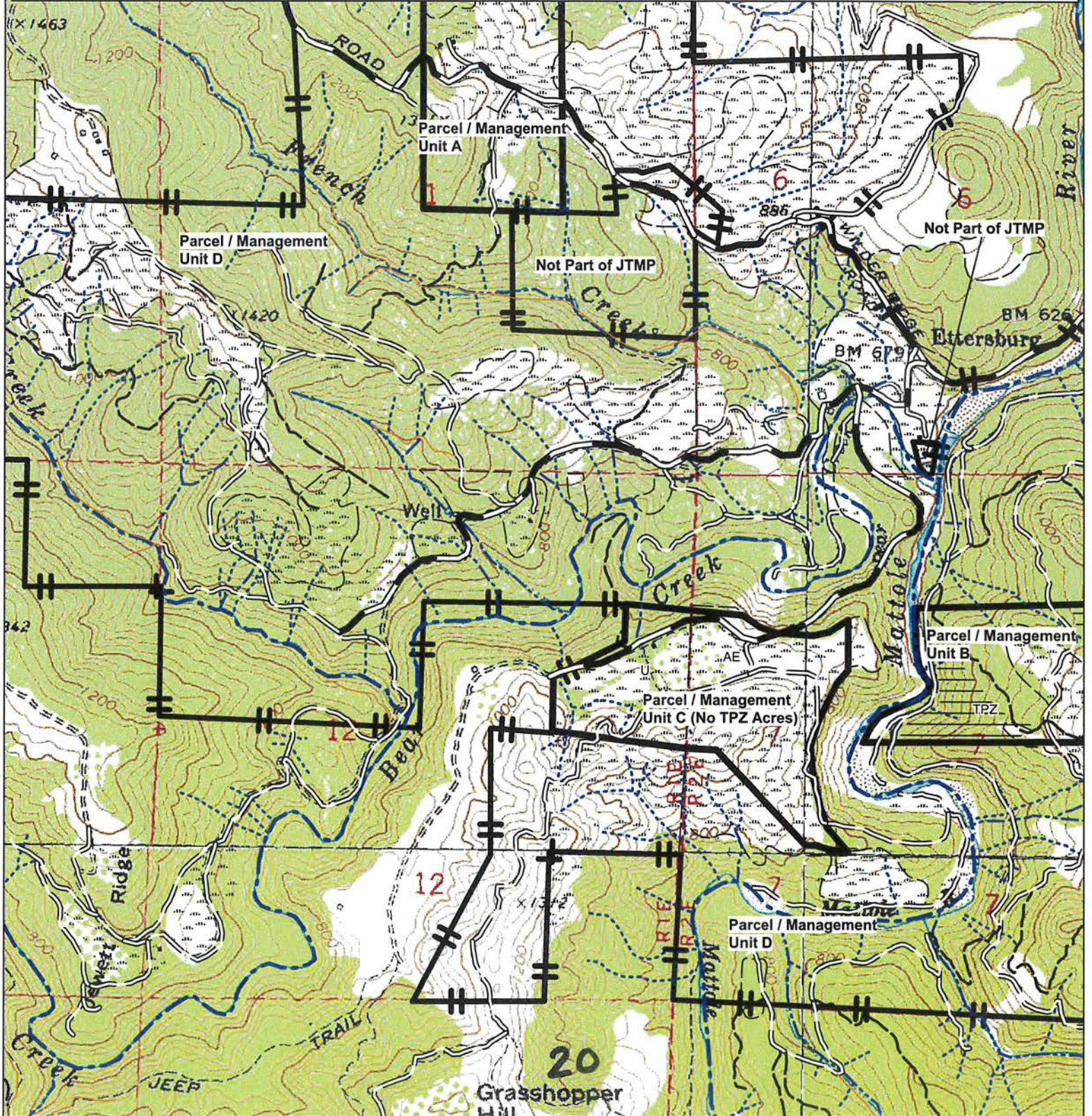
Trail

Legacy









1" = 1,320'

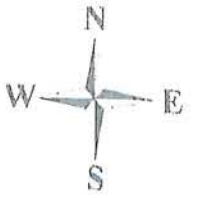
Sec. 35 & 36, T3S-R1E, H. B. M.; Sec. 1, 2, 11, & 12, T4S-R1E, H. B. M.; Sec. 6, 7, & 8, T4S-R2E, H. B. M.



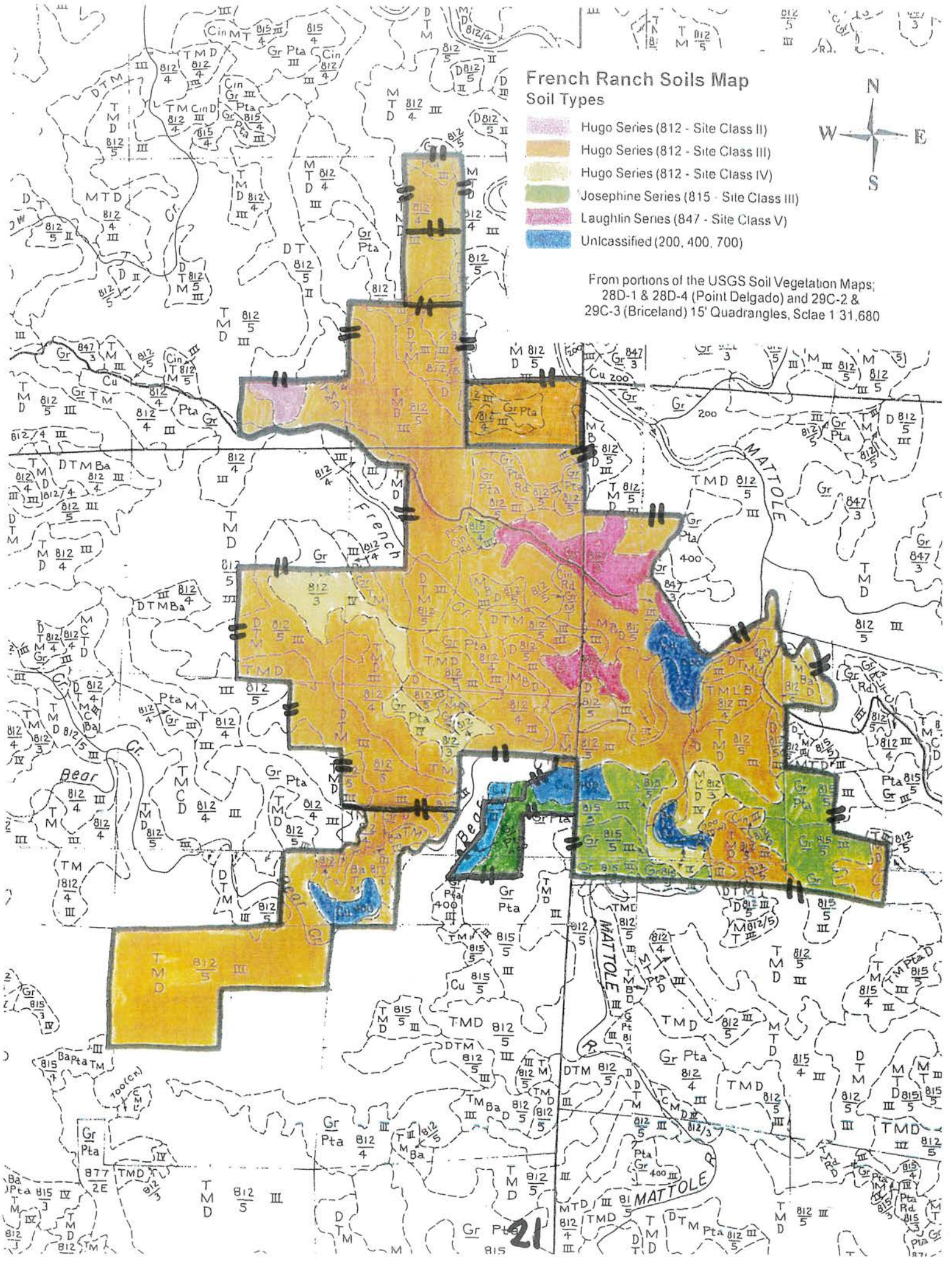
# French Ranch Soils Map

## Soil Types

-  Hugo Series (812 - Site Class II)
-  Hugo Series (812 - Site Class III)
-  Hugo Series (812 - Site Class IV)
-  Josephine Series (815 - Site Class III)
-  Laughlin Series (847 - Site Class V)
-  Unclassified (200, 400, 700)



From portions of the USGS Soil Vegetation Maps;  
28D-1 & 28D-4 (Point Delgado) and 29C-2 &  
29C-3 (Briceland) 15' Quadrangles, Sclae 1 31,680



# Cruise Reports

**FRENCH RANCH**  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: A1

Area (acres): 12.0  
02/2013

<b>Product Group</b>						
<b>Product</b> Species--Volume1/2 Tables	<b>DBH</b> (inches)	<b># Trees</b>	<b>Volume 1</b>	<b>Volume 2</b>	<b>Basal Area</b>	<b>Mean Merch. Height</b>
<b>Dimensional Wood</b>						
<b>Sawtimber</b>						
		<b>#</b>	<b>Board Feet</b>		<b>sq. ft.</b>	<b>***</b>
Douglas-fir--DF78/						
	10.0	3.8	177.0	0.0	2.1	0.0
	12.0	5.3	478.6	0.0	4.1	0.0
	14.0	5.8	763.2	0.0	6.2	0.0
	16.0	6.4	1,140.5	0.0	9.0	0.0
	18.0	4.3	1,088.8	0.0	7.6	0.0
	20.0	3.2	1,037.8	0.0	6.9	0.0
	22.0	3.7	1,724.9	0.0	9.7	0.0
	24.0	2.4	1,501.9	0.0	7.6	0.0
	26.0	2.1	1,150.4	0.0	7.6	0.0
	28.0	1.3	1,086.1	0.0	5.5	0.0
	30.0	0.4	357.6	0.0	2.1	0.0
	32.0	0.1	149.8	0.0	0.7	0.0
	34.0	0.3	405.8	0.0	2.1	0.0
	36.0	0.3	505.2	0.0	2.1	0.0
	38.0	0.1	185.0	0.0	0.7	0.0
	40.0	0.4	863.2	0.0	3.4	0.0
	42.0	0.1	287.7	0.0	1.4	0.0
	48.0	0.1	152.9	0.0	0.7	0.0
QuadMnDBH/MnH/Subtotals	19.1	40.0	13,056.4	0.0	79.3	0.0
<b>Product Group Total</b>	<b>19.1</b>	<b>40.0</b>	<b>13,056.4</b>	<b>0.0</b>	<b>79.3</b>	<b>0.0</b>



FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: A1

Area (acres): 12.0  
02/2013

<b>Product Group</b>						
<b>Product</b> Species--Volume1/2 Tables	<b>DBH</b> (inches)	<b># Trees</b>	<b>Volume 1</b>	<b>Volume 2</b>	<b>Basal Area</b>	<b>Mean Merch. Height</b>
<b>Pulwood</b>						
<b>Chips</b>						
		<b>#</b>	<b>Tons</b>		<b>sq. ft.</b>	<b>***</b>
Tanoak--RGO Tons by Feet/						
	10.0	22.8	7.5	0.0	12.4	0.0
	12.0	22.0	10.9	0.0	17.2	0.0
	14.0	10.3	8.4	0.0	11.0	0.0
	16.0	8.9	10.0	0.0	12.4	0.0
	18.0	3.1	4.8	0.0	5.5	0.0
	20.0	2.2	3.8	0.0	4.8	0.0
	22.0	0.3	0.7	0.0	0.7	0.0
	24.0	0.4	1.4	0.0	1.4	0.0
	40.0	0.1	0.8	0.0	0.7	0.0
QuadMnDBH/MnHt/Subtotals	13.2	70.0	48.3	0.0	66.2	0.0
Madrone--RGO Tons by Feet/						
	14.0	0.6	0.5	0.0	0.7	0.0
	18.0	1.2	1.0	0.0	2.1	0.0
	20.0	0.3	0.6	0.0	0.7	0.0
	24.0	0.2	0.5	0.0	0.7	0.0
	26.0	0.4	1.3	0.0	1.4	0.0
	28.0	0.3	1.3	0.0	1.4	0.0
	30.0	0.4	1.4	0.0	2.1	0.0
	34.0	0.1	0.6	0.0	0.7	0.0
	36.0	0.1	0.7	0.0	0.7	0.0
	40.0	0.1	0.7	0.0	0.7	0.0
	48.0	0.1	0.6	0.0	0.7	0.0
	50.0	0.1	1.2	0.0	1.4	0.0
	52.0	0.0	0.7	0.0	0.7	0.0
	62.0	0.0	0.3	0.0	0.7	0.0
QuadMnDBH/MnHt/Subtotals	25.8	4.0	11.4	0.0	14.5	0.0
Other Hardwood--RGO Tons by Feet/						
	22.0	0.8	1.7	0.0	2.1	0.0
	24.0	0.4	1.1	0.0	1.4	0.0
QuadMnDBH/MnHt/Subtotals	22.7	1.2	2.8	0.0	3.4	0.0

**FRENCH RANCH**  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: A1

Area (acres): 12.0  
02/2013

<b>Product Group</b>						
<b>Product</b> Species--Volume1/2 Tables	<b>DBH</b> (inches)	<b># Trees</b>	<b>Volume 1</b>	<b>Volume 2</b>	<b>Basal Area</b>	<b>Mean Merch. Height</b>
<b>Pulwood</b>						
<b>Chips</b>		<b>#</b>	<b>Tons</b>		<b>sq. ft.</b>	<b>***</b>
Black Oak--RGO Tons by Feet/						
	24.0	0.2	0.7	0.0	0.7	0.0
QuadMnDBH/MnHt/Subtotals	24.0	0.2	0.7	0.0	0.7	0.0
<b>Product Group Total</b>	<b>14.4</b>	<b>75.5</b>	<b>63.2</b>	<b>0.0</b>	<b>84.8</b>	<b>0.0</b>
<b>Stand Total</b>		<b>115.5</b>			<b>164.1</b>	
<b>Stand Means</b>	<b>16.1</b>					

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: A2

Area (acres): 27.0  
02/2013

<b>Product Group</b>						
Product Species--Volume1/2 Tables	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
<b>Dimensional Wood</b>						
<b>Sawtimber</b>						
		#	Board Feet		sq. ft.	***
Douglas-fir--DF78/						
	10.0	24.4	867.8	0.0	13.3	0.0
	12.0	8.5	526.3	0.0	6.7	0.0
	14.0	12.5	1,802.3	0.0	13.3	0.0
	18.0	7.5	2,342.8	0.0	13.3	0.0
	20.0	3.1	1,023.7	0.0	6.7	0.0
	22.0	2.5	1,419.3	0.0	6.7	0.0
	24.0	2.1	1,186.2	0.0	6.7	0.0
	26.0	5.4	4,135.2	0.0	20.0	0.0
	28.0	3.1	3,043.3	0.0	13.3	0.0
	30.0	1.4	1,874.2	0.0	6.7	0.0
	34.0	1.1	1,452.8	0.0	6.7	0.0
	36.0	0.9	1,541.1	0.0	6.7	0.0
	38.0	1.7	3,089.6	0.0	13.3	0.0
	40.0	0.8	848.9	0.0	6.7	0.0
QuadMnDBH/MnHt/Subtotals	18.5	75.0	25,153.6	0.0	140.0	0.0
<b>Product Group Total</b>	<b>18.5</b>	<b>75.0</b>	<b>25,153.6</b>	<b>0.0</b>	<b>140.0</b>	<b>0.0</b>
<b>Pulwood</b>						
<b>Chips</b>						
		#	Tons		sq. ft.	***
Tanoak--RGO Tons by Feet/						
	12.0	8.5	4.2	0.0	6.7	0.0
	14.0	12.5	10.5	0.0	13.3	0.0
QuadMnDBH/MnHt/Subtotals	13.2	21.0	14.8	0.0	20.0	0.0
Madrone--RGO Tons by Feet/						
	24.0	2.1	6.3	0.0	6.7	0.0
	26.0	1.8	6.3	0.0	6.7	0.0
QuadMnDBH/MnHt/Subtotals	24.9	3.9	12.6	0.0	13.3	0.0
<b>Product Group Total</b>	<b>15.7</b>	<b>24.9</b>	<b>27.4</b>	<b>0.0</b>	<b>33.3</b>	<b>0.0</b>
<b>Stand Total</b>		<b>99.9</b>			<b>173.3</b>	

**FRENCH RANCH**  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand Means 17.8

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B1

Area (acres): 48.0  
02/2013

<b>Product Group</b>						
Product Species--Volume1/2 Tables	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
<b>Dimensional Wood</b>						
<b>Sawtimber</b>						
Douglas-fir--DF78/		#	Board Feet		sq. ft.	***
	32.0	0.2	178.1	0.0	0.9	0.0
	34.0	0.2	287.3	0.0	1.4	0.0
	36.0	0.2	299.0	0.0	1.4	0.0
	38.0	0.2	407.7	0.0	1.8	0.0
	40.0	0.2	390.8	0.0	1.8	0.0
	42.0	0.1	235.2	0.0	0.9	0.0
	44.0	0.1	266.2	0.0	0.9	0.0
	46.0	0.0	111.9	0.0	0.5	0.0
	48.0	0.1	332.0	0.0	1.4	0.0
	50.0	0.1	184.3	0.0	0.9	0.0
	52.0	0.0	119.1	0.0	0.5	0.0
	54.0	0.0	79.3	0.0	0.5	0.0
	60.0	0.0	88.3	0.0	0.5	0.0
	62.0	0.0	69.5	0.0	0.5	0.0
	74.0	0.0	89.2	0.0	0.5	0.0
	10.0	2.5	82.5	0.0	1.4	0.0
	12.0	1.7	121.5	0.0	1.4	0.0
	14.0	1.3	126.7	0.0	1.4	0.0
	16.0	1.3	208.3	0.0	1.8	0.0
	18.0	0.8	168.7	0.0	1.4	0.0
	20.0	0.4	129.6	0.0	0.9	0.0
	22.0	0.3	150.5	0.0	0.9	0.0
	24.0	0.6	330.1	0.0	1.8	0.0
	26.0	0.5	274.6	0.0	1.8	0.0
	28.0	0.2	185.0	0.0	0.9	0.0
	30.0	0.3	278.4	0.0	1.4	0.0
QuadMnDBH/MnHt/Subtotals	21.6	11.4	5,193.7	0.0	29.1	0.0
<b>Product Group Total</b>	<b>21.6</b>	<b>11.4</b>	<b>5,193.7</b>	<b>0.0</b>	<b>29.1</b>	<b>0.0</b>

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B1

Area (acres): 48.0  
02/2013

<b>Product Group</b>						
Product Species--Volume1/2 Tables	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
<b>Pulwood</b>						
<b>Chips</b>		#	Tons		sq. ft.	***
Tanoak--RGO Tons by Feet/						
	10.0	8.3	2.6	0.0	4.5	0.0
	12.0	8.7	4.4	0.0	6.8	0.0
	14.0	8.1	6.5	0.0	8.6	0.0
	16.0	4.6	5.5	0.0	6.4	0.0
	18.0	4.6	7.6	0.0	8.2	0.0
	20.0	3.1	6.3	0.0	6.8	0.0
	22.0	1.2	3.3	0.0	3.2	0.0
	24.0	1.3	3.9	0.0	4.1	0.0
	26.0	0.2	0.8	0.0	0.9	0.0
	28.0	0.3	1.0	0.0	1.4	0.0
	30.0	0.6	2.3	0.0	2.7	0.0
	32.0	0.2	1.6	0.0	1.4	0.0
	34.0	0.1	1.0	0.0	0.9	0.0
	36.0	0.2	1.3	0.0	1.4	0.0
	38.0	0.1	0.5	0.0	0.5	0.0
QuadMnDBH/MnH/Subtotals	15.9	41.7	48.5	0.0	57.7	0.0
Madrone--RGO Tons by Feet/						
	10.0	0.8	0.2	0.0	0.5	0.0
	16.0	0.7	0.7	0.0	0.9	0.0
	18.0	1.0	1.5	0.0	1.8	0.0
	20.0	0.2	0.2	0.0	0.5	0.0
	22.0	0.2	0.5	0.0	0.5	0.0
	24.0	0.6	1.6	0.0	1.8	0.0
	26.0	0.6	2.5	0.0	2.3	0.0
	28.0	0.5	2.0	0.0	2.3	0.0
	30.0	0.2	1.0	0.0	0.9	0.0
	32.0	0.2	0.6	0.0	0.9	0.0
	34.0	0.1	0.8	0.0	0.9	0.0
	36.0	0.3	1.8	0.0	1.8	0.0
	38.0	0.1	0.5	0.0	0.5	0.0
	40.0	0.1	0.9	0.0	0.9	0.0
	48.0	0.1	0.7	0.0	1.4	0.0
	50.0	0.0	0.4	0.0	0.5	0.0
	52.0	0.0	0.1	0.0	0.5	0.0
QuadMnDBH/MnH/Subtotals	24.5	5.7	15.9	0.0	18.6	0.0

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B1

Area (acres): 48.0  
02/2013

**Product Group**

Product Species--Volume1/2 Tables	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
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**Pulwood**

Chips	#	Tons	sq. ft.	***
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Other Hardwood--RGO Tons by Feet/

10.0	1.7	0.4	0.0	0.9	0.0	
12.0	2.3	1.1	0.0	1.8	0.0	
14.0	0.9	0.6	0.0	0.9	0.0	
16.0	2.6	2.4	0.0	3.6	0.0	
18.0	1.3	1.7	0.0	2.3	0.0	
20.0	1.3	1.8	0.0	2.7	0.0	
22.0	0.9	1.9	0.0	2.3	0.0	
24.0	0.6	1.4	0.0	1.8	0.0	
28.0	0.1	0.5	0.0	0.5	0.0	
30.0	0.1	0.4	0.0	0.5	0.0	
34.0	0.1	0.6	0.0	0.5	0.0	
38.0	0.1	0.4	0.0	0.5	0.0	
40.0	0.1	0.5	0.0	0.5	0.0	
48.0	0.1	0.6	0.0	0.9	0.0	
QuadMnDBH/MnHt/Subtotals	17.4	11.9	14.4	0.0	19.5	0.0

Canyon Live Oak--RGO Tons by Feet/

14.0	0.9	0.5	0.0	0.9	0.0	
16.0	1.0	0.9	0.0	1.4	0.0	
18.0	1.3	1.2	0.0	2.3	0.0	
20.0	0.4	0.7	0.0	0.9	0.0	
22.0	0.3	0.8	0.0	0.9	0.0	
24.0	0.4	1.1	0.0	1.4	0.0	
28.0	0.3	1.2	0.0	1.4	0.0	
30.0	0.1	0.4	0.0	0.5	0.0	
36.0	0.1	0.3	0.0	0.5	0.0	
QuadMnDBH/MnHt/Subtotals	19.6	4.8	7.2	0.0	10.0	0.0

Black Oak--RGO Tons by Feet/

20.0	0.2	0.1	0.0	0.5	0.0	
36.0	0.1	0.4	0.0	0.5	0.0	
QuadMnDBH/MnHt/Subtotals	24.7	0.3	0.5	0.0	0.9	0.0

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B1

Area (acres): 48.0  
02/2013

<b>Product Group</b>						
<b>Product</b> Species--Volume1/2 Tables	<b>DBH</b> (inches)	<b># Trees</b>	<b>Volume 1</b>	<b>Volume 2</b>	<b>Basal Area</b>	<b>Mean Merch. Height</b>
<b>Pulwood</b>						
<b>Chips</b>		<b>#</b>	<b>Tons</b>		<b>sq. ft.</b>	<b>***</b>
White Oak--RGO Tons by Feet/						
	18.0	0.3	0.6	0.0	0.5	0.0
	24.0	0.1	0.4	0.0	0.5	0.0
	28.0	0.1	0.4	0.0	0.5	0.0
	30.0	0.1	0.4	0.0	0.5	0.0
	32.0	0.1	0.3	0.0	0.5	0.0
QuadMnDBH/MnHt/Subtotals	24.7	0.7	2.0	0.0	2.3	0.0
<b>Product Group Total</b>	<b>17.5</b>	<b>65.0</b>	<b>88.5</b>	<b>0.0</b>	<b>109.1</b>	<b>0.0</b>
<b>Stand Total</b>		<b>76.4</b>			<b>138.2</b>	
<b>Stand Means</b>	<b>18.2</b>					



FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B2

Area (acres): 10.0  
02/2013

<b>Product Group</b>						
Product Species--Volume1/2 Tables	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
<b>Dimensional Wood</b>						
<b>Sawtimber</b>						
		#	Board Feet		sq. ft.	***
Douglas-fir--DF78/						
	10.0	4.6	197.1	0.0	2.5	0.0
	12.0	6.4	490.2	0.0	5.0	0.0
	14.0	2.3	271.3	0.0	2.5	0.0
	16.0	3.6	409.3	0.0	5.0	0.0
	20.0	1.1	345.5	0.0	2.5	0.0
	22.0	0.9	212.9	0.0	2.5	0.0
	24.0	0.8	534.8	0.0	2.5	0.0
	26.0	2.7	1,824.7	0.0	10.0	0.0
	28.0	1.8	1,440.3	0.0	7.5	0.0
	30.0	1.5	1,463.3	0.0	7.5	0.0
	32.0	1.8	1,850.7	0.0	10.0	0.0
	34.0	1.2	1,440.0	0.0	7.5	0.0
	36.0	1.1	1,609.9	0.0	7.5	0.0
	38.0	0.3	692.3	0.0	2.5	0.0
	40.0	0.9	1,943.8	0.0	7.5	0.0
	42.0	1.3	3,153.2	0.0	12.5	0.0
	44.0	1.2	2,524.8	0.0	12.5	0.0
	46.0	0.2	617.6	0.0	2.5	0.0
	48.0	0.4	990.3	0.0	5.0	0.0
	50.0	0.6	1,909.8	0.0	7.5	0.0
	52.0	0.3	934.9	0.0	5.0	0.0
	54.0	0.3	1,312.2	0.0	5.0	0.0
	58.0	0.1	553.9	0.0	2.5	0.0
	66.0	0.2	536.5	0.0	5.0	0.0
	68.0	0.1	1,102.6	0.0	2.5	0.0
QuadMnDBH/MnH/Subtotals	27.0	35.7	28,361.8	0.0	142.5	0.0
<b>Product Group Total</b>	<b>27.0</b>	<b>35.7</b>	<b>28,361.8</b>	<b>0.0</b>	<b>142.5</b>	<b>0.0</b>

FRENCH RANCH  
Forest Cruise Report

Stand: # Trees, Volumes 1 & 2 , Means, Per Acre  
By DBH, Product and Species

Stand ID: B2

Area (acres): 10.0  
02/2013

Product Group	DBH (inches)	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
<b>Product</b> Species--Volume1/2 Tables						
<b>Pulwood</b>						
<b>Chips</b>		#	Tons		sq. ft.	***
Tanoak--RGO Tons by Feet/						
	10.0	18.3	5.7	0.0	10.0	0.0
	12.0	6.4	2.8	0.0	5.0	0.0
	14.0	2.3	1.6	0.0	2.5	0.0
	20.0	1.1	2.4	0.0	2.5	0.0
	22.0	0.9	2.4	0.0	2.5	0.0
	26.0	0.7	2.7	0.0	2.5	0.0
	32.0	0.4	1.1	0.0	2.5	0.0
	34.0	0.4	4.4	0.0	2.5	0.0
	40.0	0.3	2.9	0.0	2.5	0.0
	42.0	0.5	6.3	0.0	5.0	0.0
QuadMnDBH/MnHt/Subtotals	14.8	31.5	32.3	0.0	37.5	0.0
Madrone--RGO Tons by Feet/						
	32.0	0.4	1.2	0.0	2.5	0.0
	34.0	0.8	4.2	0.0	5.0	0.0
	36.0	0.4	2.6	0.0	2.5	0.0
QuadMnDBH/MnHt/Subtotals	33.9	1.6	7.9	0.0	10.0	0.0
Other Hardwood--RGO Tons by Feet/						
	14.0	2.3	1.6	0.0	2.5	0.0
	20.0	1.1	2.0	0.0	2.5	0.0
	22.0	0.9	1.6	0.0	2.5	0.0
QuadMnDBH/MnHt/Subtotals	17.6	4.4	5.2	0.0	7.5	0.0
<b>Product Group Total</b>	<b>16.4</b>	<b>37.5</b>	<b>45.5</b>	<b>0.0</b>	<b>55.0</b>	<b>0.0</b>
<b>Stand Total</b>		<b>73.2</b>			<b>197.5</b>	
<b>Stand Means</b>	<b>22.2</b>					

FRENCH RANCH  
Forest Cruise Report

Stand: Number of Trees Statistics, Per Acre  
By Product and Species

Stand ID: A1 Site Index: 70.00 Area (acres): 12.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
		----- # -----				
Douglas-fir	34.46	40.01	45.56	5.79	13.9	110.2
<b>Overall</b>	34.46	40.01	45.56	5.79	13.9	110.2
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
		----- # -----				
Tanoak	60.52	70.04	79.56	9.91	13.6	107.8
Madrone	2.28	3.99	5.70	1.78	42.8	339.6
Other Hardwood	0.53	1.22	1.91	0.72	56.5	447.9
Black Oak	0.01	0.22	0.43	0.22	96.0	761.6
<b>Overall</b>	65.97	75.47	84.97	9.90	12.6	99.9
<b>All Product Groups</b>	105.09	115.48	125.88	10.83	9.0	71.4

Stand ID: A2 Site Index: 70.00 Area (acres): 27.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
		----- # -----				
Douglas-fir	43.99	75.01	106.04	29.52	41.4	96.4
<b>Overall</b>	43.99	75.01	106.04	29.52	41.4	96.4
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
		----- # -----				
Tanoak	6.65	20.96	35.27	13.61	68.3	159.1
Madrone	-0.20	3.93	8.06	3.93	105.1	244.9
<b>Overall</b>	11.28	24.89	38.51	12.95	54.7	127.5
<b>All Product Groups</b>	69.82	99.90	129.99	28.62	30.1	70.2

Stand ID: B1 Site Index: 70.00 Area (acres): 48.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
			----- # -----			
Douglas-fir	8.87	11.43	14.00	2.68	22.4	219.9
<b>Overall</b>	<b>8.87</b>	<b>11.43</b>	<b>14.00</b>	<b>2.68</b>	<b>22.4</b>	<b>219.9</b>

<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
			----- # -----			
Tanoak	35.88	41.67	47.47	6.06	13.9	136.3
Madrone	4.01	5.70	7.40	1.77	29.7	291.5
Other Hardwood	9.14	11.87	14.59	2.84	22.9	224.9
Canyon Live Oak	2.66	4.78	6.91	2.22	44.5	435.8
Black Oak	0.06	0.27	0.48	0.22	76.3	747.8
White Oak	0.34	0.68	1.02	0.35	49.6	485.8
<b>Overall</b>	<b>58.56</b>	<b>64.98</b>	<b>71.40</b>	<b>6.71</b>	<b>9.9</b>	<b>96.8</b>

<b>All Product Groups</b>	<b>69.74</b>	<b>76.42</b>	<b>83.10</b>	<b>6.98</b>	<b>8.7</b>	<b>85.7</b>
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Stand ID: B2 Site Index: 70.00 Area (acres): 10.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
			----- # -----			
Douglas-fir	26.90	35.72	44.54	8.97	24.7	100.5
<b>Overall</b>	<b>26.90</b>	<b>35.72</b>	<b>44.54</b>	<b>8.97</b>	<b>24.7</b>	<b>100.5</b>

<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
			----- # -----			
Tanoak	17.55	31.46	45.37	14.15	44.2	179.9
Madrone	0.35	1.59	2.84	1.27	78.1	317.9
Other Hardwood	0.94	4.43	7.92	3.55	78.7	320.4
<b>Overall</b>	<b>23.57</b>	<b>37.49</b>	<b>51.41</b>	<b>14.16</b>	<b>37.1</b>	<b>151.1</b>

FRENCH RANCH  
Forest Cruise Report

Stand: Number of Trees Statistics, Per Acre  
By Product and Species

All Product Groups	57.56	73.20	88.85	15.91	21.4	86.9
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Stand ID: A1 Site Index: 70.00 Area (acres): 12.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
	----- Board Feet -----					
Douglas-fir	11,134.75	13,056.40	14,978.05	2,001.96	14.7	116.8
<b>Overall</b>	11,134.75	13,056.40	14,978.05	2,001.96	14.7	116.8

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
	----- Tons -----					
Tanoak	42.43	48.28	54.13	6.09	12.1	96.1
Madrone	7.45	11.42	15.39	4.14	34.8	275.8
Other Hardwood	1.19	2.76	4.32	1.63	56.7	449.8
Black Oak	0.03	0.70	1.38	0.70	96.0	761.6
<b>Overall</b>	56.67	63.17	69.66	6.76	10.3	81.6

**All Product Groups** 13,119.56

Stand ID: A2 Site Index: 70.00 Area (acres): 27.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
	----- Board Feet -----					
Douglas-fir	15,175.34	25,153.56	35,131.77	9,492.73	39.7	92.4
<b>Overall</b>	15,175.34	25,153.56	35,131.77	9,492.73	39.7	92.4

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
	----- Tons -----					
Tanoak	3.69	14.75	25.81	10.52	75.0	174.7
Madrone	-0.65	12.64	25.92	12.64	105.1	244.9
<b>Overall</b>	12.68	27.39	42.10	13.99	53.7	125.2

**All Product Groups** 25,180.94

FRENCH RANCH  
Forest Cruise Report

Stand: Volume1 Statistics, Per Acre  
By Product and Species

Stand ID: B1 Site Index: 70.00 Area (acres): 48.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
	----- Board Feet -----					
Douglas-fir	4,232.49	5,193.70	6,154.91	1,004.29	18.5	181.4
<b>Overall</b>	4,232.49	5,193.70	6,154.91	1,004.29	18.5	181.4

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
	----- Tons -----					
Tanoak	40.85	48.47	56.09	7.96	15.7	154.1
Madrone	11.09	15.93	20.76	5.05	30.3	297.5
Other Hardwood	11.33	14.43	17.54	3.25	21.5	211.1
Canyon Live Oak	4.61	7.19	9.76	2.69	35.9	351.7
Black Oak	0.13	0.53	0.93	0.42	75.5	740.1
White Oak	1.01	1.99	2.96	1.02	49.0	479.9
<b>Overall</b>	79.44	88.54	97.63	9.50	10.3	100.7

**All Product Groups** 5,282.24

Stand ID: B2 Site Index: 70.00 Area (acres): 10.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
	----- Board Feet -----					
Douglas-fir	22,420.93	28,361.79	34,302.66	6,043.30	20.9	85.2
<b>Overall</b>	22,420.93	28,361.79	34,302.66	6,043.30	20.9	85.2

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
	----- Tons -----					
Tanoak	21.19	32.35	43.50	11.34	34.5	140.3
Madrone	2.24	7.95	13.66	5.81	71.9	292.4
Other Hardwood	1.42	5.20	8.97	3.84	72.6	295.5
<b>Overall</b>	32.09	45.49	58.89	13.63	29.5	119.9

All Product Groups

28,407.29



Stand ID: A1 Site Index: 70.00 Area (acres): 12.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
		----- sq. ft. -----				
Douglas-fir	68.61	79.31	90.02	11.15	13.5	107.1
<b>Overall</b>	68.61	79.31	90.02	11.15	13.5	107.1
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
		----- sq. ft. -----				
Tanoak	58.39	66.21	74.03	8.15	11.8	93.7
Madrone	9.79	14.48	19.18	4.89	32.4	257.1
Other Hardwood	1.49	3.45	5.40	2.04	56.7	449.8
Black Oak	0.03	0.69	1.35	0.69	96.0	761.6
<b>Overall</b>	76.22	84.83	93.44	8.97	10.1	80.5
<b>All Product Groups</b>	152.43	164.14	175.85	12.20	7.1	56.6

Stand ID: A2 Site Index: 70.00 Area (acres): 27.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
		----- sq. ft. -----				
Douglas-fir	89.37	140.00	190.63	48.17	36.2	84.3
<b>Overall</b>	89.37	140.00	190.63	48.17	36.2	84.3
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
		----- sq. ft. -----				
Tanoak	5.64	20.00	34.36	13.66	71.8	167.3
Madrone	-0.68	13.33	27.35	13.33	105.1	244.9
<b>Overall</b>	16.46	33.33	50.21	16.06	50.6	118.0
<b>All Product Groups</b>	120.52	173.33	226.15	50.24	30.5	71.0

Stand ID: B1 Site Index: 70.00 Area (acres): 48.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
Douglas-fir	24.23	29.09	33.95	5.08	16.7	163.8
<b>Overall</b>	24.23	29.09	33.95	5.08	16.7	163.8

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
Tanoak	50.23	57.73	65.23	7.83	13.0	127.3
Madrone	13.14	18.64	24.13	5.74	29.5	289.2
Other Hardwood	15.54	19.55	23.56	4.19	20.5	201.1
Canyon Live Oak	6.03	10.00	13.97	4.15	39.7	389.5
Black Oak	0.30	0.91	1.52	0.64	67.3	659.5
White Oak	1.14	2.27	3.41	1.18	49.9	489.0
<b>Overall</b>	99.67	109.09	118.51	9.84	8.6	84.6
<b>All Product Groups</b>	128.38	138.18	147.98	10.24	7.1	69.5

Stand ID: B2 Site Index: 70.00 Area (acres): 10.0  
02/2013

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Dimensional Wood -- 66% CI</b>						
<b>Sawtimber</b>						
Douglas-fir	119.52	142.50	165.48	23.37	16.1	65.6
<b>Overall</b>	119.52	142.50	165.48	23.37	16.1	65.6

Product Group	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
<b>Product Group</b>						
<b>Product</b>						
<b>Species</b>						
<b>Pulpwood -- 66% CI</b>						
<b>Chips</b>						
Tanoak	25.34	37.50	49.66	12.37	32.4	131.9
Madrone	2.39	10.00	17.61	7.75	76.1	309.8
Other Hardwood	2.15	7.50	12.85	5.44	71.3	290.1
<b>Overall</b>	39.82	55.00	70.18	15.44	27.6	112.3

FRENCH RANCH  
Forest Cruise Report

Stand: Basal Area Statistics, Per Acre  
By Product and Species

All Product Groups	178.01	197.50	216.99	19.82	9.9	40.1
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# TIMBER MANAGEMENT PLAN

## Table of Contents

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44	Current Property Owner, Timber Management Plan Objectives, Project Description, Access and Roads for JTMP Management Units
46	Minimum Stocking Standards
47	Timber Management Plan Use Agreement
48	Timber Management Plan Map

## TIMBER MANAGEMENT PLAN

### 1. CURRENT PROPERTY OWNER

Parcels A, B, C, and D  
Richard and Sally French  
12051 Wilder Ridge Road  
Ettersburg, California 95558

### 2. TIMBER MANAGEMENT PLAN OBJECTIVES

The objective of the "*Timber Management Plan*" is to identify access, rights-of-ways & minimum stocking standards of the Forest Practice Rules required to maintain viable timber producing parcels.

### 3. PROJECT DESCRIPTION

A Joint Timber Management Plan (JTMP) applies to the "division" of land into assessor parcels containing less than 160 acres of Timber Production Zone (TPZ). Parcel is defined as "that portion of an Assessor's parcel that is timberland". Activities that may result in such a division include subdivision, lot line adjustment and conveyances of existing land units (e.g. land patents) underlying an Assessor's parcel zoned TPZ, when any conveyance contains less than 160 acres of TPZ land.

Management units correspond to four separate parcels being altered by a lot line adjustment and a merger. Since the recognition that two of the four parcels will result in substandard Timber Production Zone (TPZ) parcels, a Joint Timber Management Plan (JTMP) is required to demonstrate that the resulting management units will be suitable for timber production and harvesting. This JTMP is therefore being submitted to demonstrate to the County that the resulting substandard TPZ parcels can be jointly managed to maintain viable timber production.

### 4. ACCESS AND ROADS FOR JTMP MANAGEMENT UNITS

The management units are accessed by rock surfaced permanent and seasonal roads that lead from the county maintained, paved roads, of Wilder Ridge Road, Ettersburg Road, Etter Ranch Road, and French Ranch Road.

Management Unit A - Management Unit A is accessed by permanent and seasonal roads that come directly off of Wilder Ridge Road. Potential new logging access roads could also be constructed off of Wilder Ridge for timber harvesting if necessary to improve access to Management Unit A. One short spur road within Management Unit D can provide access to a portion of Management Unit A from Wilder Ridge Road in Section 1, T4S-R1E, H.B.M. This road is shown on the Timber Management Plan Map. Management Unit A shall be provided access to roads located across Management Unit D for the purpose of timber harvesting and logging access along the designated roadway mapped on the Timber Management Plan Map for the purpose of timber management activities pursuant to the attached Timber Management Plan Use Agreement.

Management Unit B - Management Unit B is accessed by permanent and seasonal roads within Management Unit D that come directly off of Ettersburg Road in Sections 6, 7, and 8, T4S-R2E, H.B.M. These roads are shown on the Timber Management Plan Map. Management Unit B shall be provided access to roads located across Management Unit D for the purpose of timber harvesting and logging access along the designated roadway mapped on the Timber Management Plan Map for the purpose of timber management activities pursuant to the attached Timber Management Plan Use Agreement.

Management Unit C - Management Unit C is accessed by private roads that come directly off of county, maintained roads, Wilder Ridge Road and Etter Ranch Road. Management Unit C does not rely on other Management Units for access, nor does it contain Timber Production Zone lands. Therefore, access through the other Management Units within this JTMP is not necessary nor being designated.

Management Unit D - Management Unit D is large parcel containing a total of 2,226.99 acres, of which 1,655.6 are Timber Production Zone. It is accessed by numerous private, permanent and seasonal roads, all of which come off of paved county roads, Ettersburg Road, Wilder Ridge Road, Etter Ranch Road, and French Ranch Road. Management Unit D nearly surrounds all of Management Units A, B, and C. As such there are roads located in Management Units A, B, and C that provide access to portions of Management Unit D. Two short spur roads within Management Unit A can provide access to a portion of Management Unit D from Wilder Ridge Road in Section 1, T4S-R1E, H.B.M. These roads are shown on the Timber Management Plan Map. Management Unit D shall be provided access to roads located across Management Unit A for the purpose of timber harvesting and logging access along the designated roadway mapped on the Timber Management Plan Map for the purpose of timber management activities pursuant to the attached Timber Management Plan Use Agreement.

Three road segments within Management Unit B can provide access to portions of Management Unit D from Ettersburg Road in Section 7, T4S-R2E, H.B.M. These roads are shown on the Timber Management Plan Map. Management Unit D shall be provided access to roads located across Management Unit B for the purpose of timber harvesting and logging access along the designated roadway mapped on the Timber Management Plan Map for the purpose of timber management activities pursuant to the attached Timber Management Plan Use Agreement.

Two road segments within Management Unit C can provide access to Management Unit D from Wilder Ridge Road and Etter Ranch Road in Sections 7, T4S-R2E, H.B.M. and Section 12, T4S-R1E, H.B.M. These roads are shown on the Timber Management Plan Map. Management Unit D shall be provided access to roads located across Management Unit C for the purpose of timber harvesting and logging access along the designated roadway mapped on the Timber Management Plan Map for the purpose of timber management activities pursuant to the attached Timber Management Plan Use Agreement.

The management units do not require specific access for skid trails and/or cable corridors. Access for new non-descript skid trails and cable corridor construction have been described in the attached Timber Management Use Agreement. The access described in the Timber Management Use Agreement is required to maintain viable timber management units. If new skid trails and cable corridors are required to be established across management unit boundaries their location should be jointly established by the affected management unit owners to benefit current and future timber operations. Landowners should consult with an RPF prior to the establishment of any skid trails or cable corridors. Any skid trail or cable corridor construction occurring within the JTMP area should be permitted under an approved THP or equivalent document, pursuant to the Timber Management Plan Use Agreement.

The Timber Management Plan Use Agreement is to insure that access is available for each management unit for the eventual commercial harvest of timber products. Each party shall have the right to construct skid trails and cable corridors, pursuant to the Timber Management Plan Use Agreement, across real property of the other parties for the purpose of forestry management and timber harvesting, provided that locations of new skid trails and cable corridors are determined by an RPF in association with approved THP or equivalent document.

## 5. MINIMUM STOCKING STANDARDS

**912.7, 932.7, 952.7 Resource Conservation Standards for Minimum Stocking [All Districts, note (b)(1)(D)]**

The following resource conservation standards constitute minimum acceptable stocking in the Coast Forest District after timber operations have been completed.

(a) Rock outcroppings, meadows, wet areas, or other areas not normally bearing commercial species shall not be considered as requiring stocking and are exempt from such provisions.

(b) An area on which timber operations have taken place shall be classified as acceptably stocked if either of the standards set forth in (1) or (2) below are met within five (5) years after completion of timber operations unless otherwise specified in the rules.

(1) An area contains an average point count of 300 per acre on Site I, II and III lands or 150 on site IV and V lands to be computed as follows:

(A) Each countable tree [Ref. PRC § 4528(b)] which is not more than 4 inches d.b.h. counts 1 point.

(B) Each countable tree over 4 inches and not more than 12 inches d.b.h. counts 3 points.

(C) Each countable tree over 12 inches d.b.h. counts as 6 points.

(D) **[Coast]** Root crown sprouts will be counted using the average stump diameter 12 inches above average ground level of the original stump from which the sprouts originate, counting one sprout for each foot of stump diameter to a maximum of 6 per stump.

(2) The average residual basal area measured in stems 1 inch or larger in diameter, is at least 85 square ft. per acre on Site I lands, and 50 square ft. per acre on lands of Site II classification or lower. Site classification shall be determined by the RPF who prepared the plan.

(3) To the extent basal area standards are specified in the rules in excess of 14 CCR § 912.7(b)(2) [932.7(b)(2), 952.7(b)(2)], up to 15 square feet of basal area of those standards higher than the minimum may be met by counting snags, and decadent or deformed trees of value to wildlife in the following sizes:

(A) 30 inches or greater dbh and 50 feet or greater in height on site I and II lands;

(B) 24 inches or greater dbh and 30 feet or greater in height on site III lands; and

(C) 20 inches or greater dbh and 20 feet or greater in height on site IV and V lands.

(c) The substitution provided for in 14CCR § 912.7(b)(3) [932.7(b)(2), 952.7(b)(2)] may only be done when the potential spread of insects and diseases will not have a significantly adverse impact on long term productivity or forest health.

(d) The resource conservation standards of the rules may be met with Group A and/or B commercial species. The percentage of the stocking requirements met with Group A species shall be no less than the percentage of the stand basal area they comprised before harvesting. The site occupancy provided by Group A species shall not be reduced relative to Group B species. When considering site occupancy, the Director shall consider the potential long term effects of relative site occupancy of Group A species versus Group B species as a result of harvest. If Group A species will likely recapture the site after harvest, Group B species do not need to be reduced. The time frames for recapturing the site shall be consistent with achieving MSP. The Director may prohibit the use of Group A and/or B commercial species which are non-indigenous or are not physiologically suited to the area involved. Exceptions may be approved by the Director if the THP provides the following information & those exceptions are agreed to by the timberland owner:

(1) Explain and justify with clear and convincing evidence how using Group A non-indigenous, or Group B species to meet the resource conservation standards will meet the intent of the Forest Practice Act as described in PRC § 4513. The discussion shall include at least:

(A) The management objectives of the post-harvest stand;

(B) A description of the current stand, including species composition and current stocking levels within the area of Group B species. The percentage can be measured by using point-count, basal area, stocked plot, or other method agreed to by the Director.

(C) The percentage of the post-harvest stocking to be met with Group B species. Post harvest percentages will be determined on the basis of stocked plots. Only the methods provided by 14 CCR §§ 1070-1075 shall be used in determining if the standards of PRC § 4561 have been met.

(D) A description of what will constitute a countable tree, as defined by PRC § 4528 for a Group B species and how such a tree will meet the management objectives of the post-harvest stand.

The Director, after an initial inspection pursuant to PRC § 4604, shall approve use of Group B species, as exceptions to the pre-harvest basal area percentage standard, if in his judgment the intent of the Act will be met, and there will not be an immediate significant and long-term harm to the natural resources of the state.

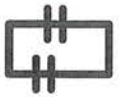
## TIMBER MANAGEMENT PLAN USE AGREEMENT

1. Each of the parties shall have the right to use designated roadway across real property of the other parties as shown on the Timber Management Plan Map and described in the Timber Management Plan for the purpose of timber management activities. This may include, but is not limited to, road access for trucks, machinery and personnel.
2. Each of the parties shall have the right to construct skid trails and cable corridors across real property of the other parties, provided that locations of new skid trails and cable corridors are determined by an RPF in association with the preparation of a THP or other applicable permit. If an RPF identifies the need to construct new skid trails or cable corridors across management unit boundaries, the RPF shall mark their location on the ground. The RPF shall notify the management unit owners of the proposed location and the management unit owners shall be allowed to propose an alternative location. The RPF shall use the alternative location if said alternative is of reasonably equal utility to the management unit owners and of reasonably equal cost. The management unit owners should cooperate in good faith, reasonable manner in establishing the location of new skid trails or cable corridors.
3. It is recognized that repairs and maintenance of roads may be required periodically. Roads shall be maintained in substantially the same condition as is excepting for improvements to better maintain said roads including drainage structures and facilities and possibly road surfacing as needed. Roads shall be no wider or larger than is necessary for the particular use. Roads shall be generally no wider than 16 feet with widening for turns and turnouts as required for safety. Maintenance of roads shall be the responsibility of the landowner utilizing the roads for timber management.
4. No party shall be required to make payment to the other for the use of the roadway for timber management, save and except the maintenance thereof as herein provided.
5. Current and/or future owners of Management Units A, B, C, and D shall be considered "Party, Parties" and are subject to the Timber Management Unit Agreement.



# French Ranch JTMP

## Timber Management Plan Map



JTMP Boundary



Parcel / Management Unit Boundary

### JTMP Roads

- County
- Permanent
- Seasonal
- Trail

Potential New Logging Access Road (Parcel A)

### JTMP Watercourses

- Class I
- Class II
- Class III

**NORTH**  
1" = 2,000'

Sec. 35 & 36, T3S-R1E, H. B. M.; Sec. 1, 2, 11, & 12, T4S-R1E, H. B. M.; Sec. 6, 7, & 8, T4S-R2E, H. B. M.

### Timber Harvesting / Logging Access Roads Legend

- Road Over Management Unit D To Be Used For Timber Harvesting / Logging Access Of Management Unit A
- Road Over Management Unit A To Be Used For Timber Harvesting / Logging Access Of Management Unit D
- Road Over Management Unit D To Be Used For Timber Harvesting / Logging Access Of Management Unit B
- Road Over Management Unit B To Be Used For Timber Harvesting / Logging Access Of Management Unit D
- Road Over Management Unit C To Be Used For Timber Harvesting / Logging Access Of Management Unit D

