

Jackson Demonstratin State Forest
CHAMBERLAIN CONFLUENCE 2019 Timber Sale
SUMMARY OF SALE INFORMATION

Bid Date:	February 5, 2019	Estimated Net Volume:	5,895 MBF
Redwood	\$650 /Mbf (min bid)	THP Number:	1-17-140 MEN
DF & WW	\$40 /Mbf (min bid)	Phone:	(707) 964-5674
		Information:	Jason Serna

Table 1. Estimated Total Volume to be Harvested (Bf)

Species	Gross	Net	% Defect & Breakage	% Comp.
Redwood	2,569,897	2,287,208	11%	38.8%
Douglas-fir	4,131,286	3,594,219	13%	61.0%
Whitewoods	15,093	13,433	11%	0.2%
Totals	6,716,276	5,894,860		100%

Table 2b. Estimated Volume, Cable and WLPZ (Bf) 59%

Species	Gross	Net
Redwood	1,550,361	1,379,821
Douglas-fir	2,388,434	2,077,938
Whitewoods	0	0
Totals	3,938,795	3,457,759

Table 2c. Estimated Volume, Tractor and ROW (Bf) 41%

Species	Gross	Net
Redwood	1,019,536	907,387
Douglas-fir	1,742,852	1,516,281
Whitewoods	15,093	13,433
Totals	2,777,481	2,437,101

Table 3. Estimated Acreage

	Plan acres
Cable	450
Tractor/Road ROW	287
Totals	737

Table 4. Harvest QMD by Species *(not including estimated cable corridor)*

Species	DBH (in.)
Redwood	22.2
Douglas-fir	19.1
Whitewoods	18.8

GENERAL INFORMATION

The list below is not intended to be all inclusive and all requirements of the North Fork Spur End Timber Harvest Plan (1-17-140 MEN) apply. Copies of Sections I and II of the THP are available by request from the State Forest headquarters or available via the internet, [ftp://thp.fire.ca.gov/THPLibrary/North Coast Region/THPs/THPs2017/1-17-140MEN/](ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region/THPs/THPs2017/1-17-140MEN/) One complete copy will be provided to the LTO.

TIMBER HARVESTING PLAN

SELECTION – HARVEST TREE DESIGNATION (*All Harvest Units*)

Harvest trees shall be marked with blue paint using a horizontal stripe at approximately breast height and a stump mark below the cut line.

GROUP SELECTION – HARVEST TREE DESIGNATION (*All Harvest Units*)

Group boundaries are identified with a combination of red/black striped flagging and yellow painted vertical stripes facing the group opening. Within group boundaries, unmarked conifers shall be harvested. Conifers may be selected for retention (see below). Hardwoods within group boundaries will remain standing, with the exception of trees knocked over from yarding and those felled to allow for safety. See Item 14(f) below for management of group B species within the GROUP SELECTION silviculture areas.

Harvesting is proposed between group openings. Harvest trees shall be marked with blue paint using a horizontal stripe at breast height and a stump mark below the cut line. For more information on marking between groups, see Section III, Item 14(d).

RETENTION TREES - All areas within THP

Marking of retention trees is not required; however individual trees may be marked for retention by the RPF or supervised designee with blue or orange paint with a circle at breast height and at the base of the tree.

Retention in Class III ELZs [ref 14 CCR 916.9(h)].

- Retain all large down wood and snags.
- Trees in the ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone.
- Hardwoods marked for retention shall not be treated with herbicide or felled, except for situations (1-4) discussed below.
- Retention of trees needed to achieve resource conservation standards in 14 CCR 912.7.
- See Section III, Item 26 for explanation and justification for managing hardwoods within Class III ELZ's.

Trees that are identified for retention may be felled in the following situations:

- 1) To provide safe operating corridors for skyline cable operations. See CABLE CLEARANCE TREES below.
- 2) To provide stumps for cable-rigging purposes.
- 3) Compliance with Title 8 CCR, Logging and Sawmill Safety Orders.
- 4) As described in Item 14(g) below.
- 5) Road Right-of-way, see below.

ROAD RIGHT-OF-WAY – Seasonal and Temporary Road Construction and Road 240 Reconstruction

Clearing limits for Proposed Seasonal and Temporary Roads and Seasonal Road 240 Reconstruction are designated on retention trees with two vertical orange painted stripes facing the flagged centerline. All trees between the clearing limits are proposed for harvest. If necessary to provide adequate clearance for road construction, additional trees may be harvested upon approval of the responsible RPF or designee. Proposed

Roads are centerline flagged with solid orange Site-Mark® “TRUCK ROAD” in black lettering. Further discussion in this section, Item 25.

Item 14g

CABLE CLEARANCE TREES: Any tree (within the THP area only) may be harvested/felled if necessary for cable clearance, except for trees located within a WPLZ. Trees located within a WLPZ shall not be felled for cable corridors unless they directly impact the safety of cable-yarding operations; trees felled for safety may be harvested. Compliance with all other applicable Forest Practice Rules and requirements in the THP is required.

TREES SUBSTANTIALLY DAMAGED BY LOGGING OPERATIONS: Merchantable young growth trees damaged during timber operations shall be felled as approved and directed by the Plan Submitter. Damaged trees may not be felled if marked for retention if damaged tree has a cavity potentially used for wildlife.

DOWNED TREES: There shall be no cutting or removal of existing unmarked down trees or logs. These logs may be moved if necessary for clearing truck road rights-of-way and as otherwise necessary to harvest the designated timber. If windthrow of merchantable trees occurs in the logging area prior to completion of operations, windthrown trees outside of the WLPZ may be harvested upon approval of the Plan Submitter.

Item 16

No cable corridors shall be situated such that logs are yarded directly up or down watercourse channels.

With prior approval of the Plan Submitter’s designee, the LTO may cable yard any area designated for ground based yarding provided it will afford equal or greater protection to the soil and residual stand.

Item 20

Tractors may be used on slopes up to 20 percent to construct fire lines around concentrations of slash at cable landings provided there are no other limitations on tractor use.

Ground based equipment may be used within the area designated for cable yarding to long-line trees from cable areas with tracks/tires resting in the area designated for ground based equipment including roads.

Item 23

Year-round wet weather restrictions apply and shall be adhered to. A winter operating plan is included in Item 23.

Item 24 (f) & (k)

Road 200A and 1066 are proposed for abandonment, involving the removal of un-drained watercourse crossings, perched fill, diversion corrections and installation of drainage facilities.

Item 25

New road construction is proposed.

Where new road construction is proposed on slopes greater than 50 percent, the following shall apply: Roads shall be built using full bench construction utilizing an excavator with end-hauling. Sidecast shall be minimized to the extent feasible. Spoils not utilized in road construction shall be disposed of in stable areas with less than 30 percent slopes and outside of any WLPZ, EEZ or ELZ. Message flagging indicates the extent of new road construction on slopes > 50%. Timber Harvest Plan Map Point 1 identifies a location where road construction is proposed on slopes > 50% (and under 65%).

Road 1062, 1063 & 1065 Reconstruction:

Reconstruction consists of excavation within an existing road prism. Work includes removal of berms, vegetation, grading, removal of cut bank sloughing material, widening, outsloping where feasible and construction of landings. A few merchantable conifers will be required for removal to allow for road widening.

See item 14d. Other unmerchantable trees maybe removed to allow for reconstruction as needed.

Road 240 Reconstruction:

Work will be done to accomplish an improvement in drainage and course of travel for loaded log trucks by reducing overall road gradient, berms, and outsloping where feasible. The objective is to maintain a road gradient no more than 15 percent. Vegetation clearing limits are described in this section, Item 14d. See timber harvest map for location.

Item 26

All WLPZ's are identified with blue and white stripe "WLPZ" flagging. With the exception of WLPZ width, all protection measures applicable to Class II's apply to springs and wet areas.

Item 27

There are four locations where heavy equipment is proposed for tractor yarding within a WLPZ of a Class I Watercourse, two springs and one wet area.

Item 30

Slash created and trees knocked down by timber operations within 100 feet of the edge of JDSF Road 200, 240, 250, 330 and 1000 adjacent to the plan area shall be treated for fire hazard reduction. Treatment shall consist of lopping as defined in 14 CCR 895.1: *Severing and spreading of slash so that no part of it remains more than 30 in. (76.2 cm) above the ground (Ref. Sec. 4551.5, PRC)*. See Timber Harvest Map in back of Section II, illustrating the numbered road system.

Other than JDSF Road 200, 240, 250, 330 and 1000 described above, an alternative to 14 CCR 917.2 (b) is proposed for all other seasonal roads within or adjacent to the plan area, including JDSF Roads 240A, 244 and associated spurs. Guidance for the LTO to comply with this alternative practice is as follows:

The alternative slash treatment is proposed to reduce the treatment distance from the standard of 100 feet to the proposed alternative distance of 50 feet where all other treatment defined in 14 CCR 895.1 described above shall apply. See Section III, Item 30(b) for an explanation and justification.

All other roads are temporary and proposed for abandonment, thus would not qualify for a traveled road surface of a public road and not subject to 14 CCR 917.2 (b).

Item 32

Marbled Murrelet Enhancement Area:

The "Chamberlain TW North" and "Chamberlain TW West" MAMU habitat areas are within the plan area and are proposed for management. Tree marking will follow the same guidelines described for SELECTION – HARVEST TREE DESIGNATION in Section II, Item 14(d). Further discussion, including details of pre-consultation with CDFW, are in Section III, Item 32.

The following are protection measures:

To the highest extent feasible, avoid damaging effects to root system, boles and crowns from timber felling and yarding to MAMU habitat trees and large downed woody debris equal or greater than 10 feet in length and 30-inch small end diameter. Elements of MAMU habitat trees include large diameter old-growth redwood and Douglas-fir trees or older Giant Chinquapin with either or a combination of epicormic branches, flat nesting platforms and lateral limbs over 4 inches in diameter. For additional information, see Section III, Item 32. The Marbled Murrelet Enhancement Area is illustrated on the Timber Harvest Map and flagged with a combination of orange/black striped and solid white. Tree marking shall be conducted prior to the Pre-Harvest Inspection.

14 CCR 914.2

(c) *Tractor roads shall be limited in number and width to the minimum necessary for removal of logs.*

Existing tractor roads shall be used to highest extent feasible.

Note: The measures stated above are to provide increased protection of resources specified in 14 CCR 914.

Foothill Yellow – Legged Frog:

The Foothill Yellow – legged Frog (*Rana boylei*, FYLF) is under review for state threatened status listing. The one year candidacy period began as of June 21, 2017. This species may inhabit perennial wetted channels of Class I and Class II watercourses. Class II crossing culvert replacements and those associated with road abandonment proposed in this plan do not occur in suitable habitat for the FYLF.

The following are protection measures:

Within five days of activities in a Class II watercourse, when water is present within 100 feet of the activity, a person familiar with all life stages of the Foothill Yellow Legged Frog shall examine from 100 feet above to 100 feet below sites (Map Points 11 and 58) and determine if any Foothill Yellow-legged Frog are present. If Foothill Yellow-legged Frog are present, operations shall not commence until CDFW consultation (incorporating avoidance or disturbance minimization during operations) or an incidental take permit (per Fish & G. Code, §2081.1) is amended to the THP.

If CDFW at a future date makes the determination that listing the FYLF is not warranted, any protection measures shall not be applied.

Item 33

The California Logging and Sawmill Safety Orders, Title 8 CCR 6259(a), require that “all ... snags which appear to be dangerous to any operation shall be felled.”

All snags within the timber harvest area shall be retained with the exception of snags that pose a fire or safety hazard. If the LTO determines a snag to be a hazard, the LTO has the option to fall the snag for safety purposes.

TIMBER SALE AGREEMENT

<u>Page</u>	<u>Item</u>	<u>Description</u>
3	2D	All timber scaled by "third party" scaling organization, using Revised Scribner Decimal C Log Rule.
3	3A	Unless written extension of time is granted by the Director of Forestry and Fire Protection, within Units J and K all merchantable timber designated for cutting shall be paid for, felled and scaled by November 15, 2018. This date may be extended or the required volume may be adjusted mutually by the STATE and the PURCHASER due to unforeseen circumstances. All remaining merchantable timber designated for cutting shall be paid for and felled, and all other timber operations shall be completed by October 15, 2019. This Agreement shall terminate on May 15, 2020, by which date all requirements of the Agreement must be completed.
5	7	Production and cost data with respect to all timber harvesting operations and other forestry activities. Required data includes person-hours and equipment-hours spent on each activity, and applicable rates for employees, machines and supervision, and costs for any materials or services needed for completion of activities.
6	10	<p>The minimum log dimensions for utilization is 10 feet in length and 8 inches in small-end diameter.</p> <p>Any log segment presented for scaling shall be scaled as merchantable which has a net volume of at least 10 board feet, providing a net merchantable scale of at least 25 percent of the total volume.</p>
6	11B	Payment for scaling and reporting services performed by the scaling organization shall be made by the Purchaser.
7	11J	Conduct a minimum of one check scale per month per scaler by the scaling organization, during the operating season, to document scaler proficiency.
8	11P	Weekly reports of faller days and volume by unit. This information to be available for collection by the Timber Sale Officer or delivered to State Forest HQ no later than the following Tuesday.
10	13A	<p>All terms, provisions and requirements of the Forest Practice Rules and the Timber Harvesting Plan (1-17-140 MEN) are made part of the Timber Sale Agreement.</p> <p>On completion of operations satisfactory to the Timber Sale Officer, the operator shall certify by letter to the STATE, all operations are complete and comply with Forest Practice Rules and THP.</p>
10	13A1	<p>A pre-work conference to be attended by representatives of the State and the Purchaser, including subcontractors is required before operations can begin.</p> <p>The Purchaser is responsible to ensure all contractors are provided with relevant applicable documentation.</p>
10	13A2	No timber operations shall be conducted after January 31 of any year until the State or the Purchaser has completed required surveys for northern spotted owls, and extension of the No-Take determination has been received from the appropriate reviewing agency.

<u>Page</u>	<u>Item</u>	<u>Description</u>
11	13A3	Flagging of all skid trails required at least two weeks in advance and notify the Timber Sale Officer for approval.
11	13A5	Minimum distance between new skid trails is 100 feet, unless waived by the Sale Officer.
11	13A7	Merchantable trees felled and bucked to log lengths, limbed to the 8-inch top, and the top bucked at the time of felling.
12	13A8	All slash created by timber operations within 100 feet of JDSF seasonal roads 200, 240, 250, 330 and 1000 shall be lopped to the extent that no portion shall remain over 12 inches above the ground for the first 50 feet and 24 inches above the ground for the remaining 50 feet. Slash created by timber operations within 50 feet of JDSF seasonal roads 244 and 240A shall be lopped to the extent that no portion shall remain over 24 inches above the ground. Prior to October 15 of each operating season, and concurrent with lopping activities conducted after that date, slash and other logging debris shall be removed from truck road surfaces, cut banks, ditches and berms, and from the inlets and outlets of culverts, unless otherwise directed by the Timber Sale Officer. All hardwood treated with "hack and squirt" herbicide with tree heights equal to or more than the distance from the tree base to the prism of JDSF seasonal roads 200, 240, 330 and 1000 shall be felled and lopped to the extent that no portion shall remain over 24 inches above the ground. Areas of herbicide treatment within 100 feet of the roads described above include ¼ acre gaps in harvest units A, B, C and D, all group openings and all of harvest Unit J. ¼ acre Gaps and group openings are marked with yellow striped paint. Harvest Units and group opening locations are illustrated on the Timber Sale Agreement maps (Exhibit A, Attachment 2). In addition to the lopping requirements stated above and in Item 14.B., an additional 40 acres within the boundaries of the Chamberlain Confluence THP shall be lopped to the extent that no portion shall remain over 24 inches above the ground. The areas identified for lopping shall be as directed by the Timber Sale Officer. All lopping requirements stated in the contract shall be complete by January 31, 2021.
12	13A9	Maximize the extent of spreading slash to avoid or minimize the need for piling and isolating slash for burning. Logging wastes on landings on permanent and seasonal roads shall be segregated into large materials which can be utilized by firewood cutters. Material at least 8 inches in diameter and 6 feet in length is considered suitable for firewood.
12	13A11	Cable yarding system requirements are given.
13	13A12	Location of cable corridors will be flagged, mapped and approved by Sale Officer prior to rigging. Distance between cable corridors, no less than 200 feet measured from the back of cable road.
13	13A16	No permanent painted messages. Use temporary signs to be removed once their function is complete.
14	13A20	Mulching standard is at least 95% coverage to a minimum depth of four inches.

Page Item Description

14 14A Trees marked with orange or blue painted circles, snags or other trees marked for retention as described in the Timber Harvest Plan or as designated by the Timber Sale Officer shall be retained, unless needed to be felled for safety.

14 14B A total of 26 groups are located within harvest units F, G, H, I and K, as illustrated on the Chamberlain Confluence Timber Sale Agreement Map 2 of 3 and 3 of 3 (Exhibit A, Attachment 2) and described in the Timber Harvest Plan (THP 1-17-140 MEN). Group boundaries are identified with black and red striped flagging combined with trees marked with yellow vertical striped paint. The PURCHASER shall fell, buck and yard all merchantable conifers within group boundaries, with the exception of any tree marked for retention. All hardwoods are to remain standing, with the exception of trees that need to be felled to allow for safe falling and yarding operations and where elsewhere described in this agreement.

The PURCHASER shall lop all created group openings. All slash created by timber operations within boundaries of groups shall be lopped to the extent that no portion shall remain over 30 inches above the ground. Lopping shall be complete no later than December 15, 2019, unless otherwise a later date is approved by the Timber Sale Officer.

14 14C A total of 10 ¼ acre study blocks are located within harvest units J and K, as illustrated on the Chamberlain Confluence Timber Sale Agreement Map 3 of 3 (Exhibit A, Attachment 2). Study block boundaries are identified with solid purple flagging. The PURCHASER shall fell, buck and yard all merchantable conifers marked with blue paint and retain all unmarked conifers and any tree, including conifers, marked with a combination of white and/or orange horizontal and/or circles. The PURCHASER shall avoid damage to retention trees to highest extent feasible. The PURCHASER shall fell all hardwoods marked with blue paint and where all other hardwoods are to remain standing, with the exception of trees that need to be felled to allow for safe falling and yarding operations. All felled hardwoods shall be topped to a 6 inch top.

The PURCHASER shall leave skid trails free of dense slash and debris leading from all study blocks to the nearest landing to allow for access.

The PURCHASER shall provide 120 man hours to perform a combination of lopping and hand piling of wood debris on 6 of the total 10 ¼ acre study blocks as described above. Work shall be performed within blocks and up to a 40 foot radius on 2 corners of each flagged study block. The study blocks needing work shall be identified by the Timber Sale Officer. Five (5) of the six (6) study blocks are located within the THP and one (1) outside the THP boundary. The PURCHASER shall cooperate with the STATE to provide man hours in a timely manner and to accommodate JDSF staff availability between the completion of felling and yarding within harvest units J & K and January 31, 2020.

16 17A3 Road width is 14 feet including 1 foot shoulder on each side of a 12 foot traveled surface. Width may be wider on curves.

16 17A5 Full bench road construction on slopes exceeding 50%.

16 17A6 Seasonal roads will be outsloped (2-5%) without a berm or ditch. Rolling dips will be constructed on road grades of 10% or less during road construction at locations proposed by the Purchaser, approved by the Timber Sale Officer. The Sale Officer will specify the location for drainage structures on roads greater than 10% prior to final road grading.

<u>Page</u>	<u>Item</u>	<u>Description</u>
18	17H	Maintenance work to be done within 15 days of end of hauling operation on each road and immediately on completion of hauling on any road after October 15.
20	17S	The PURCHASER shall remove roadside brush and thin and prune trees 200 feet each side of Forest Road 1000, as shown on the TSA Map 1 of 3 (Exhibit A, Attachment 2). Brushing and trimming work is part of JDSF's Road 1000 Shaded Fuel Break Project and shall be completed no later than January 31, 2021.
22	20	In addition to required fire tools complement, have available to the sale area for fire suppression purposes a "Park wagon" or similar self-propelled vehicle of at least 1,000 gallon capacity.
56	1	A deposit of \$40,000 must be submitted with the bid.
57	3	Furnish STATE copies of Timber Yield Tax calculations and reporting forms.
61	4	Performance security of \$80,000 required prior to contract approval.

CHAMBERLAIN CONFLUENCE THP FLAGGING CODE

/ = Striped • = Polka dot ■ = Checkered

DESIGNATED ACTIVITY	FLAGGING COLOR
Timber harvesting boundary	pink-glo Site-Mark® "TIMBER HARVEST BOUNDARY" in black lettering
Class II watercourse (centerline)	blue/white stripe
Wet Area/Seep/Spring	blue/white stripe & white (combination)
Class II/Spring/Seep/Wet Area WLPZ	blue/white stripe Site-Mark® "LAKE AND WATERCOURSE PROTECTION ZONE" in black lettering
Class I WLPZ	blue/white stripe Site-Mark® "LAKE AND WATERCOURSE PROTECTION ZONE" in black lettering & solid blue (combination)
Class III watercourse (centerline)	blue•white polka-dot
Tractor/Cable boundary	red/white stripe
Tractor road (skid trail)	solid yellow or solid yellow Site-Mark® "SKID TRAIL" in black lettering
Message flag	pink/black stripe & yellow (combination)
Survey stations, Cruise stations	red•white polka-dot
Cable Road	solid red, unless otherwise approved by the RPF
Equipment Limitation Zone (ELZ) & Equipment Exclusion Zone (EEZ)	solid red & solid white (combination)
Proposed Road grade & centerline	solid orange Site-Mark® "TRUCK ROAD" in black lettering
Faller Stripe	solid white
Special Treatment	orange/white stripe Site-Mark® "SPECIAL TREATMENT ZONE" in black lettering
Research/Demonstration	solid purple and/or orange/white checkered pattern
Extent of Excavation	solid pink & solid white (combination)
MAMU Enhancement Area Boundary	orange/black stripe & white (combination)
Forest Resource Inventory	red & lime green (combination)
Group Opening Boundary	red/black stripe (with yellow vertical stripe paint)
1,320-ft MAMU Disturbance Buffer	orange/white stripe Site-Mark® "SPECIAL TREATMENT ZONE" in black lettering
330-ft MAMU Disturbance Buffer	yellow/white stripe Site-Mark® "SPECIAL TREATMENT ZONE" in black lettering
165-ft MAMU Disturbance Buffer	red/white stripe Site-Mark® "SPECIAL TREATMENT ZONE" in black lettering