

CalTREES THP ITEM #14 - SILVICULTURE

ITEM #14 – SILVICULTURE

- Check the Silvicultural methods or treatments allowed by the Forest Practice Rules to be applied under this THP.
- If more than one method or treatment will be used identify the boundaries on a map per 14 CCR § 1034(x)(2)
- List the approximate acreage for each method identified.

a.	Evenaged	ACRES	
<input type="checkbox"/>	Clearcutting		<p align="center">EVENAGED REGENERATION METHODS (14 CCR § 913.1 [933.1, 953.1]) (All Districts)</p> <p align="center">NOTE: variation by District in (a)(4)(A) and (d)(3) Shelterwood Removal Step</p>
<input type="checkbox"/>	Seed Tree Seed Step		
<input type="checkbox"/>	Seed Tree Removal Step		
<input type="checkbox"/>	Shelterwood Preparatory Step		
<input type="checkbox"/>	Shelterwood Seed Step		
<input type="checkbox"/>	Shelterwood Removal Step		
	Un-evenaged		
<input checked="" type="checkbox"/>	Selection	81	<p align="center">UNEVENAGED REGENERATION METHODS (14 CCR § 913.2 [933.2, 953.2]) (All Districts)</p> <p align="center">NOTE: variation by District in (a)(2)(A)(1)</p> <p>Selection area is one large unit encompassing the southwestern portion of the plan and a Class II-S WLPZ.</p> <p>The Transition harvest area is a series of connected units throughout the northern, middle and eastern portions. The northern portion is that area approximately 100 feet from the road edge. Prior to operations this area will be marked to denote the boundary.</p>
<input type="checkbox"/>	Group Selection		
<input checked="" type="checkbox"/>	Transition	143	
	Intermediate Treatments		
<input checked="" type="checkbox"/>	Commercial Thinning	53	<p align="center">INTERMEDIATE TREATMENTS (14 CCR § 913.3 [933.3, 953.3])</p> <p>The Commercial Thinning is concentrated in the northwestern portion of the plan in one unit.</p>
<input type="checkbox"/>	Sanitation Salvage		
	Alternative		
<input type="checkbox"/>	Alternative Prescription		<p align="center">ALTERNATIVE PRESCRIPTIONS (ALL DISTRICTS) (14 CCR § 913.6 [933.6, 953.6])</p>
	Special Prescriptions		
<input type="checkbox"/>	Special Treatment Area Prescription		<p align="center">SPECIAL PRESCRIPTIONS (14 CCR § 913.4 [933.4, 953.4])</p> <p>RPF is required to include specific information when Restoration or Oak woodland management is selected. The FPR element forms are provided at the end. Indicate the specific acreage for each type of restoration or oak area on these forms.</p> <p>There are four VR units separated by even age areas and are concentrated in heavy huckleberry and Douglas-fir types.</p>
<input type="checkbox"/>	Rehabilitation of Understocked Area Prescription		
<input type="checkbox"/>	Fuel Break / Defensible Space		
<input checked="" type="checkbox"/>	Variable Retention	112	
<input type="checkbox"/>	Restoration – Aspen, Meadow, & Wet Area		
<input type="checkbox"/>	Ca. Black and Oregon White Oak Woodland Management		
	Non-regeneration		
<input type="checkbox"/>	Conversion		<p align="center">NON REGENERATION HARVESTING</p>
<input checked="" type="checkbox"/>	Road Right-of-way	0.2	
<input type="checkbox"/>	No Harvest		

TOTAL ACREAGE:	389.2	If acreage is different than acreage listed in the legal description provide explanation:
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There is 0.2 acre of new road construction proposed within the plan area.

If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post-harvest stocking levels must be stated. If Site class varies then state the post-harvest stocking standard to be met by each applicable Site Class.

NOTE: Location of boundaries of timber-site classes needed for the determination of stocking standards to be applied, down to 20-acres minimum or as specified in district rules shall be mapped per 14 CCR § 1034(x)(12)

b. POST-HARVEST STOCKING TO BE MET AT THE COMPLETION OF OPERATIONS

Silvicultural Prescription	Site Class (I, II, III, IV, V)	Post-harvest stocking standard
Selection	III	<ul style="list-style-type: none"> For Selection areas the stocking standard to be met is 14 CCR 912.7(b)(2) the average basal area measured in stems 1 inch or larger in diameter is at least 75 square feet, of which 15 square feet of basal area of trees shall be 18 inch DBH or greater. This standard shall be met immediately upon completion of timber operations. Not more than 20% of the stocked plots may meet stocking standards utilizing the 300 point count standard with trees that are at least 10 years old. Unless the plan submitter demonstrates how the proposed harvest will achieve MSP pursuant to 14 CCR 913.11(a) or (b), the residual stand shall contain sufficient trees to meet at least the basal area, size and phenotypic quality of tree requirements specified under the seed tree method.
Transition	III	<ul style="list-style-type: none"> For Transition areas the stocking standard to be met is 14 CCR 913.2(b)(6) (Coastal). The post harvested residual stand shall contain at least 15 sq. ft. of basal area per acre of seed trees at least 12 inches dbh or greater for site III timberland. The Transition stands are obviously stocked. Plan submitter is using MSP Option C, therefore where present in the stand, disease free, undamaged seed trees 18 inches dbh or greater shall be retained post-harvest until the stand exceeds the minimum seed tree requirements of 14 CCR 913.1(c)(1)(A). the seed trees shall be full crown, capable of seed production and representative of the best phenotypes available in the present stand.
Commercial Thinning	III	<ul style="list-style-type: none"> For Commercial Thinning, the one-hundred (100) sq. ft. per acre of basal area stocking standard of 14 CCR 913.3(a)(1)(A), Coast, 2, shall apply.
Variable Retention	III	<ul style="list-style-type: none"> In VR units 300 point count or 50 sq. ft. basal area per acre stocking will be met within 5 years following completion by either natural seed fall or planting.

c. EVENAGED REGENERATION SIZE

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will evenaged regeneration step Units be larger than those specified in the rules? <input type="checkbox"/> 20 acres TRACTOR <input type="checkbox"/> 30 acres AERIAL or CABLE
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If YES is the RPF proposing:
 An increase to evenaged TRACTOR Units to 30 acres because Erosion Hazards Rating is Low and the slopes are less than 30%
 An increase to any evenaged harvest unit up to 40 acres

If YES provide substantial evidence that the THP contains measures to accomplish any one of the subsections per 14 CCR § 913.1 [933.1, 953.1](a)(2)(A) – (E) In SECTION III

Operational Instruction to the LTO, needed to meet subsections (A) – (E) above shall be included in SECTION II

NOTE: Oversized Units should be designated on the THP map(s) by size.

Operational instructions to the LTO:

d. TIMBER MARKING				
In the table below indicate the area requiring tree marking, the method of marking, who completed the marking and if it was an entire or sample area mark.				
Marking completed in (specify Location(s))	Trees Marked (Harvest / Retained)	Completed By (RPF / Designee)	Area Marked (Entire / Sample area)	RPF Explanation if needed (Optional)
Portion Selection	Harvest	RPF/Designee	Sample	
Portion Transition	Harvest	RPF/Designee	Sample	
Portion Commercial Thinning	Harvest	RPF/Designee	Sample	Sample mark then operator select see below

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the RPF requesting a waiver of required marking?
	<p>If YES, provide directions explaining how the LTO will determine what trees shall be harvested or retained: Commercial Thin Units: Marking shall not be required within all commercial thin harvest areas. 10% of the commercial thin acreage will be sample marked prior to the PHI. The prescription for commercial thin areas is to thin the young stand from below to increase the average stand diameter and promote timber growth, while retaining the most healthy and vigorous dominant and codominant trees. Areas where the pre-harvest dominant and codominant crown canopy is occupied primarily by trees less than 14" DBH shall be thinned to achieve a minimum of 100 trees per acre, or around 20' x 20' spacing, of trees over 4" DBH. When the pre-harvest dominant and codominant crown canopy is primarily occupied by trees greater than 14" DBH, the stand shall be thinned to achieve a stocking level of 100ft²/ac of basal area and target spacing shall 18'-23'. All trees marked with a "W" shall be retained. Unique high wildlife value trees with combined traits of low commercial value, high defect, deformities, cavities, basal hollows, indicators, or internal rot, etc. shall be retained. Merchantable leave trees shall be of good vigor (>30% crown ratio). These will typically be the larger trees with crown classes in the dominant and codominant category, and small young trees with good form. <u>See Geological map: all trees marked on slide area G1 within commercial thin prior to operations.</u></p> <p>If more than one silvicultural method or group selection is used, provide instructions to the LTO identifying how boundaries of the different methods or groups have been identified:</p> <ul style="list-style-type: none"> Commercial Thinning, Transition and Selection trees are marked with blue paint at breast height with a corresponding base mark and units are identified on the Operations map. Boundaries are identified with Lime-glo and orange flagging. In lieu of specific flagged boundaries, roads and creeks may denote boundary as shown on the Operations Maps. Within VR units cut all trees 12 inches DBH and greater unless additional retention is

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	<p>designated or marked as NO with any color paint by the RPF of record. Smaller trees may be cut if they are damaged and likely to die and if their crown is less than 20% or the tree is suppressed and unlikely to release. Aggregate retention areas are denoted by solid "DO NOT CUT" pink flagging.</p> <ul style="list-style-type: none"> • DO NOT CUT any tree in Aggregate Retention areas. • DO NOT CUT any tree marked with a "NO", large "X" or with any color paint. • DO NOT CUT any tree within 15 feet of a Class-II watercourse. • DO NOT CUT any tree within the channel zone of a Class-III watercourse. • DO NOT CUT any tree the RPF of record designates not to cut by verbal communication or other wise.
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e. FOREST PRODUCTS TO BE HARVESTED:					
<input checked="" type="checkbox"/>	Saw Logs	<input checked="" type="checkbox"/>	Poles	<input checked="" type="checkbox"/>	Clean Chips
<input checked="" type="checkbox"/>	Peeler Logs	<input checked="" type="checkbox"/>	Split Wood Products	<input checked="" type="checkbox"/>	Firewood
<input checked="" type="checkbox"/>	Fuel Wood	<input checked="" type="checkbox"/>	Fuel chips	<input type="checkbox"/>	Other
<input checked="" type="checkbox"/>	Burl Wood				

f. GROUP B SPECIES MANAGEMENT	
1. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are group B species proposed for management?
2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are group B or non-indigenous A species to be used to meet stocking standards?
3. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will group B species need to be reduced to maintain relative site occupancy of group A species?
If any answer is YES, list the species, describe treatment, and provide LTO felling and slash treatment guidance. See table below	

TABLE FOR LTO TREATMENT GROUP B SPECIES MANAGEMENT			
Species	Treatment Method	Felling Instruction	Slash Treatment Instructions
Tanoak	Manual	Knock down or cut 12" DBH and under tanoak where possible to release conifer	No slash treatment prescribed.

1. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Are follow-up treatments expected to maintain relative site occupancy of group A species?</p> <p><input checked="" type="checkbox"/> Manual Treatments</p> <ul style="list-style-type: none"> - Describe: Equipment will knockdown or cut 12" DBH and smaller tanoak to release conifer during or post operations as necessary to maintain conifer site occupancy. <p><input checked="" type="checkbox"/> Herbicide Treatments</p> <ul style="list-style-type: none"> - Describe: A PCA will make recommendations for treating hardwoods with herbicide with limiting diameter to 14 " DBH maximum tree size for treatment and concentrating on tanoak species. Retain madrone, live oak and all deciduous species. A Licensed Pesticide Operator will conduct the herbicide treatment. <p><input checked="" type="checkbox"/> Both</p>
	If YES who will be responsible?
2. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will a Licensed Pest Control Advisor be involved in the process?

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	<p>If YES explain when an advisor will be needed: A licensed PCA will provide a recommendation to the License Pesticide Operator.</p>
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g. LTO FELLING INSTRUCTIONS PLAN AREA

	<ul style="list-style-type: none"> • During timber felling on the plan area, timber fallers will fall trees away from existing regeneration, and lead trees to skid trails wherever possible in order to minimize damage to advanced regeneration. • Timber adjacent to WLPZ's will be felled away from the watercourses. • Snags and large hardwoods (20" DBH+) shall be retained wherever possible, unless cutting is required for safety or operational reasons. • Accidental depositions of soil or debris in lakes or below the watercourse or lake transition line in waters classed as I, II, or IV shall be removed immediately after the deposition. • Trading trees may occur outside WLPZ's for safety reasons or for trees substantially damaged by logging operations. A conifer of comparable species and greater than or equal DBH shall be retained for each conifer harvested for the above reasons. An arrow shall be chalked on the stump of the harvested tree, pointing to the tree that was retained in trade. • DO NOT CUT any tree marked with a "NO", large "X" or Black paint. • The LTO shall maintain at least 4, 20-inch or larger hardwoods per acre where they exist.
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h. REGENERATION

<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will artificial regeneration be required to meet stocking standards? Describe:</p> <p>Planting is not proposed however planting may be necessary in Variable Retention units. The landowner's representative will evaluate each harvest area to determine if planting is required to meet stocking. Planting will occur within the 1st or 2nd year following completion of operations in areas of VR silviculture. Planting to consist of redwood or Douglas-fir seedlings planted on a 13'x13' or less spacing to achieve stocking, depending on site conditions.</p>
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i. SITE PREPARATION

Definition of site preparation per 14 CCR § 895.1: Site preparation means "any activity" involving mechanical disturbance of soils or burning of vegetation which is performed during or after completion of timber harvesting and is associated with preparation of any portion of a logging area for artificial or natural regeneration.

<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will site preparation be used within the logging area? If YES, provide site preparation plan per 14 CCR § 915.4 [935.4, 955.4]</p> <ul style="list-style-type: none"> • Site preparation may be used to meet stocking and reduce competition to conifer from hardwoods and huckleberry. • General methods used: tractor piling, feller buncher falling of hardwoods, herbicide treatment of hardwoods. • Tractors, skidders, heel boom, excavator, feller buncher, wheel loader may be used to reduce hardwood or huckleberry • Residual conifer shall be protected to the extent feasible from equipment piling or knocking down hardwoods and huckleberry.
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	<ul style="list-style-type: none"> • Do not pile slash against residual conifer. • Do not knock over snags or dead trees greater than 16" DBH and over 20 feet tall. • If slash piles are constructed, construct slash piles on contour with the slope.
2. <input checked="" type="checkbox"/> Yes [] No	<p>Will site preparation be required to meet stocking? Site preparation will be avoided to the extent feasible but may be applied following operations within VR units where clearing is warranted to remove small hardwoods or huckleberry.</p>
	<ul style="list-style-type: none"> • General method(s) of site preparation: Site preparation most likely will be conducted with tractors to push up undesirable vegetation during or following operations.
	<ul style="list-style-type: none"> • Type of equipment to be used for mechanical site preparation and/or firebreak construction: Tractor, skidder, heel boom, feller buncher, excavator
	<ul style="list-style-type: none"> • Methods to protect desirable residual trees per 14 CCR § 917.7 [937.7, 957.7]: Desirable residual trees will be protected by avoiding piling slash against them or close to them if burning is used.
3. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<ul style="list-style-type: none"> • Are there any exceptions or alternatives proposed to the standard rules? If YES, provide an explanation and justification for the proposed exceptions:
	<ul style="list-style-type: none"> • Provide a map identifying the boundaries of site preparation areas, if different from the logging area boundaries, and distinguish areas by type of site preparation activity. If site preparation occurs will be limited to the Variable Retention units designated on THP maps.
	<ul style="list-style-type: none"> • Prior to conducting site preparation activities provide the name of the person responsible for site preparation: See LTO of record on the THP or to be amended to the plan if not the LTO.
	<ul style="list-style-type: none"> - Name:
	<ul style="list-style-type: none"> - Address:
	<ul style="list-style-type: none"> - Phone #:
	<ul style="list-style-type: none"> • Estimated timing of site preparation activities: Site preparation to be conducted simultaneous with logging operations or during dry rainless periods when soils are not saturated.

j. REGENERATION PLAN (rehabilitation of understocked areas or variable retention)	
<input checked="" type="checkbox"/> Yes [] No	<p>Is a regeneration plan needed per 14 CCR § 913.4 [933.4, 953.4](b) or (d)? If YES, please provide a detailed description for Review Team to evaluate how the proposed management prescription will aid in restoring and enhancing the productivity of commercial timberland.</p> <p>The regeneration plan shall include but not be limited to:</p> <ul style="list-style-type: none"> - <u>Rehabilitation of understocked areas</u>: site preparation, method of regeneration and other information needed to evaluate the proposal by the Review team: - <u>Variable Retention</u>: Trees and elements retained, objectives intended to achieved by retention, distribution and quantity of retained trees, intended time period of retention, and potential future conditions or events the RPF believes would allow harvest of retained trees. -

<p>Regeneration plan: Trees and elements retained:</p>
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The plan proposes to retain trees in aggregate retention areas within each unit. These retention areas will have trees retained in nearly all Class III ELZ, where not retained as a whole, trees may be marked for retention individually in an ELZ. Dispersed retention is not proposed. Rock outcrops, geological features and intact patches of mixed hardwood and conifer may also be retained elements. At a minimum the percentage of area retained will meet or exceed that necessary to comply with Table 1 in 14 CCR 913.4(d)(3)(B).

Objectives intended to achieve by retention:

- Retain trees within most Class III ELZ for additional stocking
- Retain additional areas of undisturbed forest
- Avoid rock outcrops
- Avoid areas difficult to access for harvest
- Retain areas with high stocking of conifer seedlings.
- Retain majority of trees under 12 inches DBH.

Distribution and quantity of retained trees:

At a minimum, aggregate retention will be met by retaining at least 10% of the area within a unit. Please refer to the stand table in THP Section 3 for additional information concerning an estimate of pre and post-harvest stand characteristics. Also refer to the table in Section 3 that lists the unit number, total acres, percentage required to retain, minimum acres and actual retained acres.

Intended time period of retention:

It is anticipated that trees retained in aggregate will be retained for 50 years.

Potential future conditions or events the RPF believes would allow harvest of retained trees:

A natural event that causes excessive mortality such as fire, disease or wind damage, may create a situation that allows salvage of retained timber.

Site Preparation:

The units are primarily redwood, Douglas-fir, tanoak and madrone with a moderate understory of young tanoak, conifer and huckleberry. There will be conifer retention from earlier harvests in the understory that will survive. See site preparation activities proposed above.

Method of Regeneration:

Seedlings may be planted to augment existing stocking levels as necessary to attain post-harvest stocking goals. Given the amount of existing understory conifer regeneration scattered through the stands, it is expected that not more than 100 trees per acre will need to be inter-planted following operations. Redwood and Douglas-fir will be the primary species to plant.

ITEM #15 – PESTS

PESTS / FOREST DISEASES																			
<p>Timber operations shall be conducted so as to minimize the build-up of destructive insect populations or the spread of forest Diseases. 14 CCR 917.9 [937.9, 957.9](a) – (c) (All Districts)</p>																			
<p>a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of:</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Infestation Zone of Infestation for Pitch Canker and Sudden Oak Death 2. <input type="checkbox"/> Infection <p>pursuant to PRC §§ 4712 - 4718?</p> <p>If YES, identify feasible measures being taken to mitigate adverse infestation or infection impacts from the timber operation. 917.9 (937.9, 957.9)(a)</p> <p style="text-align: center;">Reference Board of Forestry Technical Rule Addendum Number 3 for RPF considerations.</p>																		
<p>Measures to mitigate adverse infestations or infections:</p> <p><u>Pine Pitch Canker</u> The THP area is within an area declared a ‘Zone of Infestation or Infection’ by the Board of Forestry with regard to Pine Pitch Canker. The following measures are required to address to potential presence of Pine Pitch Canker and to address the requirements of 14 CCR 917.9-Technical Rule Addendum No. 3, Brood Material. While the section dealing with brood material is specifically addressed towards beetle outbreaks & infestations in heavy pine areas, it also applies here because beetles may aid in the dispersal of Pine Pitch Canker. There are not known to be ponderosa pine trees within this THP. However if pine trees are discovered and pine trees are felled or knocked over they shall be treated as follows concurrently with falling or yarding operations, whichever caused the tree to be felled or knocked down:</p> <p>Pine Slash shall be lopped and scattered. Timing and specifications for lopping are taken from 14 CCR 917.9 & Technical Rule Addendum #3 (B)(2): The following treatment is acceptable, provided it is completed as soon after brood material creation as is practical, but not later than one week.</p> <ul style="list-style-type: none"> ○ Lop all branches from the tops and sides of main stems which are more than 3” in diameter. ○ Lopped stems may also be cut into short segments to reduce drying time and further reduce hazard. ○ Branches shall be scattered so that stems have maximum exposure to solar radiation. ○ Do not pile brood material. <p><u>Sudden Oak Death</u> The THP area is within the Sudden Oak Death (SOD) Zone of Infestation. SOD is known to exist within and surrounding the plan area. For compliance with CDFA regulations, and for the THP to act as a compliance agreement, THPs located in the SOD Zone of Infestation (ZOI) need to address mitigation measures to avoid movement of host material (ref. also 14CCR 917.9 and 917.10).</p> <p>Recommended Mitigation measures:</p> <ol style="list-style-type: none"> a) List of regulated counties: Alameda, Contra Costa, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, San Francisco, and Trinity. b) There are both “Regulated Host Species” and Associated Species”. <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left; padding: 5px;">Regulated Hosts</th> <th style="text-align: left; padding: 5px;">Common Name</th> </tr> <tr> <th style="text-align: left; padding: 5px;">Scientific Name</th> <th style="text-align: left; padding: 5px;"></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">1. <i>Acer macrophyllum</i></td> <td style="padding: 5px;">Bigleaf maple</td> </tr> <tr> <td style="padding: 5px;">2. <i>Acer pseudoplatanus</i></td> <td style="padding: 5px;">Planetree maple</td> </tr> <tr> <td style="padding: 5px;">3. <i>Adiantum aleuticum</i></td> <td style="padding: 5px;">Western maidenhair fern</td> </tr> <tr> <td style="padding: 5px;">4. <i>Adiantum jordanii</i></td> <td style="padding: 5px;">California maidenhair fern</td> </tr> <tr> <td style="padding: 5px;">5. <i>Aesculus californica</i></td> <td style="padding: 5px;">California buckeye</td> </tr> <tr> <td style="padding: 5px;">6. <i>Aesculus hippocastanum</i></td> <td style="padding: 5px;">Horse chestnut</td> </tr> <tr> <td style="padding: 5px;">7. <i>Arbutus menziesii</i></td> <td style="padding: 5px;">Madrone</td> </tr> </tbody> </table>		Regulated Hosts	Common Name	Scientific Name		1. <i>Acer macrophyllum</i>	Bigleaf maple	2. <i>Acer pseudoplatanus</i>	Planetree maple	3. <i>Adiantum aleuticum</i>	Western maidenhair fern	4. <i>Adiantum jordanii</i>	California maidenhair fern	5. <i>Aesculus californica</i>	California buckeye	6. <i>Aesculus hippocastanum</i>	Horse chestnut	7. <i>Arbutus menziesii</i>	Madrone
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CalTREES THP ITEMS #15-17 – PEST / HARVEST PRACTICES / EROSION HAZARD RATING

8. <i>Arctostaphylos manzanita</i>	Manzanita
9. <i>Calluna vulgaris</i>	Scotch heather
10. <i>Camellia spp.</i>	Camellia –all species, hybrids, and cultivars
11. <i>Castanea sativa</i>	Sweet chestnut (3)
12. <i>Fagus sylvatica</i>	European Beech
13. <i>Fraxinus excelsior</i>	European ash
14. <i>Griselinia littoralis</i>	Griselinia
15. <i>Hamamelis virginiana</i>	Witch hazel
16. <i>Heteromeles arbutifolia</i>	Toyon
17. <i>Kalmia latifolia</i>	Mountain Laurel - all species, hybrids and cultivars
18. <i>Laurus nobilis</i>	Bay laurel
19. <i>Lithocarpus densiflorus</i>	Tanoak
20. <i>Lonicera hispidula</i>	California honeysuckle
21. <i>Maianthemum racemosum</i>	False Solomon's seal
22. <i>Michelia doltsopa</i>	Michelia
23. <i>Parrotia persica</i>	Persian Parrotia, iron tree
24. <i>Photinia fraseri</i>	Red tip or Fraser's Photinia
25. <i>Pieris formosa</i>	Himalaya pieris
26. <i>Pieris formosa x japonica</i>	Pieris 'Forest Flame'
27. <i>Pieris floribunda x japonica</i>	Pieris 'Brouwer's Beauty'
28. <i>Pieris japonica</i>	Japanese pieris
29. <i>Pseudotsuga menziesii v. menziesii</i>	Douglas-fir
30. <i>Quercus agrifolia</i>	Coast live oak
31. <i>Quercus cerris</i>	European turkey oak
32. <i>Quercus chrysolepis</i>	Canyon live oak
33. <i>Quercus falcata</i>	Southern red oak (3)
34. <i>Quercus ilex</i>	Holm oak (3)
35. <i>Quercus kelloggii</i>	California black oak
36. <i>Quercus parvula v. shrevei</i>	Shreve oak
37. <i>Rhamnus californica</i>	California coffeeberry
38. <i>Rhamnus purshiana</i>	Cascara
39. <i>Rhododendron spp</i> cultivars	Rhododendron (including azaleas) – all species, hybrids, and cultivars
40. <i>Rosa gymnocarpa</i>	Wood rose
41. <i>Salix caprea</i>	Goat willow
42. <i>Sequoia sempervirens</i>	Coast redwood
43. <i>Syringa vulgaris</i>	Lilac (3)
44. <i>Taxus baccata</i>	European yew (3)
45. <i>Trientalis latifolia</i>	Western starflower
46. <i>Umbellularia californica</i>	California bay laurel/Oregon myrtle/pepperwood
47. <i>Vaccinium ovatum</i>	Evergreen huckleberry
48. <i>Viburnum x bodnantense</i>	Bodnant Viburnum (arrowwood)
49. <i>Viburnum plicatum</i>	Doublefile Viburnum
50. <i>Viburnum tinus</i>	Laurustinus

c) Host material permitted for removal:

- Firewood may be harvested from the THP area, so long as such wood is not smaller than four inches in diameter and does not leave the existing Zone of Infestation.
- The only *host material* that may be harvested for commercial purposes are Douglas fir and tanoak/madrone logs. They may be harvested and shipped to destinations within the existing Zone of Infestation, subject to the requirements of the Compliance Agreement. If debarked, they may be harvested and shipped to any destination without restriction.

CalTREES THP ITEMS #15-17 – PEST / HARVEST PRACTICES / EROSION HAZARD RATING

- d) Host material shall not be moved outside of the existing Zone of Infestation.
- e) This THP shall serve as the Compliance Agreement for removal of commercial host material from the THP area, within the Zone of Infestation. This Compliance Agreement is valid for life of the plan.
- f) Should such activities continue during subsequent years, and the host list, zone of infestation/infection, or recommended mitigation measures change, the plan shall be amended with current information and mitigations to meet compliance.
- g) Information regarding Compliance:
 - (1) The destinations of the host material may include the following locations in northern CA: fuel wood will potentially be transported to local residences in Lake, Mendocino or Sonoma Counties, sawlogs may be transported to Scotia, Eureka, Samoa, Arcata, Fortuna, Ukiah, Calpella, Asti, Cloverdale, Weaverville, and Willits. Although the most likely destinations for shipments are listed above, other destinations may be amended into the THP.
 - (2) Basal trunk/burl sprouts, small branches (less than 1 inch in diameter), and needles of Douglas-fir are considered host materials. These host materials shall not be removed from the THP area except as provided for above in c.
 - (3) Chips or other host material, less than 4 inches in diameter, shall not be removed from the THP area.
 - (4) Movement of host material greater than 4 inches in diameter (as described in (c), above) does not require a closed container.
 - (5) Host debris (not actual logs - just leaves, twigs, and branches of host species, listed in item (b), above) shall be inspected for, and substantially removed from, equipment/vehicles prior to departure from the plan area. The usual inspection shall consist of walking around each vehicle/piece of heavy equipment, including any load, and visually scanning for the presence of host debris, prior to movement from the THP area. The LTO shall advise all truck drivers that vehicles should be washed at a commercial wash station, or pressure washed with soap at their own facility, prior to working on another property. This is the responsibility of the LTO responsible for hauling operations.
- h) The RPF responsible for providing professional advice to the licensed timber operator pursuant to 14 CCR 1035.1(e), shall inform the LTO regarding regulations pertaining to SOD, current SOD hosts, extent of the regulated area, and operational requirements pertaining to the Compliance Agreement (this THP), prior to start-up of initial timber operations and throughout active timber operations as necessary regarding plan amendments to such.

b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any other significant insect or forest disease problems within the THP area if outside a declared zone? 1. <input type="checkbox"/> Insect(s) 2. <input type="checkbox"/> Disease(s) 3. <input type="checkbox"/> Pest problems 4. <input type="checkbox"/> Other (provide description of the forest problem)
If YES, describe proposed measures to improve the health, vigor, and productivity of the stand(s).	
Proposed measures:	

CalTREES THP ITEMS #15-17 – PEST / HARVEST PRACTICES / EROSION HAZARD RATING

ITEM #16 – HARVESTING PRACTICES

YARDING SYSTEM AND EQUIPMENT TO BE USED					
	GROUND BASED (Tractor, skidder, Forwarder)		CABLE		OTHER (Special)
<input checked="" type="checkbox"/>	Tractor, including end/long lining	* <input type="checkbox"/>	Cable, ground lead	<input type="checkbox"/>	Helicopter
<input checked="" type="checkbox"/>	Rubber tire skidder, forwarder	* <input type="checkbox"/>	Cable, High lead	<input type="checkbox"/>	Animal
<input checked="" type="checkbox"/>	Feller buncher	* <input type="checkbox"/>	Cable, skyline	<input type="checkbox"/>	Other (describe below)
<input checked="" type="checkbox"/>	Shovel yarding				
** All Tractor operations restrictions apply to ground based equipment Reference 14 CCR 914.2 [934.2, 954.2] (All Districts)					

General Tractor yarding guidelines:

- The principal yarding methods for this plan is ground based. However, the LTO may cable yard any area designated as tractor so long as cable yarding the area will result in less ground and residual stand disturbance. Prior consultation with the Plan Submitter and RPF is required.

Note: See additional information in Section III, Item 16.

See Winter Operations Item 23 for operations associated with skid trail use during the Wet Weather Operating Period and Winter Period.

ITEM #17 – EROSION HAZARD RATING

EROSION HAZARD RATING (EHR)					
		Per 14 CCR 914.6 [934.6, 954.6](c) Waterbreaks Road and/or Trail Gradients Waterbreak Spacing by trail/road gradient			
		10 or less	11-25	26-50	>50
<input type="checkbox"/>	LOW	300	200	150	100
<input checked="" type="checkbox"/>	MODERATE	200	150	100	75
<input type="checkbox"/>	HIGH	150	100	75	50
<input type="checkbox"/>	EXTREME	100	75	50	50
NOTE:					
<ul style="list-style-type: none"> • If more than one rating is checked, areas must be identified on a THP map down to 20 acres in size. • COASTAL DISTRICT with a High or extreme EHR(s) must be mapped to 10 acres. • If ratings checked do not match the EHR Worksheet clarify the discrepancy: 					
EHR rating discrepancy:					
The EHR worksheets indicate all Moderate Erosion Hazard Rating for the slope, remaining slash cover, rainfall and soil type. EHR worksheet ratings can be found on the EHR map at the end of Section II. EHR sheet for calculations is in Section V. It is not expected that any site preparation methods will be of size and extent to impact the EHR rating for a unit or area larger than 20 acres.					

CaITREES THP ITEM #18 – SOIL STABILIZATION

ITEM #18 – SOIL STABILIZATION

ITEM #18	SOIL STABILIZATION / EROSION CONTROL
<p>Per 14 CCR 923.5, 943.5, 963.5 – Erosion Control for Logging Roads and Landings [All Districts] – All logging road and landing surfaces shall be adequately drained, through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.</p> <p>Per 14 CCR 914, 934, 954 – Harvesting practice and erosion control [All Districts] – Timber operations shall be conducted to: Meet the goal... to prevent degradation of the quality and beneficial uses of water and maintain site productivity by minimizing soil loss</p> <p>Guidance on methods for hydrologic disconnection may be found in “Board of Forestry Technical Rule Addendum Number 5: Guidance on Hydrologic Disconnection, Road Drainage, Minimization of Diversion Potential, and High Risk Crossings” (1st Edition, revised 10/27/14)</p> <p>14 CCR 923.5, 943.5, 963.5(b), (c), (d), (e), (f), (g), (h), (j), (k), (p) contain standard Forest Practice Operational rules pertaining to the timing and specifics for the installation of erosion control structures for Roads and Landings.</p> <p>14 CCR 914.6, 934.6, 954.6(a) (1-2), (b), (c), (d), (e), (f), (g), additional Coast areas (h), (i) contain standard Forest Practice Operational rules pertaining to the timing and specifics for the installation of erosion control structures for harvesting practices, tractor and cable operations.</p> <p align="center">THE LTO SHALL BE FAMILIAR WITH THESE STANDARD OPERATIONAL REQUIREMENTS, PRIOR TO OPERATIONS.</p>	

<p>a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any exceptions proposed to the above listed standard operational requirements? If YES, please provide the specific operational instruction to the LTO.</p>
<p><input checked="" type="checkbox"/> STRAW Mulch Depth (inches): <u>2-4</u> Percent coverage: <u>90</u></p> <p><input checked="" type="checkbox"/> SLASH Mulch <input type="checkbox"/> Scattered Depth (inches): _____ Percent coverage: _____ <input checked="" type="checkbox"/> Packed Depth (inches): <u>6</u> Percent coverage <u>90</u></p> <p><input type="checkbox"/> Grass Seeding LTO Instructions:</p> <p><input checked="" type="checkbox"/> Rock Armoring Size: <u>Varies, see Map Point Table and Rock Size Nomograph in Item 38</u> Installation instructions:</p> <p><input type="checkbox"/> Replanting LTO instructions if needed</p> <p><input type="checkbox"/> Installation of commercial erosion devices Describe commercial devise and provide instructions to the LTO:</p> <p><input type="checkbox"/> Other Describe method and provide LTO instructions:</p>	

CaITREES THP ITEM #18 – SOIL STABILIZATION

Per 14 CCR 914.9[934.9, 954.9] the RPF may develop on a site-specific basis alternative practices that will achieve environmental protection at least equal to the standards set forth in 914.1-914.8 [934.1-934.8, 954.1-954.8]

b. Yes No

Are there any alternative practices to the standard harvesting or erosion control rules proposed?
If YES, the information as required per 914.9 [934.9, 954.9] shall be provided in SECTION III. Provide instructions to the LTO in SECTION II.

CaITREES THP Item 18

CaITRES THP ITEM #18 – SOIL STABILIZATION

<p><u>All WATERSHEDS</u> Logging roads / Landings</p>	<p>Description of Treatments</p>	<p>Timing</p>
<p>N/A</p>	<p>Protection Measures</p> <p><u>Primary mechanisms for decreasing hydrologic connectivity are:</u> (1) installation of a “disconnecting” drainage facility or structure close to the watercourse crossing; (2) increasing the frequency of ditch drain (relief) culvert spacing for roads with inside ditches; (3) converting crowned or insloped roads with inside ditches to outloped roads with rolling dips; (4) removing or breaching outside berms on crowned or outloped roads to facilitate effective drainage; (5) applying treatments to dissipate energy, disperse flows, and minimize erosion at road drainage outlets not connected to watercourses; (6) avoiding concentration of flows onto unstable areas. In particular, the distance between a watercourse crossing and the first upslope adequately functioning and sized road drainage facility or structure is of high importance because this distance has a large influence on the volume of water and sediment delivered to a watercourse.</p>	<p>Prior to a significant rain event that may cause overland flow. Prior to the Extended Wet Weather Period, October 15th and/or defined Winter Period, November 15th. See also Winter Period Operating Plan Item 23 below for operations in the EWWP.</p>
<p>d. 923.5[943.5, 963.5](l) & (m): treatments for sidecast or fill; cuts and fills associated w/ approaches to watercourse crossings; bare areas w/in WLPZ.</p>	<p><u>Soil stabilization measures</u> Treatment of the traveled surface of logging roads within the WLPZ may be by one or more of the following methods:</p> <ul style="list-style-type: none"> • Rocking, chip sealing, paving. • Compacting and draining with water breaks. • Compacting and draining with outloping and rolling dips. • Insloping with ditch drain. • Crowning with ditch drains. • Mulching outer half of drainage facilities. <p>Treatment for soil stabilization as discussed in this item shall be with straw mulch or other appropriate material (logging slash, brush, etc.). To ensure the protection of beneficial uses of water and riparian function, mulch shall be applied to a minimum depth of two inches for adequate rainfall dissipation. The Plan Submitter shall be responsible for supplying all stabilization materials and the LTO shall be responsible for application. The areas of application are described below.</p> <p><u>Material and Methods preferences</u></p> <ul style="list-style-type: none"> • On tractor roads, including crossing locations, the preferred mulch is slash and brush walked into the trails (See “Specifications for use of ‘Slash Packing’ ” given below). • On logging road fill slopes the preferred mulch is placed slash. 	<p>See c. above.</p>

CAITREES THP ITEM #18 – SOIL STABILIZATION

	<ul style="list-style-type: none"> • On logging road surfaces or disturbed running areas at logging road watercourse crossings where near term future use IS expected the preferred mulch is straw. • On logging road surfaces or disturbed running areas at logging road watercourse crossings where near term future use is NOT expected the preferred mulch is slash. <p><u>Specifications for use of ‘Slash Packing’</u> Where ‘slash packing’ is used as a method of treatment it shall conform to the following specifications:</p> <ul style="list-style-type: none"> • Out-slope or waterbar the landing, logging road, or tractor road so that flow is not concentrated. • The slash should be small enough diameter so that it can be crushed and embedded into the soil by track-walking over it with a piece of tracked equipment, generally 3 inches or less in diameter. • Place slash on disturbed areas by hand or with equipment so that at least 90% of the ground surface is covered with slash. • Slash shall not be placed more than 1 foot thick to ensure that it may be effectively crushed and embedded by the tracked equipment. • After slash is placed, a piece of tracked equipment shall walk over the slash repeatedly until at least two thirds of the pieces of slash are touching the ground, and that most of the length of any individual piece of slash is in contact with the ground. • 	
<p>e. 923.5[943.5,963.5](n): When the natural ability of ground cover in WLPZ is inadequate to filter sediment.</p>	<p>See (d.) above and (i.) below where applicable</p>	<p>See c. above.</p>
<p>f. 923.5[943.5,963.5](o): Exceptions to soil stabilization treatment timing.</p>	<p>N/A</p>	
<p>Watercourse crossings on logging roads</p>		
<p>g. 923.9[943.9,963.9] (t)(1)-(3): Bare soil on fills, sidecast,</p>	<p>See (d.) above and (i.) below where applicable</p>	<p>See c. above.</p>

CalTREES THP ITEM #18 – SOIL STABILIZATION

timing of treatment.	
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Forest Practice Rules (FPR) require Specific Erosion Control / Soil Stabilization measures to be addressed within the proposed THP addressing. WLPZ & Protected ELZ & EEZs within a Non ASP and exempt ASP watersheds. Please address the following table and the specific rule. If not applicable, so state.

<u>Non ASP & Exempt ASP watersheds</u> WLPZ & Protected ELZ & EEZ	N/A	Description of Treatments Protection Measures	Timing
h. 916.7[936.7,956.7] Stabilization measures for WLPZ of CI & C II.	NA		

Forest Practice Rules (FPR) require Specific Erosion Control / Soil Stabilization measures to be addressed within the proposed THP addressing WLPZ & Protected ELZ & EEZ, Roads and Landings and Watercourse Crossings, within an ASP Watershed or Immediately upstream of an ASP Watershed. Please address the following table and the specific rule. If not applicable, so state.

<u>ASP WATERSHEDS</u> Logging roads / Landings	N/A	Description of Treatments Protection Measures	Timing
i. 916.9[936.9,956.9](n)(1)-(7): WLPZ, & protected ELZ & EEZs.		Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge shall be described in the plan as follows. (1) Soil stabilization is required for the following areas: (A) Areas exceeding 100 contiguous square feet where timber operations have exposed bare	See c. above.

CalTREES THP ITEM #18 – SOIL STABILIZATION

	<p>soil.</p> <p>(B) Approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing.</p> <p>(C) Any other area of disturbed soil that threatens to discharge sediment into waters in amounts that would result in a significant sediment discharge.</p> <p>(2) Soil stabilization treatment measures may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers.</p> <p>(3) Where straw or slash mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of timber operations.</p> <p>(4) Where slash mulch is packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum slash coverage shall be 75 percent.</p> <p>(5) For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water. <u>For Philo weather forecast use the following internet address: https://forecast.weather.gov/MapClick.php?site=eka&textField1=39.79306&textField2=-123.24694#.XpT3dm5Fx9A</u></p> <p>(6) For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.</p> <p>(7) Where the natural ability of ground cover is inadequate to protect beneficial uses of water by minimizing soil erosion or by filtering sediment, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.</p> <p>See also (d) above.</p>	
<p>j. 923.5[943.5,963.5](q)(3): as it pertains to roads, landings, etc.</p>	<p>See (c.), (d.) and (i.) above</p>	<p>See c. above.</p>
<p>k. 923.9[943.9,963.9](t)(4): as it pertains to watercourse crossings.</p>	<p>See (c.), (d.) and (i.) above</p>	<p>See c. above.</p>

CalTREES THP ITEMS #19-21 – GROUND BASED EQUIPMENT

ITEM #19 – 21: GROUND BASED EQUIPMENT

GROUND BASED EQUIPMENT

a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Per 14 CCR 895.1 a layout is a prepared bed in which a tree is felled, generally constructed by a tractor or other ground based equipment.</p> <p>Are tractor or skidder constructed layouts to be constructed?</p> <p>If YES, specify the location (consider mapping) and the extent of use. NOTE: winter operations and soil stabilization measures apply to tractor or skidder constructed layouts.</p>
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Per 14 CCR 914.3 [943.3, 954.3](e) Tractors shall not be used in areas designated for cable yarding except:

- To pull trees away from streams
- To yard logs in areas where deflection is low
- Where swing yarding is advantageous
- To construct firebreaks and/or layouts
- To provide tail-holds

Such exception(s) shall be explained and justified in the THP, and require Director's approved

b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will ground based equipment be used within area(s) designated for cable yarding: (CHECK all that apply)</p> <p><input type="checkbox"/> Pulling trees away from watercourses</p> <p><input type="checkbox"/> Yarding logs from areas with low deflection</p> <p><input type="checkbox"/> Swing yarding</p> <p><input type="checkbox"/> Construct fire breaks</p> <p><input type="checkbox"/> Construct layouts</p> <p><input type="checkbox"/> Providing tail-holds</p> <p><input type="checkbox"/> Other Describe:</p>
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If YES, specify the location (consider mapping) and provide LTO instructions

c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Are any exceptions proposed for ground based operations within cable areas outside of the exceptions listed above?</p> <p>If YES, provide the required explanation and justification in SECTION III of the THP and provide operations instructions for the LTO in SECTION II below.</p>
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Per 14 CCR § 914.9 [934.9, 954.9](a) Alternatives to Standard Rules:

- (a) Alternative practices may be developed by the RPF on a site-specific basis provided the following conditions are complied with and the alternative practices will achieve environmental protection at least equal to that which would result from using measures stated in 14 CCR §§ 914.1-914.8, 934.1-934.8, 954.1-954.8.
- (1) Environmental impacts with potential for significant adverse effects on the beneficial uses of water, on the residual timber, and on the soil productivity are identified and measures proposed to mitigate such impacts are included in an approved THP. The THP shall also contain a clear statement as to why alternative harvesting and erosion control measures are needed.
 - (2) The alternative practice(s) must be explained in sufficient detail and standards provided in the THP so that they can be adequately evaluated and enforced by the Director and implemented by the licensed timber operator.
 - (3) On a THP in which alternatives covering harvesting and erosion control measures have been incorporated, the timber operator shall agree to the alternative specifications by signing and filing with the Director a copy of the plan, the amended plan or a facsimile thereof, prior to beginning or continuing operations on the portion of the plan to which the alternatives apply.
- (b) The Director shall not accept for inclusion in a THP alternative harvesting and erosion control measures proposed under this section which do not meet the standard of subsection (a) of this section. In the event that there is more than one written negative position showing that the alternative practice(s) does (do) not meet the standard of subsection (a) received from among the agencies listed in 14 CCR 1037.3 and the Department which participated in the review of the plan including on-the-ground inspection, the Director shall reject the proposed alternative.
- (c) Alternative practices stated in an approved THP shall have the same force and authority as those practices required by the standard rule.

CalTREES THP ITEMS #19-21 – GROUND BASED EQUIPMENT

d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Is the RPF proposing any Alternative Practices to the standard rule on a site-specific basis?</p> <p>If "YES" provide clear instruction to the LTO in Section II advising LTO how the Alternative is to be implemented to maintain equal protection of the standard rule. In Section III explain how the alternative practice proposed achieves environmental protection at least equal to that what which would result from using measures stated in 14 CCR §§ 914.1-914.8 ,934.1-934.8, 954.1-954.8.</p>
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LTO Instructions:

14 CCR 914.2 [934.2, 954.2](a-k) Identifies the Forest Practice Rule requirements for the use of ground based equipment within the harvesting area.

- (b) Tractor, or other heavy equipment equipped with a blade, SHALL NOT operate on skid roads or slopes that are so steep as to require the blade to be used for breaking.
- (c) Tractor roads SHALL be limited in number and width to the minimum necessary for removal of logs.
 - When less damage to the resources specified in 14 CCR 914[934, 945] will result, existing tractor roads shall be used instead of constructing new tractor roads.
 - [NORTHERN only] RPF may propose exceptions for silvicultural reasons when explained and justified within the plan.
- (e) Slash and debris from timber operations SHALL not be bunched adjacent to residual trees required for silvicultural or wildlife purposes, or placed in a location where they could discharge into a Class I or II watercourse, or Lake.
- (g) where tractor roads are constructed only those roads shall be used for the skidding of logs to landings
- (h) Desirable residual trees and seedlings will not be damaged or destroyed by tractor operations.
- (i) where water breaks cannot effectively disperse surface runoff, other erosion controls shall be installed as needed.
- (j) Slope restriction are identified in subsection (d), (f) [Coastal, Northern], (j) [Southern]

The LTO shall be aware of these rule requirements prior to operations

e. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will new tractor roads be constructed?
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f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will tractor road use be limited to existing tractor roads?
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ASP NOTE: per 14 CCR 916.9 (k)(1) – Year-around tractor road limitations, Tractor roads shall not be used when operations may result in significant sediment discharge and (m) Tractor Road Drainage Facility Installation - All tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

Short sections of new tractor roads may need to be constructed but any new tractor roads will comply with rules and no exceptions are proposed.

Will ground based equipment be used on:

g. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Unstable areas? (only allowed if unavoidable)</p> <p>If YES, the RPF SHALL develop specific measures to minimize the effect of operations on slope stability. Provide the required justification and explanation in SECTION III and operational instructions to the LTO in SECTION II.</p> <p>Several large deep-seated landslide areas have been identified by CEG Tim Best and a report is included in <u>Section V</u> and maps are included in <u>Section II</u></p> <p>Operations are proposed on a portion of an identified active landslide area shown on the <u>Geological Report Maps as G1 and G3</u> and are associated with commercial thinning and transition activities, road</p>
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CaITREES THP ITEMS #19-21 – GROUND BASED EQUIPMENT

	<p>use and tractor skidding. The slopes are generally 30% or less and operations should retain a minimum of 100 square feet of basal area on the operated areas and over 100 feet of basal area will be retained on the remaining areas. The main indicator of active movement of this feature are disjointed watercourses that are not in original channels, but causes may also be earlier logging without proper drainage installed. <u>Following review by agencies the following is required prior to operations on slides G1 and G3:</u></p> <ul style="list-style-type: none"> • <u>All timber shall be marked</u> • <u>A total of 100 sq feet of basal area shall remain on the slide areas following operations including hardwood</u> • <u>Skid trails proposed for use shall be flagged yell and black “Skid Trail” flagging</u> • <u>Boundaries of G1 and G3 shall be flagged with “Special Treatment Zone” flagging.</u> • <u>If herbicides are used to reduce hardwood the slide areas shall retain sufficient hardwoods and conifers to maintain 100 sq ft basal area</u> • <u>See additional information in Section V of the plan under Geological Report</u> • <u>In addition, the Geological Maps are included in Section II, Item 38 of this section as pages 91.3 and 91.4</u> <p>Other identified landslide features on the CEG landslide map do not show signs of active movement such as tilted or leaning trees, fresh head scarps, disrupted ground, active watercourse channel migration or road surface movements from last grading.</p>
<p>h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Slopes steeper than 65% if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p>
<p>i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Slopes steeper than 50% where the erosion hazard rating (EHR) is HIGH or EXTREME. if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p>
<p>j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Slopes between 50% and 65% with a MODERATE EHR at: (percentage based on average slope on sample areas of 20 acres)</p> <p>Existing tractor roads that do not require reconstruction.</p> <p>[NORTHERN and SOUTHERN only] New tractor roads that have been flagged by an RPF or supervised designee prior to use.</p> <p>[COASTAL only] New tractor roads at a location that has been shown on the THP map, flagged by an RPF or supervised designee prior to the pre-harvest inspection, or prior to the start of timber operations if a PHI was not required.</p> <p>if YES, provide site specific instructions to the LTO in SECTION II.</p>
<p>k. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake? if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p>
<p>NOTE:</p> <ul style="list-style-type: none"> - Per 14 CCR 1034(x)(15) all exceptions must be located on a map. - If any question above is answered YES then tractor road locations must be flagged on the ground prior to the PHI or the start of timber operations if a PHI is not required. 	

CaITREES THP ITEM #23 – WINTER OPERATIONS

ITEM # 23 – WINTER OPERATIONS

Per 14 CCR 895.1:

- **“Winter period”** means the period between November 15 and April 1, Except under special County Rules per 14 CCR:
 - 925.1 (Santa Clara)
 - 926.18 (Santa Cruz)
 - 927.1 (Marin)
 - 965.5 (Monterey)

- **“Extended wet weather period” (EWWP)** means the period from October 15 to May 1.

- **Tractor roads (except as otherwise provided in the rules):**
 - All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations.
 - Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a “chance” (30% or more) of rain within the next 24 hours per 14 CCR 914.6[934.6, 954.6](a).
- **Logging roads and landings used for timber operations shall have adequate drainage:**
 - Upon completion of use for the year or by October 15, whichever is earlier.
 - An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow. 923.5[943.5, 963.5](j).

- When the term **“WPOP”** (Winter Period Operating Plan) is used below, all the requirements per 14 CCR 914.7[934.7, 954.7] (b) must be addressed.

ITEM #23		WINTER OPERATIONS	
If timber operations are proposed within the winter period the RPF may propose to operate under a:			
<ul style="list-style-type: none"> • Winter Period Operating Plan (WPOP) per 14 CCR 914.7, 934.7, 954.7(b) • In-lieu winter operating plan per 14 CCR 914.7 [934.7, 954.7](c) 			
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will timber operations occur during the winter period?		
WINTER PERIOD OPERATING PLAN (WPOP)			
A Winter Period Operating Plan (WPOP) is required when winter operations will occur under the following conditions:			
<ul style="list-style-type: none"> • Site preparation • Road and landing construction • Temporary logging road watercourse crossings will not be removed • At tractor watercourse crossings • Temporary logging roads or landings • Roads to be abandoned or deactivated • Operations are proposed in an ASP watershed or immediately upstream 			
b. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will mechanical site preparation be conducted during the winter period? If YES, then a WPOP is required per 14 CCR 914.7 [934.7, 954.7](b)		
c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will roads be constructed during the winter period? If YES, a WPOP is required per 14 CCR 914.7 [934.7, 954.7] addressing logging road and landing construction and reconstruction per 14 CCR 923.4 [943.4, 963.4](l). Provide operational instructions to the LTO in SECTION II		
d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will landings be constructed during the winter period? If YES, a WPOP is required per 14 CCR 914.7 [934.7, 954.7] addressing logging road and landing		

CalTREES THP ITEM #23 – WINTER OPERATIONS

	construction and reconstruction per 14 CCR 923.4 [943.4, 963.4](l).). Provide operational instructions to the LTO in SECTION II
e. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will temporary logging road watercourse crossings be left in place during the winter period? If YES, a WPOP is required per 14 CCR 923.9 [943.9, 963.9](r). Provide specific measures to be taken during operations by the LTO in SECTION II
f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will tractor watercourse crossings be used during the winter period? If YES, a WPOP is required per 14 CCR 914.8 [934.8, 954.8](d). Provide operational instructions and stabilization measures in SECTION II. If an exception is proposed provide an explanation and justification in SECTION III.
g. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will temporary logging roads be used during the winter period? If YES, a WPOP is required per 14 CCR 923.6 [943.6, 963.6](f) and 923.8 [943.8, 963.8](d). Provide specific measures to be taken during operations for the LTO in SECTION II.
h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will temporary landings be used during the winter period? If YES, a WPOP is required per 14 CCR 923.6 [943.6, 963.6](f) and 923.8 [943.8, 963.8](d). Provide specific measures to be taken during operations for the LTO in SECTION II.
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will logging roads to be abandoned or deactivated, be open (not blocked) during the winter period? If YES, a WPOP is required per 14 CCR 923.6 [943.6, 963.6](f) and 923.8 [943.8, 963.8](d). Provide specific measures to be taken during operations for the LTO in SECTION II.
ASP WATERSHEDS OR IMMEDIATELY UPSTREAM	
	Extended Wet Weather Period:
j. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are timber operations proposed during the extended wet weather period – October to May 1? If YES, then a WPOP is required per 14 CCR 916.9 [936.9, 963.9](l) and (l)(1)
k. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will <u>logging roads construction or reconstruction</u> occur within the extended wet weather period? If YES, provide specific measures to be taken during operations per 14 CCR 923.6 [943.6, 963.6] (h)(6) and 923.4 [943.4, 963.4](s)(2) In SECTION II
l. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will <u>logging road use</u> occur within the extended wet weather period? If YES, provide specific measures to be taken during operations per 14 CCR 923.6 [943.6, 963.6] (h)(6) and 923.4 [943.4, 963.4](s)(2) In SECTION II
m. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will <u>landing construction or reconstruction</u> occur within the extended wet weather period? If YES, provide specific measures to be taken during operations per 14 CCR 923.6 [943.6, 963.6] (h)(6) and 923.4 [943.4, 963.4](s)(2) In SECTION II
n. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will <u>landing use</u> occur within the extended wet weather period? If YES, provide specific measures to be taken during operations per 14 CCR 923.6 [943.6, 963.6] (h)(6) and 923.4 [943.4, 963.4](s)(2) In SECTION II
o. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will any watercourse crossing drainage structures be <u>CONSTRUCTED</u> during the extended wet weather period? If YES, provide specific measures to be taken during operations per 14 CCR 923.9 [943.9, 963.9](s) In SECTION II
p. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will any watercourse crossing drainage structures be <u>RECONSTRUCTED</u> during the extended wet weather period?

	If YES, provide specific measures to be taken during operations per 14 CCR 923.9 [943.9, 963.9](s) In SECTION II
q. [x]	If any of the questions above are answered YES then WPOP is required: RPF chooses to prepare a WPOP per 14 CCR 914.7 [934.7, 954.7](b)(1-12)

IF A WINTER OPERATING PLAN (WPOP) IS NOT BEING PROPOSED THEN THIS PAGE MAY BE REMOVED

ITEM FF

WINTER PERIOD OPERATING PLAN (WPOP)	
Per 14 CCR 914.7 [934.7, 954.7](b) the WPOP shall include the specific measures to be taken during the winter period to avoid or substantially lessen erosion, soil movement into watercourses and soil compaction from timber operations. The winter period operating plan shall address the following subjects:	
1) Erosion Hazard Rating:	The Erosion Hazard Rating for the plan area is Moderate.
2) Mechanical Site preparation methods:	Mechanical Site Preparation is proposed but will be limited to dry rainless periods when soil is not saturated and limited to slopes less than 30%.
3) Yarding system: <i>(Constructed skid trails and tractor road watercourse crossings)</i>	Tractor
4) Operating Period:	<p>a) Timber falling may be conducted during the winter period. The felling of trees that have a chance of accidentally entering a Class I or II (Small or Large) watercourse shall be deferred until such time as when equipment is available on-site to remove such trees from the watercourse.</p> <p>b) Cable harvesting: <u>Is not proposed in this plan.</u></p> <p>c) Ground based yarding: Ground based yarding shall be done only during dry rainless periods and shall not be conducted on saturated soils conditions that may produce significant sediment discharge. Significant Sediment Discharge (14 CCR 895.1) means soil erosion that is currently, or may be in the future, discharged to watercourses or lakes in quantities that violate Water Quality Requirements or result in significant individual or cumulative adverse impacts to the beneficial uses of water. Ground based operations that produce a Significant Sediment Discharge which causes a visible increase in turbidity to receiving Class I, II, III or IV waters is prohibited. Saturated soil conditions (14 CCR 895.1) means: “soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.” Use of tractor roads and watercourse crossings within any WLPZ/ELZ will be prohibited during the winter period.</p> <p>Indicators of saturated soil conditions:</p> <p>In yarding, this condition may be evidenced by:</p> <p>i) reduced traction by equipment indicated by spinning or churning of wheels or</p>

tracks in excess of normal performance,

ii) inadequate traction without blading wet soil,

iii) soil displacement in amounts that cause visible increase in turbidity of downstream waters in a receiving Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or

iv) creation of ruts greater than would be normal following a light rainfall.

On logging roads and landing surfaces, this condition may be evidenced by:

i) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance,

ii) inadequate traction without blading wet soil,

iii) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in receiving Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or

iv) pumping of road surface materials by traffic, or

v) creation of ruts greater than would be created by traffic following normal road watering, which transports surface material to a drainage facility that discharges directly into a watercourse.

vi) soils or road and landing surfaces that are hard frozen are excluded from this definition.

d) Road and landings use: Use of logging roads and landings shall not take place at any location where saturated soil conditions exist, where a stable logging road or landing operating surface does not exist, or when visibly turbid water from the road or landing surface, or inside ditch may reach a watercourse or lake. Logging roads and landings shall not be used during any time of the year when operations may result in significant sediment discharge to watercourse, except in emergencies to protect the road, to reduce erosion, to protect water quality, or in response to public safety needs {14 CCR 923.6(b)}.

e) Road construction and reconstruction (defined in 14 CCR 895.1) will not occur during the defined winter period November 15-April 1. This also includes the construction or reconstruction of watercourse crossings.

f) Road upgrades (upgrading seasonal roads to permanent roads) may be conducted during the winter period when soils are not "saturated". Saturated soil conditions (14 CCR 895.1) means: "soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials."

g) Road maintenance (grading) may occur during the winter period as long as the road system is dry. A dry road is one in which moisture is less than or equal to that found during normal watering (dust abatement) treatments or light rainfall. Further,

CaITREES THP ITEM #23 – WINTER OPERATIONS

	equipment is not rutting a road surface or pumping fines causing a visible increase in turbidity in any drainage facility which drains directly to Class I, II or III waters.
5) Erosion Control facilities timing:	Erosion control requirements and timing are listed above in Item 18. With pertinent information copied below: (5) For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water. (6) For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier. For Philo weather forecast use the following internet address: https://forecast.weather.gov/MapClick.php?site=eka&textField1=39.79306&textField2=123.24694#.XpT3dm5Fx9A
6) Consideration of form of precipitation: (rain or snow)	Precipitation is expected to occur in the form of rain, snow is rare but possible considering the elevation is excess of 1600 feet in some locations.
7) Ground conditions: (soil moisture conditions, frozen)	Timber operations shall not occur when saturated soil conditions exist or when a stable operating surface does not exist on tractor roads, logging roads and landings. See Equipment Use Limitations in #10 below.
8) Silvicultural system ground cover:	Silviculture is selection, commercial thinning, transition and variable retention. All harvest areas of the plan are expected to retain a vegetative cover in the form of overstory/understory vegetation, slash, and associated logging debris.
9) Operations within the WLPZ:	Operations within the WLPZ/ELZ during the winter period will be limited to: a) The felling of trees. Trees shall be felled away from watercourses, in such a manner to facilitate the removal of logs from the WLPZ/ELZ with minimized disturbance to vegetation and ground cover. b) Long lining of logs Road Maintenance as defined in Item 4 (g) above.
10) Equipment limitations:	See Section II, Item 23, FF, 4(b-g), 7, and 9 (b) above. <u>Per 14 CCR 914.6(b)(2) Installation of Drainage facilities and structures is required from October 15 to November 15 and from April 1 to May 1 on all constructed skid trails and Tractor Roads prior to sunset if the National Weather Service forecast is a "chance" (thirty (30) percent or greater) of rain within the next twenty-four (24) hours.</u> <u>And Per 14 CCR 914.7(c)(2) Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown-periods.</u> <u>Not more than 400 feet of skid trail per piece of skidding equipment shall be open or not have drainage facilities or structures installed during the Extended Wet Weather or Winter Operating Periods.</u>
11) Known Unstable Areas:	No timber operations allowed on slide or unstable areas where active soil movement is observed impacting roads, skidtrails or watercourses other than emergency operations undertaken to mitigate impacts to roads, skid trails or watercourses.
12) Logging roads and landings:	See Item 23, FF, 4(d) above.

CalTREES THP ITEM #24 & 25– ROADS AND LANDINGS

ITEM # 24 – ROADS AND LANDINGS

ITEM #24	ROAD CONSTRUCTION
<p>a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will any road(s) be CONSTRUCTED?</p> <p>PROVIDE: The classification and approximate length of each of the following logging road segment categories: 1034(o) Road classification: Approximate length Feet: <input type="checkbox"/> Permanent _____ <input checked="" type="checkbox"/> Seasonal <u> 475 </u> <input type="checkbox"/> Temporary _____</p> <p>Road is necessary to connect two existing seasonal road segments to reduce log hauling distance. The current road/skid trail is too steep to accommodate trucks.</p>
<p>b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will new road construction be wider than single lane with turnouts? If YES, address pursuant to 14 CCR 923 [943, 963](c) & 923.2 [943.2, 963.2](d)(1)</p>
<p>c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any new Logging road(s) cross? <input type="checkbox"/> Unstable areas <input type="checkbox"/> Connected headwall swales (14 CCR 895.1 "Connected Headwall Swale") <input type="checkbox"/> Both</p> <p align="center">If YES, address pursuant to 14 CCR 923.1 [943.1, 963.1](d)</p>
<p>d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any new roads? <input type="checkbox"/> Exceed a grade of 15% <input type="checkbox"/> Have grades greater than 15% for distances greater than 500 feet <input type="checkbox"/> Both</p> <p>NOTE: per 14 CCR 1034(x)(5)(A) new road construction or reconstruction segments exceeding 15% for 200 feet shall be mapped. If YES, address pursuant to 14 CCR 923.2 [943.2, 963.2](d)(2). See 923 [943, 963](c).</p>
<p>e. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will any logging roads be constructed within? <input type="checkbox"/> 150 feet of a Class I Watercourse and Lake Transition Line (WLTL) <input type="checkbox"/> 100 feet of a class II WLTL on slopes greater than 30% <input type="checkbox"/> Class I Watercourse or Lake <input type="checkbox"/> Class II Watercourse or Lake <input checked="" type="checkbox"/> Class III Watercourse or Lake Class III crossing modification at MP 54 & 55 w/1600 <input type="checkbox"/> Class IV Watercourse or Lake <input type="checkbox"/> A Watercourse and Lake Production Zone (WLPZ) <input type="checkbox"/> Other (Examples; marshes, wet meadows, wet areas) If "OTHER" is selected describe the type of feature referenced below.</p> <p>NOTE: Exceptions are permitted per 14 CCR 923.1 [943.1, 963.1](b)(1) – (3) at: - Existing logging road crossing(s) - Logging road watercourse crossing(s) to be constructed that are approved as part of a Fish and Game Code process (F&GC 1600 et seq.) - Logging road watercourse crossings of class III watercourses that are dry at the time of use.</p> <p align="center">If YES, address per 14 CCR 923 [943, 963](c)</p>
<p>f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any constructed road be located across 100 feet or more lineal distance on? <input type="checkbox"/> Slopes over 65%</p>

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	<input type="checkbox"/> Slopes over 50% which are within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake If YES, address per 14 CCR 923.2 [943.2, 963.2](a)(7) and 923.4 [943.4, 963.4](n)
<p>g. 1. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>3. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 4. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any road(s) be deactivated? Will any road(s) be abandoned? Road classification: Approximate length Feet: <input type="checkbox"/> Permanent _____ <input type="checkbox"/> Seasonal _____ <input type="checkbox"/> Temporary _____</p> <p>Will any watercourse crossing(s) be deactivated? Will any watercourse crossing(s) be abandoned? If YES, describe specific measures to prevent significant sediment discharge. per 14 CCR 923.8 [943.8, 963.8] et seq. and 923.9 [943.9, 963.9](e) and (p)</p> <p>If Logging road(s) are to be abandoned provide the blockage design Per 14 CCR 923.8 [943.8, 963.8](d)</p>
<p>h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Is there any exception to flagging or otherwise identifying the location of any road(s) to be constructed? If YES, address per 14 CCR 923.3 [943.3, 963.3](c)</p>

ROAD RECONSTRUCTION	
<p>i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any roads be RECONSTRUCTED?</p> <p>PROVIDE: The classification and approximate length of each of the following logging road segment categories: 1034(o) Road classification: Approximate length Feet: <input type="checkbox"/> Permanent _____ <input type="checkbox"/> Seasonal _____ <input type="checkbox"/> Temporary _____</p>
<p>j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will new road reconstruction be wider than single lane with turnouts? If YES, address pursuant to 14 CCR 923 [943, 963](c) & 923.2 [943.2, 963.2](d)(1)</p>
<p>k. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any logging roads be reconstructed within? <input type="checkbox"/> Class I Watercourse or Lake <input type="checkbox"/> Class II Watercourse or Lake <input type="checkbox"/> Class III Watercourse or Lake <input type="checkbox"/> Class IV Watercourse or Lake <input type="checkbox"/> A Watercourse and Lake Zone (WLPZ) <input type="checkbox"/> Other (Examples; marshes, wet meadows, wet areas) If "OTHER" is selected describe the type of feature referenced below.</p> <p>NOTE: Exceptions are permitted per 14 CCR 923.1 [943.1, 963.1](b)(1) – (3) at: - Existing logging road crossing(s) - Logging road watercourse crossing(s) to be constructed that are approved as part of a Fish and Game Code process (F&GC 1600 et seq.) - Logging road watercourse crossings of class III watercourses that are dry at the time of use.</p>

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	If YES, address per 14 CCR 923 [943, 963](c)
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any reconstructed road be located across 100 feet or more lineal distance on?</p> <input type="checkbox"/> slopes over 65% <input type="checkbox"/> Slopes over 50% which are within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake. If YES, address per 14 CCR 923.2 [943.2, 963.2](a)(7) and 923.4 [943.4, 963.4](n)
m. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Is there any exception to flagging or otherwise identifying the location of any road(s) to be reconstructed?</p> <p align="center">If YES, address per 14 CCR 923.3 [943.3, 963.3](c)</p>
LANDING CONSTRUCTION	
n. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will any Landing(s) be CONSTRUCTED?
o. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any landing(s) be constructed within?</p> <input type="checkbox"/> 150 feet of a Class I Watercourse and Lake Transition Line (WLTL) <input type="checkbox"/> 100 feet of a class II WLTL on slopes greater than 30% <input type="checkbox"/> Class I Watercourse or Lake <input type="checkbox"/> Class II Watercourse or Lake <input type="checkbox"/> Class III Watercourse or Lake <input type="checkbox"/> Class IV Watercourse or Lake <input type="checkbox"/> A Watercourse and Lake Protection Zone (WLPZ) <input type="checkbox"/> Other (Examples; marshes, wet meadows, wet areas) If "OTHER" is selected describe the type of feature referenced below. <p>NOTE: Exceptions are permitted per 14 CCR 923.1 [943.1, 963.1](b)(1) – (3) at:</p> <ul style="list-style-type: none"> - Existing crossing(s) - Logging road watercourse crossing(s) to be constructed that are approved as part of a Fish and Game Code process (F&GC 1600 et seq.) - Logging road watercourse crossings of class III watercourses that are dry at the time of use. <p align="center">If YES, address per 14 CCR 923 [943, 963](c)</p>
p. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any landing(s) exceed one half acre in size?</p> <p>NOTE: per 14 CCR 1034(x)(5)(D) if any landing exceeds ¼ acre in size or requires substantial excavation, the location shall be mapped. If YES, address per 14 CCR 923 [943, 963](c) and 923.2 [943.2, 963.2](e)(2)</p>
q. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any Landing(s) be located on?</p> <input type="checkbox"/> Unstable areas <input type="checkbox"/> Connected headwall swales (14 CCR 895.1 "Connected Headwall Swale") <input type="checkbox"/> Both <p align="center">If YES, address pursuant to 14 CCR 923.1 [943.1, 963.1](d)</p>
r. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any landing construction be located across 100 feet or more lineal distance on?</p> <input type="checkbox"/> Slopes over 65% <input type="checkbox"/> Slopes over 50% which are within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake. If YES, address per 14 CCR 923.2 [943.2, 963.2](a)(7) and 923.4 [943.4, 963.4](n)
s. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any Landing(s) be deactivated? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Will any Landing(s) be abandoned? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>

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	If YES, describe specific measures to prevent significant sediment discharge. per 14 CCR 923.8 [943.8, 963.8] et seq. and 923.9 [943.9, 963.9](e) and (p)
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LANDING RECONSTRUCTION	
t. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any Landing(s) be RECONSTRUCTED?
u. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any logging roads be reconstructed within?</p> <p><input type="checkbox"/> Class I Watercourse or Lake</p> <p><input type="checkbox"/> Class II Watercourse or Lake</p> <p><input type="checkbox"/> Class III Watercourse or Lake</p> <p><input type="checkbox"/> Class IV Watercourse or Lake</p> <p><input type="checkbox"/> A Watercourse and Lake Protection Zone (WLPZ)</p> <p><input type="checkbox"/> Other (Examples; marshes, wet meadows, wet areas)</p> <p>If "OTHER" is selected describe the type of feature referenced below.</p> <p>NOTE: Exceptions are permitted per 14 CCR 923.1 [943.1, 963.1](b)(1) – (3) at:</p> <ul style="list-style-type: none"> - Existing logging roads crossing(s) - Logging road watercourse crossing(s) to be constructed that are approved as part of a Fish and Game Code process (F&GC 1600 et seq.) - Logging road watercourse crossings of class III watercourses that are dry at the time of use. <p align="center">If YES, address per 14 CCR 923 [943, 963](c)</p>
u.1. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any landing reconstruction be located across 100 feet or more lineal distance on?</p> <p><input type="checkbox"/> Slopes over 65%</p> <p><input type="checkbox"/> Slopes over 50% which are within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake.</p> <p align="center">If YES, address per 14 CCR 923.2 [943.2, 963.2](a)(7) and 923.4 [943.4, 963.4](n)</p>

SIGNIFICANT EROSION SITE(S)	
w. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Are there any significant erosion sites?</p> <p><input type="checkbox"/> Existing</p> <p><input type="checkbox"/> Potential</p> <p><input checked="" type="checkbox"/> Both</p> <p>Associated within the logging area at?</p> <p><input checked="" type="checkbox"/> Logging road(s)</p> <p><input type="checkbox"/> Landing(s)</p> <p><input checked="" type="checkbox"/> Watercourse crossing(s) in the logging area?</p> <p>Per 14 CCR 923.1 [943.1, 963.1](e)(1) – (5). Also see 923.9 [943.9, 963.9](a)</p> <p>If YES, for each significant existing or potential erosion site, provide the following:</p> <ul style="list-style-type: none"> ➤ Describe current condition of the site. ➤ Identify which sites can be feasibly treated, and which sites cannot. ➤ Specify mitigations for those sites that can be feasibly treated. ➤ Indicate logical order of treatment for those which have feasible treatments <p>NOTE: Consider providing a MAP POINT TABLE which identifies the erosion site by mapped</p>

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	<p>referenced identifier consistent with mapped locations.</p> <p>See Map Point Table below in Item 38 for detailed descriptions and repair of erosion sites and Operation Maps for location of map points.</p>
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ITEM #25

NOTE: If any item listed above is checked "YES" Provide:

- **Operations Instructions to the LTO**, in accordance with the respective rule requirement(s) in **SECTION II** of the THP.
- Any required **explanation and justification** should be included in **SECTION III**

Operation instructions to the LTO:

LTO: Items a, e, n and w are checked "Yes" above.

Item "a" is new road construction of 475 feet of seasonal road.

Item "e" is new road construction at approach to existing culvert crossings, 54 and 55, requiring lengthening of culvert at both locations.

Item "n" is new or proposed landing construction.

Item "w" checked above is associated with erosion control points listed in the Map Point Table in Item 38.

The Map Point Table lists map location, type feature, hydro calculation for rock and culvert calculations, whether CDFW permit required, CEG reviewed, amount potential sediment transport, a description and recommendation for treatment. The Opera

ONLINE SYSTEM WILL HAVE A BOX TO ALLOW FOR THE EXPLANATION AND EXPLANATION TO BE COMPLETED IN SECTION II BUT WILL POPULATE IN SECTION THREE WHEN PRINTED

ASP WATERSHEDS

a. Yes No

Will hauling on roads and landings be limited to those which are Hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface?
If NO, address the exception pursuant to 923.6 [943.6,963.6] (h)(3).

ADDRESS THE FOLLOWING AS IT APPLIES TO ASP WATERSHEDS OR IMMEDIATELY UPSTREAM AND CONTIGUOUS TO, ANY WATERSHED WITH LISTED ANADROMOUS SALMONIDS

- When logging road(s) or landing(s) construction or reconstruction is proposed identify:

1) How the proposed operations will fit into the systematic layout pattern.

Per 14 CCR 923.1 [943.1. 963.1](g)

New logging road construction will provide access for timber harvest, road maintenance and fire prevention.

2) What, if any, offsetting mitigation measures (including but not limited to, abandonment of logging road(s) and landing(s) are needed to minimize potential adverse impacts to watersheds from the road system.

Per 14 CCR 923.1 [943.1. 963.1](g)

The road construction will only occur if the plan is operated. The benefits to reduced sediment transport proposed for the roads and crossings upgrades will far outweigh the impacts associated with the proposed road construction.

- Provide specific provisions for the protection of salmonid habitat for all logging road(s) construction:

3) On slopes, greater than 50% with access to a watercourse or lake.

Per 14 CCR 923.4 [943.4, 963.4](s)(1)

The new road construction provides protection for downstream resources by installing additional lengths to existing culverts to prohibit sidecast from entering the watercourse during and after construction.

CalTREES THP ITEM #24 & 25- ROADS AND LANDINGS

- Provide specific erosion control measures for all permanent and seasonal roads:

4) With a grade of 15% or greater which extends 500 feet or more.

Per 14 CCR 923.5 [943.5, 963.5](q)(2)

Those sections of road with gradient of 15% or more have been rocked to prevent erosion. See map of permanent existing road locations.

CalTREES THP ITEMS 26 – WATERCOURSES

ITEM #26– WATERCOURSE LAKE PROTECTION ZONE (WLPZ) PROTECTION MEASURES

ITEM #26	WATERCOURSES
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Per 14 CCR 916, 936, 956 – Intent of Watercourse and lake Protection [ALL DISTRICTS] – The purpose of this article is to ensure that timber operations do not potentially cause significant adverse site-specific and cumulative impacts to the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones; or result in an unauthorized take of listed aquatic species; or threaten to cause violation of any applicable legal requirements. This article also provides protection measures for application in watersheds with listed anadromous salmonids and watersheds listed as water quality limited under Section 303(d) of the Federal Clean Water Act.

It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing appropriate levels of consideration for the quality and beneficial uses of water relative to that productivity.... Further, it is the intent of the Board that the evaluations that are made, and the measures that are taken or prescribed, be documented in a manner that clearly and accurately represents those existing conditions and those measures.

a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any watercourses or lakes classified as a CLASS I through CLASS IV within or adjacent to the plan area? <i>(Check all that apply)</i>		
		<u>Within plan area</u>	<u>Adjacent to plan area</u>
	<input type="checkbox"/> Class I:	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Class II:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Class III:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> Class IV:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Lakes:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other (Springs, Seeps Pond)		

If YES, to above question list:

- Class of the water feature
- Associated WLPZ or ELZ and width
- Protection measures; determined from 14 CCR 916.5[936.5, 956.5], Table I. and/or 14 CCR 916.9[936.9, 956.9] et seq.
- Specify if Class III or IV watercourses will have a WLPZ or ELZ

b. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will Class III or IV watercourses be protected with a WLPZ or ELZ? If YES, describe below
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CaITREES THP ITEMS 26 – WATERCOURSES

LTO instructions:

Slope Class	Class I with Confined Channel Zone Width (feet) Core/Inner/Outer Zones Even Age Management	Class I with Confined Channel Zone Width (feet) Core/Inner Zones Uneven Age Management	Class II-L WLPZ Zone Width (feet) Core/Inner Zones	Class II-S WLPZ Zone Width (feet) Core/Inner Zones & POND	Class III ELZ Width (feet)	Wet Area with WLPZ Width (feet)	Wet Area/Seeps with ELZ Width (feet)
<30%	30/70/50 = 150	30/70 = 100	30/70= 100	15/35 = 50	30	50	25
30-50%	30/70/50 = 150	30/70 = 100	30/70 = 100	15/60 = 75	50	50	25
>50%	30/70/50 = 150	30/70 = 100	30/70 = 100	15/85 =100	50	50	25

Watercourse description and protection measures to be applied: (14 CCR 916.5)

Class I Protection Measures: no class 1 watercourses within or immediately downstream of plan area.

Class II Watercourses:

There are numerous, unnamed Class II watercourses located adjacent to the plan area. And one within the plan requiring a WLPZ. The Classification of whether the Class II is a standard Class II – S or a large Class II-L was determined by mapping the area above the confluence of Class I and inspecting the width of the active channel of the Class II at the confluence per 14 CCR 916.9(g)(1)(A) and (B).

Class II-L Protection Measures:

There are no Class II-L watercourses within the THP boundary.

Class II-S Protection Measures:

The enforceable standard for shade canopy retention for Class II-S watercourses is:

- Core zone is 15 feet from the watercourse transition line, operations are limited to actions to allow for full suspension cable yarding per 916.9(e)(1)(D). No timber harvest within the core zone.
- Inner Zone is variable width, slope dependent, ranging from 35 to 85 feet from the core zone; a minimum 50% multi-story canopy shall be retained within this zone.
- The WLPZ is flagged at a slope dependent width of 50, 75, or 100 feet with blue/white striped “Watercourse and Lake Protection Zone” flagging.
- The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. If the above noted canopy levels are lacking in any given area timber is not marked for removal in that area, however it may be marked elsewhere in the zone.
- WLPZ identification, flagging, and timber marking shall be completed prior to PHI.
- Harvest trees will be marked with a horizontal blue stripe at breast height with a corresponding base mark below stump level.

CaITREES THP ITEMS 26 – WATERCOURSES

- Groups shall not be located in a WLPZ.
- No Salvage logging or hardwood harvest within the WLPZ.

Class III Watercourses:

There are numerous, unnamed Class III watercourses within the proposed project area. The center lines of the Class III watercourses have been flagged with solid blue flagging.

The following are the minimum requirements for timber operations in Class III watercourses per 936.9(h):

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and an additional 20 foot ELZ where side slopes are >30%. The ELZ is measured from the WLTL. Within the ELZ:

(A) No new construction of tractor roads permitted;

(B) No ground based equipment on slopes >50%; and

(C) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller- bunchers or shovel yarding.

(2) Retain all pre-existing large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.

(3) Retain all pre-existing down wood and debris in the channel zone.

(4) Retain hardwoods, where feasible, within the ELZ.

(5) Retain all snags (except as required for safety) within the ELZ.

(6) Retain all countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 within the ELZ.

(7) Retain all trees in the channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.

Exceptions pursuant to 14 CCR § 916.9, subsections (e)(1)(A)-(F) are permitted in any ELZ and channel zone.

Additional specific equipment limitations associated with ELZs are described in Item 21. In addition to the ELZ requirements the following apply to Class III watercourses:

Slash deposited into Class III watercourses shall be removed or stabilized prior to the completion of operations or October 15, whichever comes first. If slash is stabilized it shall be stabilized (such that the debris does not create the potential for diversion of the watercourse or the potential build up of excess sediment in amounts greater than found in the watercourse where there is no logging associated debris).

Soil deposited into Class III watercourses shall be removed prior to the completion of operations or October 15th, whichever comes first, except as noted in the winter operating plan.

Per 936.4(c)(3) Soil deposited during timber operations in Class III watercourses other than a temporary crossing shall be removed and debris deposited during timber operations shall be removed or stabilized before the conclusion of timber operations or October 15th, whichever comes first.

Groups shall not be located within the ELZ of Class III watercourses.

Wet Areas with ELZ:

These wet areas have moist ground, may ooze water year-round, and can support hydrophilic vegetation but do not provide habitat for aquatic species (see Operations Map for location of wet area symbols). These areas are centerline flagged with solid blue flagging. These areas shall be given 25-foot ELZ, which will not be flagged in the field and it is the operator's responsibility to respect the ELZ proposed in the plan. Tractor operations in these ELZs are limited to existing pre-flagged trails.

Wet Areas with WLPZ:

CaITREES THP ITEMS 26 – WATERCOURSES

These wet areas can support hydrophilic vegetation, can provide habitat for aquatic species, and can have pool structure (typically at least a couple of feet wide and at least several inches deep). If located outside of Class I or II WLPZs and Class III channel zones, these areas shall be provided with a 50 foot ELZ and canopy retention zone where 50% total canopy shall be retained. The 50% canopy shall be comprised of at least 25% of the pre-existing overstory conifers. The zone is flagged with blue/white striped "WLPZ" flagging.

Seeps:

A seep is a feature created by anthropogenic structures (e.g. roads, landings) which intercepts subsurface flow and may create wet ditches, possibly including pools that may support hydrophilic vegetation. No protection is afforded seeps. Typically they may be drained to ensure continued functionality and use of infrastructure. Seeps are only mapped (as map points) if specific work is associated with such sites.

c. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is there any tractor road watercourse crossings that require mapping per 14 CCR 1034(x)(7) All crossings are shown on Operations Map and listed in Map Point Table.
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will TRACTOR road watercourse crossings involve the use of a culvert? If YES, per 14 CCR 914.8[934.8, 954.8](e) state the minimum diameter and length for each culvert.

Map Reference Points (MRP)	Culver Diameter	Culvert Length

d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there a Master Agreement for Timber Operations (MATO) for Streambed Alteration Agreement (SAA) approved by the Department of Fish and Wildlife for any portion of this plan? MATO or SSA Number: _____ If YES, provide a list of the crossings, water drafting sites, or other water features to be used during operations and provide the conditions to be utilized and or consider from the MATO or SAA as operational instruction to the LTO in SECTION II.
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MATO or SAA INSTRUCTIONS TO LTO

CalTREES THP ITEMS 26 – WATERCOURSES

Specific water feature under MATO or SAA (crossings, drafting sites, etc.)	Conditions of MATO or SAA to be utilized at each specific feature

<p>e. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Is this THP Review Process to be used to meet Department of Fish and Wildlife CEQA review requirements?</p> <p>If YES, attach the required 1611 Addendum at the end of SECTION II and include any supporting information and analysis in SECTION III.</p> <p>List instructions to the LTO in SECTION II for installation, protection measures, and mitigation measures, per THP from instructions or CDF Mass Mailing (07/02/1999) "Fish and Game Code 1611 Agreements and THP Documentation."</p>
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LTO INSTRUCTIONS:
 See Map Point Table for list of watercourses that require 1600 Agreement.
 If conditions stated in the approved CDFW 1600 Agreement are different than that listed in the Map Point Table the LTO shall follow the requirements of the approved CDFW 1600 Agreement.

<p>f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are any exceptions provided under F & G code 1600 et seq., and made an enforceable part of plan?</p> <p>If YES, per 14 CCR 923 [943,963](d) identify the exceptions and provide the enforceable standards as instructions to the LTO in SECTION II.</p>
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<p>g. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will new drainage structures and facilities on watercourses that support fish or listed aquatic species be constructed?</p> <p>If YES, per 14 CCR 914.8[934.8, 954.8](c) and 923.9 [943.9, 963.9](c). Structures and facilities shall be fully described and allow unrestricted passage of all life stages of fish or listed aquatic species, and natural movement of bedload. Provide operational instructions to the LTO in SECTION II.</p>
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CalTREES THP ITEMS 26 – WATERCOURSES

<p>Per 14 CCR 923.9(e) – The location of all NEW permanent constructed and reconstructed, and temporary logging road watercourse crossings, including those crossings to be abandoned or deactivated, SHALL be shown on a map. If the structure is a culvert intended for permanent use, the minimum diameter of the culvert and the method(s) used to determine the culvert diameter SHALL be specified in the plan,</p>	
h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any NEW PERMANENT constructed logging road watercourse crossings requiring mapping?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any NEW RECONSTRUCTED logging road watercourse crossings requiring mapping?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any watercourse crossings to be ABANDONED or DEACTIVATED?
<p>If YES, to the above questions these crossing shall be shown on a map in section II</p> <p>Per 14 CCR 923.9(e) If any watercourse crossing has a culvert intended for permanent use, the minimum diameter of the culvert and the method(s) used to determine culvert diameter shall be stated in the plan.</p> <p>Per 14 CCR 923.9(f) permanent watercourse crossings that are constructed or reconstructed SHALL accommodate the estimated 100-year flood flow, including debris and sediment loads.</p> <p>See Operations Maps and Map Point Table for location and descriptions of crossings. All crossings are existing, and some will require reconstruction or upgrading.</p>	
<p>Method for sizing crossing:</p> <p>Crossings were sized using Cal Fire 2017 Forestry Report No. 1, Excel Spreadsheet using combination of Magnitude and Frequency or Rational Method calculations.</p> <p>See Section V for culvert calculations and rock sizing nomograph.</p>	
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there any exception to flagging or otherwise identifying the location of any constructed or reconstructed road watercourse crossing prior to the pre-harvest inspection?
<p>If YES, per 14 CCR 923.9[943.9, 963.9](j) provide the explanation and justification in SECTION III.</p>	
j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will other methods for diversion of overflow at culvert crossings be utilized (other than critical dips) in the construction or reconstruction of logging road watercourse crossings which culverts?
<p>If YES, per 14 CCR 923.9[943.9, 963.9](j) provide instructions to the LTO in SECTION II identifying the methods to be used for the diversion of overflow at watercourse crossings.</p>	
<p>Per 14 CCR 923.9[943.9, 963.9](k) watercourse crossings and associated fills and approaches SHALL be constructed and maintained to prevent diversion of stream overflow down the road, and to minimize fill erosion should the drainage structure become obstructed.</p>	
k. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any existing watercourse crossings that are located on logging roads within the logging area?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any watercourse crossing proposed for construction located on logging roads within the logging area?
<p>If YES, per 14 CCR 923.9[943.9, 963.9](k) identify the crossing and provide the methods to mitigate or address the diversion of stream overflow at the crossing.</p> <p>See Operations Maps and Map Point Table for list of crossings and their requirements. Operations associated with watercourse work shall comply with the approved CDFW 1600 Agreement.</p>	
l. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will rock be used to stabilize crossing outlets?

CalTREES THP ITEMS 26 – WATERCOURSES

	<p>If YES, per 14 CCR 923.9[943.9, 963.9](k) Rock used to stabilize outlets of crossings shall be adequately sized to resist mobilization of soil and significant sediment discharge. The range of rock size shall be described within the plan as instruction to the LTO in SECTION II indicate the range of the rock dimensions to be used.</p> <p>See Operations Maps and Map Point Table for list of crossings and their requirements. Rock was sized using Cal Fire 2017 Forestry Report No. 1, Excel Spreadsheet using combination of Magnitude and Frequency or Rational Method calculations. Copies of these spreadsheets are included in Section V.</p>
<p>m. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Watercourse crossing proposed to be reconstructed or removed, are there any significant volumes of sediment accumulated upstream of the watercourse crossing?</p> <p>If, YES per 14 CCR 923.9[943.9, 963.9](n) provide instructions to the LTO, in SECTION II, describing how the material will be stabilized, removed (the extent feasible), and in conformance with CDFW agreements, where applicable.</p> <p>See Operations Maps and Map Point Table for list of crossings and their requirements. Crossings number 14 and 15 will require sediment volume removed upstream of the culvert inlets and have information to address removal and stabilized.</p>
<p>n. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Do logging road watercourse crossing drainage structures and other erosion control features have a high historical fail rate within the project area?</p>
<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Do/will existing watercourse crossings utilizing a culvert have large amounts of fill material covering the culvert making up the crossing?</p>
	<p>If, YES per 14 CCR 923.9[943.9,963.9](o) drainage structures and erosion control features shall be oversized, designed for low maintenance, reinforced, or removed before the completion of timber operations or as specified in the approved plan.</p> <p>Provide instruction to the LTO in SECTION II identifying these crossings, providing instruction of how these crossings will be treated.</p>
<p>Guidance on reducing the potential for failure at high risk watercourse crossings may be found in “Board of Forestry Technical Rule Addendum Number 5: Guidance on Hydrologic Disconnection, Road Drainage, Minimization of Diversion Potential, and High Risk crossings” (1st Edition, revised 10/27/14)</p>	
<p>o. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will any logging road watercourse crossing be removed?</p> <p>If YES, provide instructions to the LTO, in SECTION II, describing the removal plan pursuant to the standards per 14 CCR 923.9[943.9, 963.9](p)(1)-(4)</p> <p>The Map Point Table and Operations Map list temporary crossings to be removed and there is a Temporary Crossing Removal diagram included in Item 38 for LTO reference.</p>

CalTREES THP ITEMS 26 – WATERCOURSES

FOR PLANS LOCATED WITHIN AN ASP WATERSHED	
p. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will timber operations occur within a class I WLPZ?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will timber operations occur within a WLPZ adjacent to a restorable Class I watercourse?
	If YES, Address per 14 CCR 916.9[936.9, 956.9](f)(2)(A)-(E).
Per 14 CCR 916.9[936.9, 956.9](e)(1)(A)-(E) there shall be NO timber operations within a channel zone with the exception of those conditions listed within 916.9[936.9, 956.9](e)(1)(A)-(E)	
q. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will there be any timber operations within the channel zone of any watercourse? If YES, Indicted the location and type of timber operations to be conducted and provide instructions to the LTO in SECTION II. See Operations Map and Map Point Table for operations within a channel zone of a watercourse associated with crossing installation and removal.
Per 14 CCR 923.1[943.1, 963.1](h) NO logging road(s) or landing(s) shall be planned for construction or reconstruction in the CMZ or Core Zone of a Class I watercourse or within 150 feet of a watercourse transition line. with the exception of those conditions listed within 916.9[936.9, 956.9](e)(1)(A)-(E) and 916.9[936.9, 956.9](v)	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will there be any logging road(s) or landing(s) constructed in the CMZ or Core Zone of a Class I?
	If Yes, indicate the location and provide instructions to the LTO in SECTION II.
Per 14 CCR 923.9[943.9, 963.9](d) Watersheds with listed anadromous salmonids. A description of all existing permanent Class I watercourse crossings shall be provided, where fish are always or seasonally present or fish passage is restorable.	
r. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there existing permanent Class I crossings where fish are always present?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there existing permanent Class I crossings where fish are seasonally present?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there existing permanent Class I crossings where fish passage is restorable?
	If YES, provide a description of the existing permanent Class I watercourse crossings. Indicate in the description where the current crossing conditions may be adversely affecting fish passage and identify the proposed measures, if feasible, to address the conditions.
s. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will water drafting occur in association with the timber operations? If YES, timber operations shall comply with Fish and Game Code Section 1600, et seq. A drafting plan is proposed near Map Points 14 and 24 and will comply with the approved CDFW 1600 Agreement.
t. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there a Fish and Game Code Section 1600 Master Agreement for Timber Operations which addresses water drafting? If YES, provide the operational restrictions from the Master Agreement in SECTION II as instructions to the LTO. If NO, describe the water drafting site conditions and proposed water drafting activity in the plan. Per 14 CCR 923.7[943.7, 963.7](l)(2)(A)-(F) (See Below)

Per 14 CCR 923.7[943.7, 963.7](l)(2)(A)-(F) the description of water drafting site conditions and proposed water drafting activity shall include:	
General description of proposed site: Shown on Operations Map at Map Points 14 and 24, are 4, 5,000 gallon poly water tanks, 2 at each location, put in following the 2008 fire to provide water for fire protection and road maintenance. Each will use a 3/4 “- plastic waterline to remove less than 10% of the flow from respective drainage. Overflow will be returned to the drainage.	
Watercourse Classification: Class 2-S and Class 2-L watercourses	
Drafting parameters including:	
Month(s) of use –	5 months
Estimated volume needed per day –	8,000
Estimated maximum instantaneous drafting rate and filling time –	125 gallon per minute,
Other water drafting activities in same watershed -	None proposed for this THP but otherwise unknown.
Drainage area (acres) above point of diversion - 93 acres above MP 14 and 406 acres above MP 24	
Estimated:	
Unimpeded stream flow -	10-15 gpm at each location
Pumping rate -	125 gpm
Drafting duration –	.5 hrs
A discussion of the effects on aquatic habitat downstream from the drafting site(s) of single pumping operations, or multiple operations at the same location, and at other locations in the same watershed:	
<p>The stream above MP 14 runs all year from springs above and will be monitored for flow during operations with a valved input at the tank.</p> <p>The watercourse at MP 24 runs all year and will be monitored for flow during operations with a valved input at the tank. It is not expected flow below the drafting sites will be impacted by water removal at low rate.</p>	

Before commencing any water drafting operation, the RPF or his supervised designee and the drafting operator shall conduct a pre-operations field review to discuss the water drafting measures in the plan and/or to comply with the approved CDFW 1600 Agreement.

CalTREES THP ITEMS 27 – WLPZ IN-LIEU OR ALTERNATIVE PRACTICES

ITEM #27– WLPZ IN-LIEU OR ALTERNATIVE PRACTICES

ITEM #27	WLPZ IN-LIEU OR ALTERNATIVES
	<p>Per 14 CCR 916.1[936.1, 956.1] (In-Lieu Practices) – In rule sections where provision is made for site specific practices to be proposed by the RPF, approved by the Director and included in the THP in lieu of a standard rule, the RPF shall:</p> <ul style="list-style-type: none"> • Reference the standard rule • Explain and describe each proposed practice • Explain how it differs from the standard practice, • Explain and justify how the protection provided by the proposed practice is at least equal to the protection provided by the standard rule. • Identify the specific location where it shall be applied. 14 CCR 1034(x)(15) and (16) <p>Per 14 CCR 916.6[936.6, 956.6] (Alternatives) – Alternative prescription for the protection of watercourses and lakes may be developed by the RPF or proposed by the Director on a site specific basis provided the following conditions are complied with and the alternative prescription will achieve compliance with the standards set forth in 14 CCR 916.3[936.3, 956.3] and 916.4[936.4, 956.4](b) The alternative prescription shall include in the THP information per 14 CCR 916.6[936.6, 956.6]a)(1)-(3)</p>
<p>a. <input type="checkbox"/>Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the prohibition of the construction or use of tractor roads listed below?</p> <p>Per 14 CCR 916.3[936.3, 956.3](c) Timber operators shall not construct or use tractor roads in a Class I, II, III, IV watercourses, in the WLPZ, marshes, wet meadows and other wet areas unless explained and justified in the plan by the RPF. Except at:</p> <ul style="list-style-type: none"> • Prepared tractor crossing described in 14 CCR 914.8[934.8, 954.8](b) • Class III watercourse crossings dry at the time of use • At new and existing tractor road crossings approved as part of a Fish and Game Code Process (F&GC 1600 et seq.) <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>b. <input type="checkbox"/>Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the retention of non-commercial vegetation bordering and covering meadows and wet areas? 14 CCR 916.3[936.3, 956.3](d)</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>c. <input type="checkbox"/>Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the Directional felling of trees within any WLPZ away from the watercourse or lake? 14 CCR 916.3[936.3, 956.3](e)</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>d. <input type="checkbox"/>Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the standard WLPZ(s) width(s) identified in 14 CCR 916.5[936.5, 956.5], Table I?</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>e. <input type="checkbox"/>Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the protection of Class IV watercourse(s)? 14 CCR 916.4[936.4,956.4](c) and 916.5[936.5,</p>

CalTREES THP ITEMS 27 – WLPZ IN-LIEU OR ALTERNATIVE PRACTICES

	<p>956.5], Table I If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the exclusion of heavy equipment from the WLPZ except at those locations listed below?</p> <p>Per 14 CCR 916.4[936.4, 956.4(d)&(f) – Heavy equipment shall not be used in timber falling, yarding, or site preparation within the WLPZ unless such use is explained and justified in the THP and approved by the Director. Except at:</p> <ul style="list-style-type: none"> • Prepared tractor crossing described in 14 CCR 914.8[934.8, 954.8](b) • Class III watercourse crossings dry at the time of use • Existing road crossings • New tractor and road crossings approved as part of a Fish and Game Code Process (F&GC 1600 et seq.) <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>g. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the establishment of ELZ(s) for Class III watercourses unless side slopes are, 30% and EHR is low? 14 CCR 916.4[936.4, 956.4](c)(1) If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the Retention of at least 50% of the overstory canopy in the WLPZ? 14 CCR 916.5[936.5, 956.5](e)“G” If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any site-specific practices proposed in-lieu of, or as an alternative, to the Retention of at least 50% of the understory in the WLPZ? 14 CCR 916.5[936.5, 956.5](e)“G” If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>
<p>j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Are there any additional in-lieu or alternative practices proposed for watercourse or lake protection? If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Prove the explanation and justification in SECTION III, (see table below)</p>

CalTREES THP ITEMS 28-29 – DOMESTIC WATER NOTIFICATIONS

ITEM #28-29 – DOMESTIC WATER NOTIFICATIONS

ITEM #28		DOMESTIC WATER NOTIFICATIONS	
<p>Per 14 CCR 1032.10 – The THP submitter shall provide notice by letter to all other landowners within 1,000 feet downstream of the THP boundary whose ownership adjoins or includes a Class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations.</p> <p>The notice shall request that the THP submitter be advised of surface domestic water use from the watercourse, within the THP or within 1,000 feet downstream of the THP boundary.</p> <p>When required to notice by letter, publication shall also be given one time by the THP submitter in a newspaper of general circulation in the area affected by the proposed project.</p> <p>Such letter and publication shall notify the adjoining party:</p> <ul style="list-style-type: none"> • of the proposed timber operation • describe its legal location • identify the name, if any, of the watercourse it may affect • request a response by the property owner within ten days of the post-marked date on the letter or the date of publication as appropriate <p>The RPF may propose, with justification and explanation, an exemption to such notification requirements, and the Director may agree.</p> <p>Copies of either notice, proof of service and publication, and any responses shall be attached to the THP (SECTION V) when submitted.</p> <p>If domestic use is noted, the plan shall contain mitigations necessary to protect domestic water use.</p> <p>THE PLAN SHALL NOT BE SUBMITTED UNTIL <u>TEN DAYS</u> AFTER THE ABOVE NOTIFICATION(S) HAVE BEEN COMPLETED</p>			
<p>a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Are there any landowners with 1,000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II or IV watercourse(s) which receive surface drainage from the proposed timber operations?</p> <p>If YES, the requirement of 1032.10. Proof of letter notification shall be included in THP SECTION V. If NO, notification exemption request below need not be answered.</p> <p>There are 2 downstream landowners that have received a domestic water notification and map of plan area. A list is included in Section V.</p>	
<p>b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Letter</p> <p><input type="checkbox"/> Newspaper</p> <p><input type="checkbox"/> Both</p>		<p>Is an exemption to the notification requirements requested? (check notification requesting to be exempted)</p> <p>If YES, provide the explanation and justification for the exemption request in SECTION III of the THP.</p>	
<p>c1. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Was any information received in response to domestic water notifications indicating domestic water supplies may be present within or downstream of the project area?</p>	
<p>c2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>If YES, are there any additional mitigation measures needed beyond that required by standard watercourse and lake protection rules?</p>	

CalTREES THP ITEMS 28-29 – DOMESTIC WATER NOTIFICATIONS

	If YES, provide the site-specific instruction to the LTO in SECTION II.
ITEM #29	SENSITIVE WATERSHEDS
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is any part of the THP area within a Sensitive Watershed as designated by the Board of Forestry and Fire Protection? If YES, identify the watershed and list the special rules, operating procedures or mitigation that will be used to protect the resources identified at risk.

WATERSHED	SPECIAL RULE	MITIGATION MEASURES PROTECTING RESOURCES IDENTIFIED AT RISK

CalTREES THP Item 28-29

CalTREES THP ITEM #30 AND 31 – HAZARD REDUCTION

ITEM #30 – HAZARD REDUCTION

ITEM #30	HAZARD REDUCTION
<p>Per 14 CCR 917, 937, 957 - Hazard reduction shall provide standards for the treatment of snags and logging slash in order to reduce fire and pest safety hazards in the logging area, to protect such area from potential insect and disease attack, and to prepare the area for natural or artificial reforestation while retaining wildlife habitat.</p> <p>Per 14 CCR 917.2, 937.2, & 957.2 – The following standards shall apply to the treatment of slash created by timber operations within the plan area and on roads adjacent to the plan area.</p>	
a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will slash treatment occur within 100 feet of the edge of the traveled surface of a PUBLIC road?
b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will slash treatment occur within 50 feet of the edge of the traveled surface of PERMANENT private roads open for public use where permission to pass is not required?
c. <input type="checkbox"/> Yes <input type="checkbox"/> No	[SOUTHERN only] Will slash treatment occur within 50 feet of the edge of the traveled surface of SEASONAL private roads open for public use where permission to pass is not required?
	<p>If YES to any of the above, slash created or trees knocked down by road construction or timber operations shall be treated by: (Select all that apply)</p> <p><input type="checkbox"/> Piling and burning per (14 CCR 917.2, 937.2, 957.2(a)(1-3))</p> <p><input type="checkbox"/> chipping</p> <p><input type="checkbox"/> burying</p> <p><input type="checkbox"/> removal</p> <p><input type="checkbox"/> Other (explain)</p>
d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Are there any permanently located structures maintained for human habitation in the project area requiring slash treatment?</p> <p>If YES, identify distance slash treatment will occur and indicate the method of treatment</p> <p><input type="checkbox"/> Within 100 feet of permanent structure</p> <p style="padding-left: 20px;"><input type="checkbox"/> Removed</p> <p style="padding-left: 20px;"><input type="checkbox"/> Piled and burned per (14 CCR 917.2, 937.2, 957.2(a)(1-3))</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other (explain)</p> <p><input type="checkbox"/> Between 100-200 feet of permanent structure</p> <p style="padding-left: 20px;"><input type="checkbox"/> Lopped for fire hazard reduction (per 14 CCR 895.1)</p> <p style="padding-left: 20px;"><input type="checkbox"/> removed</p> <p style="padding-left: 20px;"><input type="checkbox"/> chipped</p> <p style="padding-left: 20px;"><input type="checkbox"/> Piled and burned per (14 CCR 917.2, 937.2, 957.2(a)(1-3))</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other (explain)</p>
e. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Has the RPF or Director determined there is an unusual fire risk or other hazard exists within the proposed project area?</p> <p>If YES then lopping is required within 200-500 feet of permanent structures.</p>

CalTREES THP ITEM #30 AND 31 – HAZARD REDUCTION

<p>f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Is the RPF proposing any alternatives to treating slash along roads and within 200 feet of structures.</p> <p>If YES, the RPF shall explain and justify in the plan how equal fire protection will be provided. The explanation and justification shall include:</p>
	<p>Description of the alternative treatment(s):</p>
	<p>Estimated amount / distribution of slash:</p>
	<p>Type of remaining vegetation:</p>
	<p>Topography:</p>
	<p>Climate:</p>
	<p>Degree of public exposure fire history:</p>
	<p>Provide a description of where the alternative will be used: (mapping area(s) is suggested)</p>

ITEM #31 – PILING AND BURNING

<p>g. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will piling and burning be used for hazard reduction?</p> <p>If YES, refer to 14 CCR 917.2, 937.2, 957.2(a)(1-3). (select all that apply)</p> <p><input checked="" type="checkbox"/> Piles created prior to September 1 shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access after April 1 of the year following its creation.</p> <p><input checked="" type="checkbox"/> Piles created on or after September 1 shall be treated not later than April 1 of the second year following its creation, or within 30 days following climatic access after April 1 of the second year following its creation.</p>
<p>h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Is the RPF proposing any alternatives to piling and burning from those required in 14 CCR 917.2, 937.2, 957.2(a)(1-2)?</p> <p>If YES, the RPF shall provide an explanation and justification in the plan to be approved by the director.</p>

CalTREES THP ITEMS #32-35 BIOLOGICAL RESOURCES

ITEM # 32 – BIOLOGICAL RESOURCES

ITEM #32 LISTED PLANT or ANIMAL SPECIES INCLUDING HABITAT	
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any <u>ANIMAL SPECIES</u> , including their habitat(s), which are listed as rare, threatened or endangered under Federal or state law, or a sensitive species by the Board of Forestry associated with the THP area? If YES, identify the animal species and the provisions to be taken for the protection of the species.

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibian / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
NSO	Bird	Threatened	Threatened	Yes	<p><u>Northern Spotted Owl</u></p> <p>Note to LTO: 1. No operations shall occur until all required surveys have been provided to CAL-FIRE, evaluated for consistency with the plan and protocols, and amended into the plan. Pursuant to 14 CCR 919.9(e), this THP is using Scenario 4. The person submitting the original plan or the successor in interest will submit subsequent consultations to the Department as enforceable amendments to the plan prior to operations being conducted pursuant to that consultation. Surveys shall be conducted pursuant to the most current, approved survey protocol. Also habitat retention, standard protection measures, operational limitations, and surveys shall be conducted in compliance with <u>2019 version Attachment A</u> for the Northern Forest District. NSO surveys for 2019-2022 have been included in the THP and are located in Section V. No NSO AC within 0.25 miles of THP as of 2022 surveys. See NSO information in Section V for details of surveys and NSO.</p> <p>1. Definitions USFWS NSO Take Avoidance Analysis- Attachment B Northern Spotted Owl Northern District Range</p> <p>a. Nesting/Roosting</p> <p>i. High Quality Nesting/Roosting Habitat</p> <ol style="list-style-type: none"> 1. Basal area= 210+ sq. ft., and 2. ≥15" quadratic mean diameter (QMD), <p>and</p> <ol style="list-style-type: none"> 3. ≥8 trees per acre (TPA) of trees ~26" in diameter at breast height (DBH), and 4. ≥60% canopy closure <p>ii. Nesting/Roosting Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 150-180+ sq. ft., and 2. ≥15" QMD, and 3. ≥8 TPA of trees ~26" DBH, and 4. ≥60% canopy closure <p>b. Foraging</p> <p>i. Foraging Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 120-180+ sq. ft., and 2. ~13" QMD, and 3. ~5 TPA of trees ~26" DBH, and 4. A mix of ~40%-100% canopy closure <p>ii. Low Quality Foraging Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 80-120+ sq. ft., and 2. ~11" QMD, and 3. ~40% canopy closure <p>2. Quantities</p> <p>a. Within 1000 feet of an activity center</p> <p>i. <i>Outside breeding season (September 1- January 31):</i></p>

CalTREES THP ITEMS #32-35 BIOLOGICAL RESOURCES

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
					<p><i>no timber operations other than use of existing roads</i></p> <p><i>ii. During breeding season (February 1-August 31): no timber operations other than the use of existing, permanent, year-round roads. If NSOs are nesting, utilize seasonal restriction for all timber operations within 0.25mile of nest.</i></p> <p><i>b. Within 0.5 mile radius (502 acres) centered on an activity center</i></p> <p><i>i. Retention of habitat should follow Section III.4 of this document</i></p> <p><i>ii. At least 250 acres nesting/roosting habitat present, as follows:</i></p> <p style="padding-left: 40px;"><i>1. 100 acres High Quality Nesting /Roosting Habitat, and</i></p> <p style="padding-left: 40px;"><i>2. 150 acres Nesting/Roosting Habitat</i></p> <p><i>-AND iii.</i></p> <p><i>At least 150 acres foraging habitat must be present, as follows:</i></p> <p style="padding-left: 40px;"><i>1. 100 acres Foraging Habitat, and</i></p> <p style="padding-left: 40px;"><i>2.50 acres Low Quality Foraging Habitat</i></p> <p><i>iv. No more than 1/3 of the remaining suitable habitat may be harvested during the lifetime of the THP</i></p> <p><i>c. Between the 0.5 mile radius and the 1.3 mile radius circles centered on an activity center</i></p> <p><i>i. Retention of habitat should follow Section III.4 of this document</i></p> <p><i>ii. ~935 acres of suitable habitat must be present, as follows:</i></p> <p style="padding-left: 40px;"><i>1. At least 655 acres of Foraging Habitat, and</i></p> <p style="padding-left: 40px;"><i>2. At least 280 acres of Low Quality Foraging, and</i></p> <p style="padding-left: 40px;"><i>3. No more than 113 of the remaining suitable habitat may be harvest during the life of the THP</i></p>
Bird	Bald Eagle	Fed Delisted	Endangered Fully Protected	Yes	<p>Buffer zone around active nest site/trees ranges from 10-40 acres in consultation with CDFW.</p> <p>The following year around restrictions shall apply within the buffer zone. no clear cutting is allowed within the buffer zone. Selection, commercial thinning, sanitation-salvage, and the shelterwood regeneration method, except for the removal step, are permitted if all trees are marked prior to preharvest inspection. All nest trees containing active nests, and all designated perch trees, screening trees and replacement trees, shall be left standing and unharmed.</p>
Bird	Golden Eagle		Fully Protected	Yes	<p>The buffer zone around active nest site shall be a minimum of eight acres in size. For the Golden Eagle, no clear cutting is allowed within the buffer zone. All nest trees containing active nests, and all designated perch trees, screening trees, and replacement tree, shall be left standing and unharmed.</p>
Bird	Great Blue Heron and Great Egret			Yes	<p>For the Great Blue Heron and Great Egret, the buffer zone around nest sites shall consist of the area within a 300-foot radius of a tree or trees containing a group of five or more active nests in close proximity as determined by the CDFW. For the Great Blue Heron and Great Egret, the critical period is February 15 until July 1 for coastal counties south of and including Marin County. For all other areas, the period is from March 15 through July 15. During this critical period, timber operations within the buffer zone shall be staged with a gradual approach to the nest.</p>
Bird	Northern goshawk			Yes	<p>For the Northern Goshawk, the buffer zone around active nest</p>

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
					sites shall be a minimum of five acres in size. When explained and justified in writing, the Director may increase the size of the buffer zone to a maximum of 20 acres when necessary to protect nesting birds. For the Northern goshawk, designated nest trees, screening trees, perch trees, and replacement trees shall be left standing and unharmed. Only the commercial thinning, sanitation-salvage, and selection regeneration methods are permitted in the buffer zone.
Bird	Osprey			Yes	For the Osprey, the buffer zone around active nest sites shall be up to five acres in size. When explained and justified in writing, the Director may increase the size of the buffer zone to a maximum of 18 acres when necessary to protect nesting birds. For the Osprey, all designated nest trees, perch trees, screening trees, and replacement trees shall be left standing and unharmed. If the RPF believes that retention is not feasible, he/she may propose construction of an artificial nest structure as an alternative.
Bird	Peregrine Falcon		Fully Protected	Yes	For the Peregrine Falcon, the buffer zone around active nest sites shall be a minimum of ten acres in size. The Director may increase the buffer zone beyond 40 acres in size so that timber operations will not result in a "take" of either species. The Director shall develop the buffer zone in consultation with the CDFW and the RPF. For the Peregrine Falcon, where timber provides part of the immediate nesting habitat, special cutting prescriptions may be required by the Director on an area up to ten acres in size immediately surrounding the nest. The cutting prescriptions shall protect the nesting habitat.
Bird	Swainson's Hawk		Threatened	No	(b) During timber operations, nest tree(s), designated perch trees(s), screening tree(s), and replacement trees(s), shall be left standing and unharmed except as otherwise provided in these following rules. (c) Timber operations shall be planned and operated to commence as far as possible from occupied nest trees unless explained and justified by the RPF in the THP. (d) When an occupied nest site of a listed bird species is discovered during timber operations, the timber operator shall protect the nest tree, screening trees, perch trees, and replacement trees and shall apply the provisions of subsections (b) and (c) above and shall immediately notify the CDFW and the CDF. An amendment that shall be considered a minor amendment to the timber harvesting plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the CDFW.
Bird	Marbled Murrelet	Threatened	Endangered	Yes	<u>No MAMU habitat within the plan area or immediately adjacent. All area of the plan has had multiple harvest and no large trees with limb structure suitable for MAMU were identified in the plan.</u>
Bird	California Condor	Endangered	Endangered	Yes	Not known to occur within this far inland. If a California Condor is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Bird	Great Grey Owl	Endangered		Yes	Not known to occur within this habitat normally found in Sierra Nevada mountain range. If a Great Grey Owl is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Bird	Tricolored Blackbird	Candidate Endangered		No	Not known to occur within the area of the plan. If a Tricolored Blackbird is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
Bird					Should an occupied nest site of a listed bird species be discovered during the timber operations, the timber operator will protect the nest tree, screening trees, and replacement trees, and will apply the provisions of 14 CCR 919.2(d), and will immediately notify the Department of Fish and Wildlife, CAL FIRE, and the landowner or his agent. Appropriate mitigations will be devised through consultation with the agencies and the landowner and representative. A minor amendment will then be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the Department of Fish and Wildlife. The specific protection measures to be implemented will be based on the establishment of buffer zones, compliance with year-round restrictions, and the established critical periods for each specie.
Fish	Coho Salmon	Threatened	Threatened	No	Protective measures for the Coho Salmon and other aquatic wildlife species have been incorporated into the silvicultural methods in Item #14, soil stabilization measures in Item #18, watercourse protection measures included in Item #26, and other provisions of the THP.
Fish	Steelhead		Threatened	No	Protective measures for the Steelhead and other aquatic wildlife species have been incorporated into the silvicultural methods in Item #14, soil stabilization measures in Item #18, watercourse protection measures included in Item #26, and other provisions of the THP.
Mammal	Humboldt Marten	Endangered	Candidate	No	The plan is within the historic range of Humboldt Marten and is listed as an endangered species by the CDFW and candidate species under the Federal Endangered Species Act. Humboldt Martin was not discovered during plan preparation. Measures proposed for protection of habitat elements of this species are included in Item 14, Item 26, and Item 32(b), as well as other provisions of the THP.
Mammal	Pacific Fisher	<u>Endangered</u>	Threatened <u>(Only Southern Sierra Nevada ESU/DPS)</u>	No	This plan is within the current range of the Fisher and Fisher have <u>not been sited within BAA</u> of the plan area. Protections for pacific fisher during operations of the THP: The RPF or supervised designee shall be responsible for identification of den trees during timber marking activities and oversight of measures intended to protect fisher. Generally potential den trees shall not be felled. If a potential den tree must be felled for safety reasons it will not be felled during the natal period (March 1 st to May 15 th) and if it is felled during the maternal denning period (May 16 th thru July 31 st) it will not be cut until the day after all other trees intended to be felled within a ten acre area (375' radius) have been felled. During timber operations, if a fisher is observed, Cal Fire and DFW will be notified of the detection and all vegetation disturbing activities will cease within the affected area. During timber operations, if a den, resting area or other habitation of a fisher is discovered, all operations shall cease within .25 mile of a natal den or within 375-foot radius buffer around the maternal den or other habitation until it can be confirmed that fisher are no longer present. In order to avoid take, habitat elements utilized by fisher shall be retained.
Mammal	Gray Wolf		Endangered	No	Gray Wolf is listed as endangered in California. If an individual, active den, or a rendezvous site for this species is observed, all vegetation disturbing activities within 200-feet will be suspended and the RPF, DFW, and CALFIRE will be notified. Vegetation disturbing activities will not recommence until approved by the consulting agencies.

CalTREES THP ITEMS #32-35 BIOLOGICAL RESOURCES

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
Amphibian	Foothill yellow-legged frog			<u>Species of Special Concern</u>	The Foothill Yellow-legged frog is not known to inhabit the plan area.
Amphibian	Northern Western Pond Turtle			<u>Species of Special Concern</u>	<u>There are no ponds or watercourses to support northern western pond turtles within the plan or adjacent appurtenant roads.</u>

b. Yes No

Are there any PLANTS, including their habitat(s), which are listed as rare threatened or endangered under Federal or state law, or a sensitive species by the Board of Forestry associated with the THP area?

If YES, identify the plant species and the provisions to be taken for the protection of the species.

Plant Species Scoping List				
Scientific Name Common Name	Status	Associated Habitat	Blooming period	Habitat In plan Area
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i> Konocti manzanita	CNPS; 1B.3 S3 G5T3	Evergreen shrub; Chaparral, cismontane woodland, lower montane conifer forest/ volcanic; 395 - 1615 meters	Jan-May (July)	Yes

CalTREES THP ITEMS #32-35 BIOLOGICAL RESOURCES

Plant Species Scoping List				
Scientific Name Common Name	Status	Associated Habitat	Blooming period	Habitat In plan Area
<i>Asclepias solanoana</i> Serpentine milkweed	CNPS; 4.2 S3 G3	Chaparral, cismontane woodland, lower montane coniferous forest/serpentine; 230 - 1860 meters	May-July(Aug)	Yes
<i>Calycadenia micrantha</i> small-flowered calycadenia	CNPS; 1B.2 S2 G2	Annual herb; chaparral, meadows and seeps (volcanic), valley and foothill grassland/ roadsides, rocky talus scree, sometimes serpentine, sparsely vegetated areas; 5 - 1500 meters	June-Sept	Yes
<i>Calystegia collina</i> ssp. <i>tridactylosa</i> three-fingered morning glory	CNPS; 1B.2 S1 G4T1	Rhizomatous herb; Chaparral, cismontane woodland / serpentine, rocky gravelly, openings; 0-600 meters	April-June	Yes
<i>Collomia tracyi</i> Tracy's collomia	CNPS; 4.3 S4 G4	Rocky, sometimes serpentine. Broadleafed upland forest, lower montane coniferous forest. 300-2100 meters	June-July	Yes
<i>Cypripedium montanum</i> Mountain lady's-slipper	CNPS; 4.2 S4 G4	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, North Coast coniferous forest. 185-225 meters	March-August	No-no habitat at this elevation
<i>Epilobium nivium</i> Snow Mountain willowherb	CNPS; 1B.2 S2S3 G2G3	Perennial herb; chaparral, upper montane coniferous forest/ rocky 795 - 2500 meters	June-October	Yes
<i>Limnanthes bakeri</i> Baker's meadowfoam	CNPS; 1B.1 State; Rare S1 G1	Meadows, marshes and swamps (freshwater), valley and foothill grassland (vernally mesic), vernal pools; 175 - 910 meters	April-May	Yes
<i>Lupinus milo-bakeri</i> Milo Baker's lupine	CNPS; 1B.1 S1 G1Q State; Threatened	Cismontane woodland (often along roadsides), Valley and foothill grassland; 410 - 1320 meters	June-September	Yes
<i>Piperia candida</i> White-flowered rein Orchid	CNPS; 1B.2 S3 G3	Perennial herb; Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest/ sometimes serpentine 30-1310 meters	(Mar) May-September	Yes
<i>Potamogeton epihydrus</i> Nuttall's ribbon-leaved pondweed	CNPS; 2B.2 S2S3 G5	Rhizomatous herb aquatic; Marshes and swamps (assorted shallow freshwater); 369 - 2172 meters	(Jun) July-Sept	Yes
<i>Sanicula tracyi</i> Tracy's sanicle	CNPS; 4.2 S4 G4	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest/openings; 100-1585 meters	April-July	Yes
<i>Sedum laxum</i> ssp. <i>flavidum</i> pale yellow stonecrop	CNPS; 4.3 S4 G5T4Q	Serpentine or volcanic, broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, upper montane coniferous; 455-2000 meters	May-July	Yes
Communities				
<i>Upland Douglas Fir Forest</i>	S3.1 G4	North coast coniferous forest		
<i>Valley Oak Woodland</i>	S2.1 G3	Cismontane woodland		

Botanical Resources

A Botanical Survey for South THP is included in Section V. An early survey visit needs to be completed in spring of 2023 to confirm no state or federally listed plant species or California Native Plant Society listed species in categories, 1a, 1b, or 2 are identified that required protection.

General Protections:

If a listed plant species is found, an EEZ buffer of 50 feet will be established, except where located near a road, where

the edge of the road will be the EEZ boundary. The EEZ will be flagged on the ground prior to operations. No trees to be harvested within the EEZ unless a site-specific alternative has been developed with CDFW. If the plant population is located on a feature which cannot be avoided, CDFW will be consulted and site specific mitigations will be developed and amended into the THP.

Post Approval Discovery Mitigation:

Should a listed plant species be discovered during the timber operations, a 50-foot diameter EEZ shall be flagged around the area and the CDF, DFW, and the plan submitter or his agent shall be immediately notified. An amendment shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with DFW.

NON-LISTED SPECIES IMPACTS	
c. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any NON-LISTED species which will be significantly impacted by the operation? If yes, identify the species and the provisions to be taken for the protection of the species.

Non-Listed Species Table		
Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	Protection measures
Mammal	Red Tree Vole	Sonoma (Red) Tree Vole (RTV) nests were not discovered during plan preparation but may be associated with the plan area. The CNDDDB has no reports of RTV. If RTV nests are discovered, the Plan Submitter shall be notified and nest trees shall be retained along with screen trees (those with crowns touching the nest tree).
Amphibian	Pacific Tailed Frog and Southern Torrent Salamander	The Pacific tailed frog and the southern torrent salamander are listed as California Species of Special Concern. None of the above listed species were discovered on the plan area during plan preparation. Measures proposed in the plan for protection of these species are included in Item 14 and Item 26, as well as other provisions of the THP.

In the course of preparing this plan, plant and animal species that are not rare, threatened, endangered, or sensitive species were given consideration and review. Special habitat elements shall be maintained across the landscape to maintain forest ecosystems by providing complexity, which supports wildlife diversity. All feasible steps are being taken to retain special habitat features. For example all snags, except as required in 14 CCR 919.1(b), shall be retained. In addition, to provide habitat structure, all existing downed large woody debris and cull logs shall remain on site. Also, conifer and hardwoods with pre-eminent wildlife value, such as large woody limbs, bole defects, nesting cavities, basal hollows, and broken or snag tops, shall be left to provide habitat and mast for food supplies. These include trees that meet the definition of “decadent and deformed trees of value to wildlife” as defined in 14 CCR 895.1. If an occupied, non-listed raptor nest is located the nest tree and screening trees shall be protected and if the nest is unoccupied the nest tree shall be retained. Riparian zones and springs shall have special protection given (see Item #26) to provide for habitat and water sources.

CalTREES THP Item 32-35

CalTREES THP ITEMS #32-35 BIOLOGICAL RESOURCES

ITEM # 33 – SNAGS

ITEM #33		SNAGS
Per 14 CCR 919, 939, 959 – Timber operations shall be planned and conducted to maintain suitable habitat for wildlife species as specified by the provisions of Article 9 of the Forest Practice Rules.		
Within the logging area all snags shall be retained to provide wildlife habitat with the exception of snags for safety reasons Per 14 CCR 919.1, 939.1, 959.1(a)-(f)		
a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any snags which must be felled for fire protection or safety reasons? The RPF is unaware of any specific snag that must be felled for fire protection or safety reasons. However during operations of the plan if a snag is identified that needs to be felled for fire protection or safety reasons the LTO may fell that snag after consultation with the responsible RPF or his supervised designee.	
b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will snags over 20 feet in height and 16 inches dbh be felled within 100 feet of a main ridge that is suitable for fire suppression? If YES, ridge shall be delineated on a THP map.	
c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will snags over 20 feet in height and 16 inches dbh be felled within 100 feet of all public roads, permanent roads, landings and railroads? (select all that apply) <input type="checkbox"/> Public road(s) <input type="checkbox"/> Permanent road(s) <input type="checkbox"/> Landing(s) <input type="checkbox"/> Railroad(s)	
d. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will snags be felled where federal and state safety laws and regulations require the felling of snags?	
e. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will snags be felled within 100 feet of structures maintained for human habitation? NA	
f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will merchantable snags be felled in any location as provided for in the plan?	
g. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will snags be felled as required to control insect or disease concerns?	

ITEM # 34 – LATE SUCCESSIONAL FOREST STANDS

ITEM #34		LATE SUCCESSIONAL FOREST STANDS
a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are any Late Successional Forest stands proposed for harvest? If YES, describe measures to be implemented by the LTO to avoid long-term significant adverse effects on fish, wildlife and listed species known to be primarily associated with late successional forests.	
Describe:		

ITEM # 35 – OTHER WILDLIFE PROTECTION REQUIRED BY FOREST PRACTICE RULES

a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any other provisions for wildlife protection required by the rules? If YES, describe.	
Description:		

CalTREES THP Item 32-35

CalTREES THP ITEMS #36-38 – CULTURAL RESOURCES / GROWTH AND YIELD / SPECIAL INSTRUCTIONS

ITEM # 36 – CULTURAL RESOURCES

ITEM #36		ARCHAEOLOGICAL / HISTORICAL	
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Has an archaeological / historical survey been made for the THP area?		
b. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Has a current archaeological / historical records check been conducted for the THP area?		
c. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>During pre-field research and surveys were archaeological or historical sites identified within the plan area?</p> <p>If YES, THIS INFORMATION IS CONFIDENTIAL AND NOT AVAILABLE TO REVIEW AGENCIES, OTHER THAN CAL FIRE, AND THE GENERAL PUBLIC.</p> <p>RPF is advised to complete the Confidential Archaeological Addendum (CAA) and place in Section VI of the THP.</p>		

ITEM # 37 – GROWTH AND YIELD INFORMATION

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Has any inventory or growth and yield information designated "TRADE SECRET" been submitted in a separate confidential envelope in Section VI of this THP?</p> <p>If YES, THIS INFORMATION IS CONFIDENTIAL AND NOT AVAILABLE TO REVIEW AGENCIES.</p>
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ITEM # 38 – SPECIAL INSTRUCTIONS OR CONSTRAINTS

CONDITION Flagging codes / water drafting / paint colors etc.	INSTRUCTION	
Notify of Start-up	<p>a. The person responsible for notifying CAL FIRE of start up of operations may be any one of the following: LTO, RPF or Plan Submitter.</p> <p>CAL FIRE will be notified in accordance with 14 CCR 1035.4 using one or more of the contacts below: Telephone: MEU, Howard Forest Resource Management = (707) 459-7440 Mail: Address: 17501 North Highway 101, Willits, CA 95490, or Email: current office technician using the formula—<u>First Name.Last Name@fire.ca.gov</u> (The actual name-email does not have to be provided, only the generic email contact information). When notifying, have the THP number available and earliest start date.</p>	
Flagging	<p>Solid Pink with "Timber Harvest Boundary" -</p> <p>Solid Blue -</p> <p>Solid Lime-Glo with "Silviculture" and orange-</p> <p>Solid Pink with "DO NOT CUT" -</p> <p>Blue and white stripe with "Watercourse and Lake Protection" - with red or pink</p> <p>Solid yellow with black "Skid Trail" flagging -</p> <p>White with orange flagging</p> <p>Orange and white stripe with black "Special Treatment Zone"</p>	<p>THP Boundary where flagged</p> <p>Centerline of Class III watercourses</p> <p>Silviculture boundary</p> <p>Aggregate retention boundary within VR units</p> <p>Class II WLPZ and springs</p> <p>Skid trails, (three hung together or with solid red means stop)</p> <p>Map point with description of work</p> <p>Archaeological, botanical, unstable area, wildlife protection zone or buffer</p>
WQ Requirements	<p>a. "Conditions stated in Section V of the plan which pertain to NCRWQCB waste discharge requirements will not be enforced by CAL FIRE unless those same conditions are subject to the Forest Practice Act/Rules and included as enforceable provisions in Section II of the plan."</p>	

Map Point Table Header Descriptions:

Map - Indicates the point number on the map.

Site Description, Watercourse Class – Type of feature whether a CSDS - “Controllable sediment discharge source” means sites or locations, both existing and those created by proposed timber harvest activities, within the Project area that meet all the following conditions:

1. is discharging or has the potential to discharge sediment to waters of the state in violation of applicable water quality requirements or other provisions of these General WDRs,
2. was caused or affected by human activity, and
3. may feasibly and reasonably respond to prevention and minimization management measures.

Potential Sediment Discharge (cy) Priority - indicates in cubic yards the amount of sediment that could potentially erode downstream if the feature failed and priority.

Priority –

- “High” indicates the feature will be repaired the first year of operations.
- “Medium” indicates it will be treated the year when operations occur in the logging area past the feature or in the vicinity of the feature.
- “Low” indicates it will be treated before the completion report is filed or prior to expiration of the plan if the logging area around the feature is operated.

Hydro Calculation - Indicates whether the hydrological calculation was made for the feature. Hydrological calculation sheets are included in Section V.

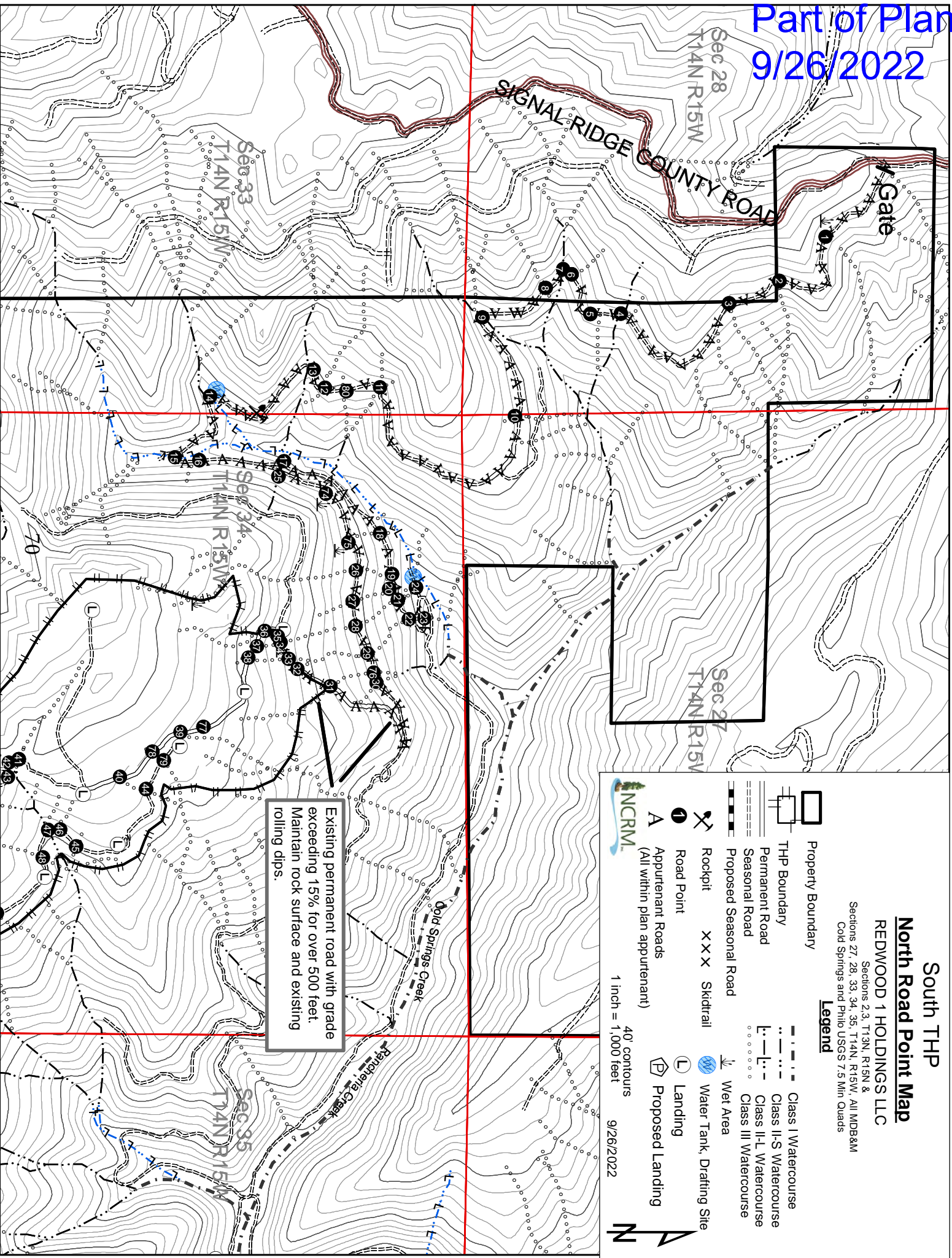
1600 – Whether or not feature is included in the 1600 Agreement with CDFW.

Geo - Indicates whether a CEG reviewed the site and provided recommendations listed in his report.

Where permanent culverts, temporary or Spittler crossings, rolling dips, rock fords, waterbars, outloping and road construction are proposed, standard plan diagrams are included below. Crossing 14 and 15 have specific diagram attached below to assist in activities at that site.

Where standards in the CDFW 1600 Agreement conflict with other standards in the THP the standards in the CDFW 1600 Agreement are the enforceable standard.

The LTO or RPF of record shall contact Mendocino County Department of Transportation prior to log hauling notifying them of logging operations on Signal Ridge County Road. The LTO shall post signs indicating logging trucks on Signal Ridge County Road at intersection with Philo Greenwood County Road and just south of the entrance to Redwood 1 LLC property on Signal Ridge County Road. The LTO shall make the log truck drivers aware of the need to drive careful and slow on Signal Ridge County Road.



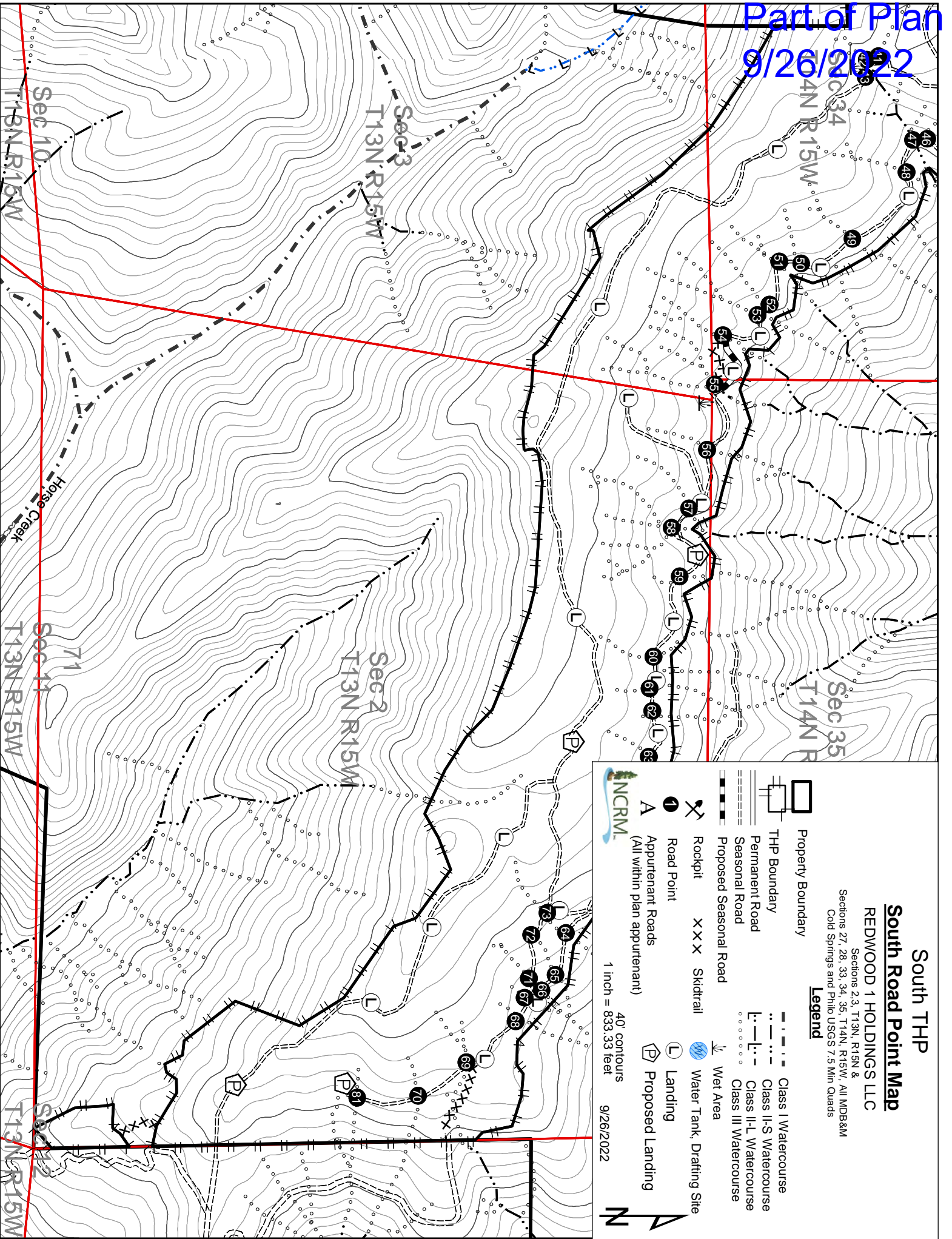
Existing permanent road with grade exceeding 15% for over 500 feet. Maintain rock surface and existing rolling dips.

South THP
North Road Point Map
REDWOOD 1 HOLDINGS LLC
 Sections 27, 28, 33, 34, 35, T14N, R15W, All MDB&M
 Cold Springs and Philo USGS 7.5 Min Quads

Legend
 --- Class I Watercourse
 - - - - Class II-S Watercourse
 - · - · - Class II-L Watercourse
 ······ Class III Watercourse
 --- Property Boundary
 - - - - THP Boundary
 = Permanent Road
 = Seasonal Road
 = Proposed Seasonal Road
 X X X Skidtrail
 ⚡ Rockpit
 ● Road Point
 A Appurtenant Roads (All within plan appurtenant)
 40 contours
 1 inch = 1,000 feet
 9/26/2022

↓ Wet Area
 Water Tank, Drafting Site
 L Landing
 P Proposed Landing

Part of Plan
9/26/2022



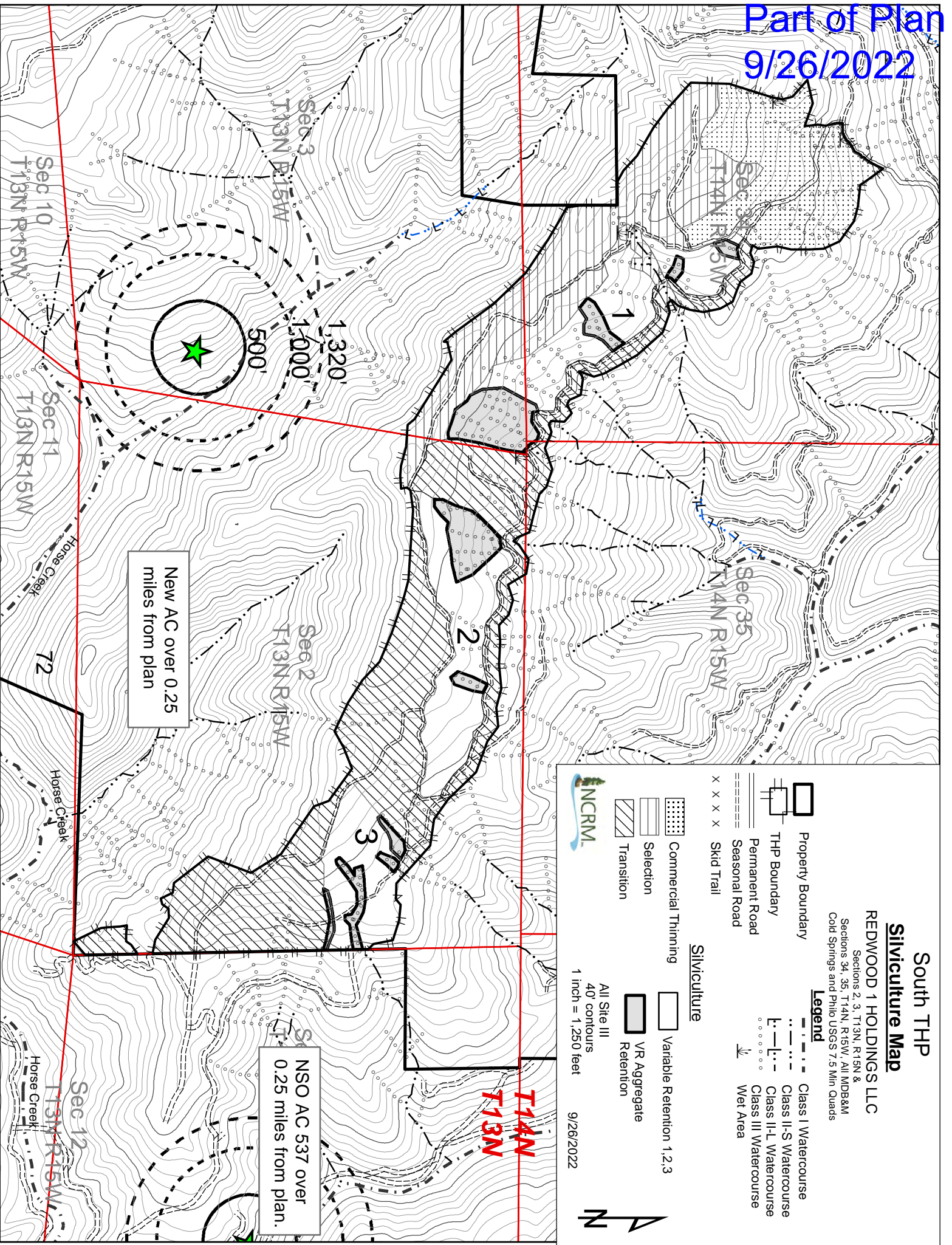
South THP
South Road Point Map
REDWOOD 1 HOLDINGS LLC
Sections 2, 3, T13N, R15W &
Sections 27, 28, 33, 34, 35, T14N, R15W, All MDB&M
Cold Springs and Philo USGS 7.5 Min Quads

Legend

	Property Boundary		Class I Watercourse
	THP Boundary		Class II-S Watercourse
	Permanent Road		Class II-L Watercourse
	Seasonal Road		Class III Watercourse
	Proposed Seasonal Road		Wet Area
	Rockpit		Water Tank, Drafting Site
	Road Point		Landing
	Appurtenant Roads (All within plan appurtenant)		Proposed Landing

40' contours
1 inch = 833.33 feet
9/26/2022

N



New AC over 0.25
miles from plan

NSO AC 537 over
0.25 miles from plan.

South THP
Silviculture Map
REDWOOD 1 HOLDINGS LLC
Sections 2, 3, T13N, R15W &
Sections 34, 35, T14N, R15W, All MDB&M
Cold Springs and Philo USGS 7.5 Min Quads

Legend

	Property Boundary		Class I Watercourse
	THP Boundary		Class II-S Watercourse
	Permanent Road		Class II-L Watercourse
	Seasonal Road		Class III Watercourse
	Skid Trail		Wet Area

Silviculture

	Commercial Thinning		Variable Retention 1,2,3
	Selection		VR Aggregate
	Transition		Retention

All Site III
40' contours
1 inch = 1,250 feet

9/26/2022

South THP

Silviculture Map

REDWOOD 1 HOLDINGS LLC

Sections 2, 3, T13N, R15W &
Sections 34, 35, T14N, R15W, All MDB&M
Cold Springs and Philo USGS 7.5 Min Quads

Legend

- Property Boundary
- THP Boundary
- Permanent Road
- Seasonal Road
- Skid Trail
- Class I Watercourse
- Class II-S Watercourse
- Class II-L Watercourse
- Class III Watercourse
- Wet Area

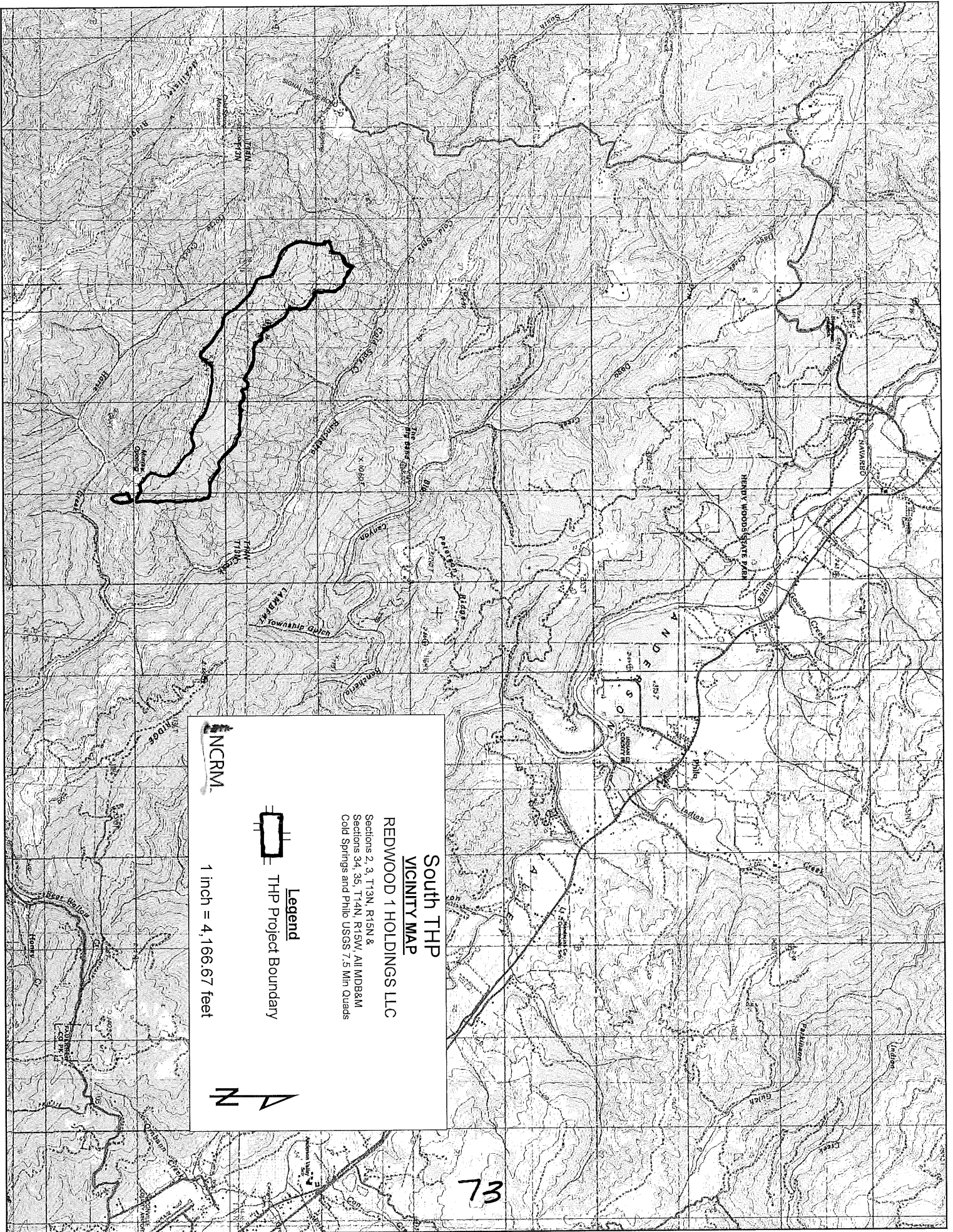
Silviculture

- Commercial Thinning
- Selection
- Transition
- Variable Retention 1,2,3
- VR Aggregate
- Retention


All Site III
40' contours
1 inch = 1,250 feet

9/26/2022






South THP
VICINITY MAP
REDWOOD 1 HOLDINGS LLC
 Sections 2, 3, T13N, R15W &
 Sections 34, 35, T14N, R15W, All MDB&M
 Cold Springs and Philo USGS 7.5 Min Quads

Legend
 THP Project Boundary

NCRMI

1 inch = 4,166.67 feet



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Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority	1600	Description and Recommendations
		Hydro Calc	Geo Report	
1	CSDS Class III Watercourse	<5, Mod	No	A wet area crosses an existing seasonal road via an 18" plastic culvert. The culvert inlet is plugged but little flow exists and is mainly ditch drain. <ul style="list-style-type: none"> • Clear inlet
		No	No	
2	Class III Crossing	<5, Low	No	A Class III watercourse crosses an existing seasonal road via an 18" plastic culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
3	Class III Crossing	<5, Low	No	A Class III watercourse crosses an existing seasonal road via a 24" plastic culvert. In good condition. <ul style="list-style-type: none"> • Maintain crossing.
		NO	No	
4	Class II-S Crossing	<5, Low	No	A Class II watercourse crosses an existing seasonal road via an 18" plastic culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
5	Class III Crossing	6, Low	No	A Class III watercourse crosses an existing seasonal road via an 18" metal culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
6	CSDS, Class III Watercourse	<5, Low	No	A Class III watercourse crosses an existing seasonal road via an 18" plastic culvert with partially blocked outlet. <ul style="list-style-type: none"> • Clear outlet.
		No	No	
7	CSDS, Class II-S Crossing	<5, Moderate	No	A Class II watercourse crosses an existing seasonal road via a 24" plastic culvert. Minor erosion of road edge above culvert outlet. <ul style="list-style-type: none"> • Install waterbar above culvert crossing through slash, mulch or other energy dissipator to disconnect surface flow from channel. • Armor road edge above culvert outlet with 2 cy+/-, 8"-12" rock.
		No	No	
8	Class III Watercourse	<5, Moderate	No	A Class III watercourse crosses an existing seasonal road via an 18" plastic culvert. <ul style="list-style-type: none"> • Installed in 2020 during ops of 1-19-052-M. • Maintain crossing.
		No	No	
9	Class II-S Crossing	<5, Low	No	A Class II watercourse crosses an existing seasonal road via an 18" plastic culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
10	Class III Ford Crossing	<5, Low	No	A Class III watercourse crosses an existing seasonal road via a ford crossing with rocked outlet in good condition. (Q ₁₀₀ =2.9 cfs) <ul style="list-style-type: none"> • Maintain crossing.
		Yes	No	
11	CSDS	<5, Low	Yes	A Class III watercourse crosses an existing seasonal road via a rock

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600	Description and Recommendations
			Geo Report	
	Class III Crossing	Yes	No	<p>ford with minor erosion. . (Q₁₀₀=2.9 cfs)</p> <ul style="list-style-type: none"> • Add additional rock to outlet 8-12" D50 size. • Alternatively install an 18" culvert per Permanent Culvert Diagram.
12	Class III Crossing	<5, Low	No	<p>A Class III watercourse crosses an existing seasonal road via an 18" plastic culvert in good condition.</p> <ul style="list-style-type: none"> • Maintain crossing.
		Yes	No	
13	Class II-S Crossing	<5, Low	No	<p>A Class II watercourse crosses an existing seasonal road via a 36" plastic culvert in good condition.</p> <ul style="list-style-type: none"> • Maintain crossing.
		Yes	No	
14	CSDS Class II Crossing	30-40, Moderate	Yes	<p>A Class II rock ford crossing with failure of the rock at the outlet. Water has gone around the rock at the outlet and is slowly scouring the crossing and created a 4 x 5-foot hole in 10% of road prism. Water is usually flowing at this site year-round. Also at this location is a water drafting site with 2, 5,000-gallon tanks for fire protection and road maintenance. The tanks are full but currently do not have water diverted to them. See 1600 Agreement and site 14 diagram. (Q₁₀₀=93.3 cfs)</p> <ul style="list-style-type: none"> • Install a 72-inch culvert per the site diagram provided at the end of this table. • Excavate inlet channel 30 feet above inlet on a 1.5:1 tapered side with 6' wide bottom. Spoils can be spread on road as fill over culvert. • Armor head of excavated channel with 24", D50 rip rap to prevent downcutting. • Armor inlet and outlet with 24"+, D50 rock to prevent erosion. • Dewater crossing prior to work by installing temporary dam with sandbags and plastic and pumping clean water around the site. • Water drafting is proposed at this site and discussed above in Item 26 (t) page 50. • Comply with 1600 Agreement.
		Yes	No	
15	CSDS	40-50, High	Yes	Existing failed 42" CMP that plugged and water diverted around the

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority	1600	Description and Recommendations
		Hydro Calc	Geo Report	
	Class II Crossing	Yes	No	<p>site to the east eroding a 6' wide x 2' deep channel. ($Q_{100}=144.5$ cfs)</p> <ul style="list-style-type: none"> Install an 84-inch culvert per the site diagram provided at the end of this table. Excavate inlet channel 30 feet above inlet on a 1.5:1 slope tapered side with 9' wide bottom. Spoils can be spread on road as fill over culvert. Armor head of excavated channel with 36", D50 rip rap to prevent downcutting. Armor inlet and outlet with 36"+, D50 rock to prevent erosion. Dewater crossing prior to work by installing temporary dam with sandbags and plastic and pumping clean water around the site, if necessary. Comply with CDFW 1600 Agreement
16	CSDS Class III Crossing	<2, Low	Yes	<p>Existing earth ford crossing with erosion at its outlet. ($Q_{100}=2$ cfs)</p> <ul style="list-style-type: none"> Install a rock ford per the Rock Ford Nomograph requirements shown at the end of this section using 6-8" rock.
		Yes	No	
17	CSDS Class II Crossing	5-10, Med	Yes	<p>Existing 24" plastic culvert failed in a Class II crossing and eroded portion of fill over culvert. Water had diverted down road and created a small gully at road exit.. ($Q_{100}=10.5$ cfs)</p> <ul style="list-style-type: none"> Remove culvert and install rock ford crossing per the Rock Ford Nomograph requirements. Rock sizes to 12-inches at a 2:1 slope with a 3-foot wide by 1-foot deep chute below road with road edge width of 3-feet .
		Yes	No	
18	CSDS Class III Crossing	<5, Med	Yes	<p>Existing earth ford crossing of Class III with wet inside ditch. ($Q_{100}=2.9$ cfs)</p> <ul style="list-style-type: none"> Install a 24" culvert at waterbar location. Reestablish wet ditch to culvert.
		Yes	No	
19	Class III Crossing	<5, Low	No	<p>Existing 24" plastic culvert at seasonal road crossing in good condition.</p> <ul style="list-style-type: none"> Maintain crossing.
		No	No	
20	Class III Crossing	<5, Low	No	<p>Existing 18" plastic culvert at seasonal road crossing in good condition.</p> <ul style="list-style-type: none"> Maintain crossing.
		No	No	

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600	Description and Recommendations
			Geo Report	
21	Class III Crossing	5-10, Low	No	Existing 24" plastic culvert at seasonal road crossing in good condition. Needs waterbar above to disconnect road runoff. <ul style="list-style-type: none"> Maintain crossing. <u>Install waterbar 30' above crossing to disconnect road runoff.</u>
		No	No	
22	Class III Crossing	5-10, Low	No	Existing 36" plastic culvert at seasonal road crossing in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
23	Class III Crossing	5-10, Low	No	Existing 48" plastic culvert at seasonal road crossing in good condition. <ul style="list-style-type: none"> Maintain crossing. <u>Install water bar 30 feet above crossing and rock outlet.</u>
		No	No	
24	CSDS Class III Crossing	5-10, Low	Yes	Existing 18" plastic culvert in a seasonal road crossing is functioning but is undersized, does not appear to have overtopped. Very gravelly soils. Gradient through the crossing is 5-8% and 12% below. (Q ₁₀₀ =13.3 cfs) <ul style="list-style-type: none"> Install additional 12-18" rock at outlet and armor road through crossing with 6" rock to facilitate a vented ford. Install fence post in front of inlet.
		Yes	No	
25	CSDS Class II Crossing	5-10, Low	Yes	Existing rock ford in a seasonal road crossing is eroded at the outlet. (Q ₁₀₀ =10.5 cfs) <ul style="list-style-type: none"> Install additional 12-18" rock at outlet and armor road through crossing with 6" rock per Rock Ford Nomograph.
		Yes	No	
26	Class III Crossing	<5, Low	No	Existing 18" plastic culvert at seasonal road crossing in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
27	CSDS Class III Crossing	<5, Low	Yes	Existing earth ford crossing in a seasonal road with minor erosion at its outlet. (Q ₁₀₀ =2.9 cfs) <ul style="list-style-type: none"> Install an 18" culvert per the Permanent Culvert Diagram.
		Yes	No	
28	CSDS Class III Crossing	<5, Low	Yes	Existing rock ford crossing in seasonal road with minor erosion at outlet. Needs larger rock at road edge and rock armor through road section or install permanent culvert. (Q ₁₀₀ =7.6 cfs) <ul style="list-style-type: none"> Install additional rock 18" or larger at wider area along road edge up to grade of road. Place additional rock in road surface. Alternatively, install a 24" culvert to grade per the Permanent Culvert Diagram.
		Yes	No	
29	Class III Crossing	<2, Low	No	Existing <u>rock ford with active erosion at its outlet.</u> (Q ₁₀₀ =2 cfs)

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600 Geo Report	Description and Recommendations
		No	No	<ul style="list-style-type: none"> Install additional rock at the outlet, D₅₀ of 12” to 18” approximately 10 cy.
30	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
31	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
32	Ditch Relief to Class III	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
33	CSDS Class III Crossing	<5, Moderate	No	Existing 18” plastic culvert at seasonal road crossing in good condition but inlet and outlet need some clearing. <ul style="list-style-type: none"> Clear inlet and outlet and maintain crossing.
		No	No	
34	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
35	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
36	Class III Crossing	<2, Low	No	Existing 24” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
37	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
38	Class III Crossing	<2, Low	No	Existing 18” plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> Maintain crossing.
		No	No	
39	Ditch Relief	<2, Low	No	Existing 15” plastic ditch relief culvert in a seasonal road in good condition. <ul style="list-style-type: none"> Maintain culvert.
		No	No	
40	CSDS Poor Road	<2, Moderate	No	Erosion of seasonal road where a channel has developed from road runoff in through-cut section and runoff from a swale above the road.

Revised 9/26/2022

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority	1600	Description and Recommendations
		Hydro Calc	Geo Report	
	Drainage	No	No	The road is rocked in this locale but not of sufficient size to prevent movement. <ul style="list-style-type: none"> • <u>Move road 4-6' to the west to allow establishment of an inside ditch.</u> • <u>Rock armor inside ditch with 6-8" rock and establish rocked dip at top of through cut directing flow to ditch.</u>
41	Class III Crossing	<2, Low	No	Existing ford crossing with rocked outlet in good condition. Low gradient crossing with minimal flow. <ul style="list-style-type: none"> • Maintain ford crossing.
		No	No	
42	Class III Crossing	<2, Low	No	Existing ford crossing with rocked outlet in good condition. Low gradient crossing with minimal flow. <ul style="list-style-type: none"> • Maintain ford crossing
		No	No	
43	Ditch Relief	<2, Low	No	Existing 12" ditch relief crossing for wet area in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
44	Class III Crossing	<2, Low	No	Existing 24" plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
45	Class III Crossing	<2, Low	No	Existing 18" plastic culvert at seasonal road crossing in good condition <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
46	Class III Crossing	<2, Low	Yes	Existing ford crossing of 1 acre drainage with wood at its outlet. (Q ₁₀₀ =1.0 cfs). <ul style="list-style-type: none"> • Remove wood and place 4-5 cy 8-12" rock at outlet. • Alternatively install an 18" culvert per Permanent Culvert Diagram.
		Yes	No	
47	Class II-S Crossing	<2, Low	No	Existing 36" plastic culvert Class II crossing of seasonal road in good condition. <ul style="list-style-type: none"> • Install rolling dip on east approach to disconnect road runoff.
		No	No	
48	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition.. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
49	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
50	Class III Crossing	<5, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> • Maintain crossing.
		No	No	
51	Class III	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600	Description and Recommendations
			Geo Report	
	Crossing	No	No	good condition. <ul style="list-style-type: none"> Maintain crossing.
52	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
53	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 36" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
54	Class III Crossing	<2, Low	Yes	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. Start of new road construction and requires lengthening of culvert 20 feet to avoid side cast into channel. <ul style="list-style-type: none"> Add 20' <u>length of</u> culvert and maintain crossing.
		No	No	
55	Class III Crossing	<2, Low	Yes	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. New road intersects crossing at pipe outlet and will require lengthening culvert by 20' to keep fill from channel. <ul style="list-style-type: none"> Add 20' <u>length of</u> culvert and maintain crossing.
		No	No	
56	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
57	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
58	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 30" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
59	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
60	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
61	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
62	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 24" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
63	Class III	<2, Low	Yes	Existing broad, low gradient temporary ford crossing in seasonal

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600	Description and Recommendations
			Geo Report	
	Crossing	Yes	No	road with no erosion. (Q ₁₀₀ =2.9 cfs) <ul style="list-style-type: none"> Install rock ford per Rock Ford Nomograph requirements using 12-18" rock.
64	Class III Crossing	<2, Low	No	Existing Class III logging road crossing with a 24" plastic culvert in good condition. <ul style="list-style-type: none"> Add rock to outboard edge of road above culvert outlet to prevent erosion Install waterbar on north side of crossing.
		No	No	
65	Class III Crossing	<2, Low	Yes	Existing broad, low gradient temporary ford crossing in seasonal road with no erosion. (Q ₁₀₀ =3.8 cfs) <ul style="list-style-type: none"> Install rock ford crossing per the Rock Ford Nomograph requirements using 12-18" rock. Alternatively install an 24" culvert per Permanent Culvert diagram.
		Yes	No	
66	CSDS Class III Crossing	<2, Low	Yes	Existing low gradient rock ford crossing with minor erosion at outlet. (Q ₁₀₀ =3.8 cfs) <ul style="list-style-type: none"> Place 12"-18" rock at outlet for additional armoring.
		Yes	No	
67	Class III Crossing	<2, Low	No	Existing low gradient rock ford crossing in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
68	Class III Crossing	<2, Low	No	Existing low gradient rock ford crossing in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
69	Class III Crossing	<2, Moderate	Yes	Existing low gradient earth ford crossing with minor erosion at its outlet. <ul style="list-style-type: none"> Maintain crossing, following use remove crossing per Temporary Crossing Removal diagram.
		No	No	
70	CSDS Class III Crossing	<2, Moderate	Yes	Existing low gradient earth ford crossing with minor erosion. <ul style="list-style-type: none"> Maintain crossing, following use remove crossing per Temporary Crossing Removal diagram.
		No	No	
71	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with an 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
72	CSDS Class III Crossing	<2, Low	Yes	Existing temporary Class III seasonal road crossing of 2-acre drainage. (Q ₁₀₀ =1.9 cfs) <ul style="list-style-type: none"> Install rock ford crossing per the Rock Ford Nomograph requirements using 8-12" rock. Alternatively, install an 18" culvert per Permanent Culvert diagram.
		Yes	No	
73	Class III Crossing	< 2, Low	Yes	Existing earth ford crossing in good condition. (Q ₁₀₀ =2.9 cfs) <ul style="list-style-type: none"> Install rock ford per Rock Ford Nomograph requirements. Alternatively, install an 18" culvert per Permanent Culvert diagram.
		Yes	No	
74	Wet Area	<1, Low	No	Wet area along cut bank and into road.

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SEP 13 2022

COAST AREA
RESOURCE MANAGEMENT

Map Point Table – South THP

Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority Hydro Calc	1600	Description and Recommendations
			Geo Report	
		No	No	<ul style="list-style-type: none"> If wet during time of operations, install temporary 6" drain pipe and remove prior to winter period.
75	Wet Area	<1, Mod	No	Wet area along cut bank and into road. <ul style="list-style-type: none"> If wet during time of operations, install temporary 6" drain pipe and remove prior to winter period. If permanent, install 18" culvert per Permanent Culvert diagram.
		No	No	
76	Class III Crossing	<2, Low	No	Existing Class III seasonal road crossing with a 18" plastic culvert in good condition. <ul style="list-style-type: none"> Maintain crossing.
		No	No	
77	Class III Crossing	<2, Low	Yes	Existing temporary ford seasonal road crossing of a 2-acre Class III. (Q ₁₀₀ =1.9 cfs) <ul style="list-style-type: none"> Install rock ford crossing per the Rock Ford Nomograph requirements using 8-12" rock. Alternatively, install an 18" culvert per Permanent Crossing diagram.
		Yes	No	
78	CSDS Class III Crossing	<2, Low	Yes	Existing ford on seasonal road crossing of a 2-acre Class III with low gradient channel. (Q ₁₀₀ =1.9 cfs) <ul style="list-style-type: none"> Install rock ford per Rock Ford Nomograph using 8"+ D50 rock.
		Yes	No	
79	CSDS Class III Crossing	<2, Low	Yes	Existing ford on seasonal road crossing of a 2-acre Class III with low gradient channel. (Q ₁₀₀ =1.9 cfs) <ul style="list-style-type: none"> Install rock ford per Rock Ford Nomograph using 8"+ D50 rock.
		Yes	No	
80	CSDS Class III Crossing	<2, Low	Yes	Existing ford on seasonal road crossing of a 2-acre Class III with low gradient channel. (Q ₁₀₀ =1.9 cfs) <ul style="list-style-type: none"> Install a rock armored crossing per the Rock Armored Nomograph requirements using 8-12" rock. Alternatively, install an 18" culvert per Permanent Culvert diagram.
		Yes	No	
81	CSDS Class III Crossing	<2, Low	Yes	Existing low gradient earth ford Class III crossing with minor erosion. <ul style="list-style-type: none"> Maintain crossing, following use remove crossing per Temporary Crossing Removal diagram.
		No	No	

If conditions stated in the approved CDFW 1600 Agreement are different than that listed in the Map Point Table the LTO shall follow the requirements of the approved CDFW 1600 Agreement.

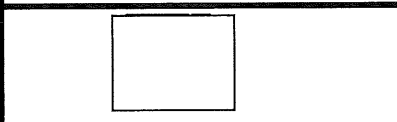
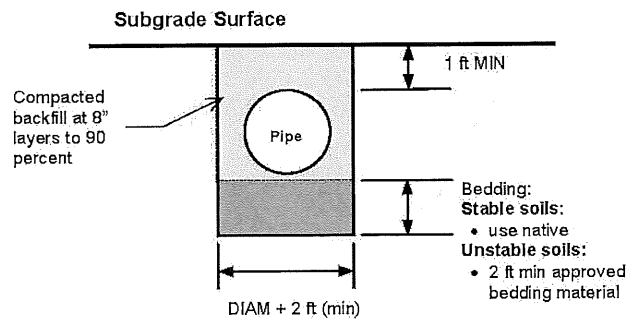
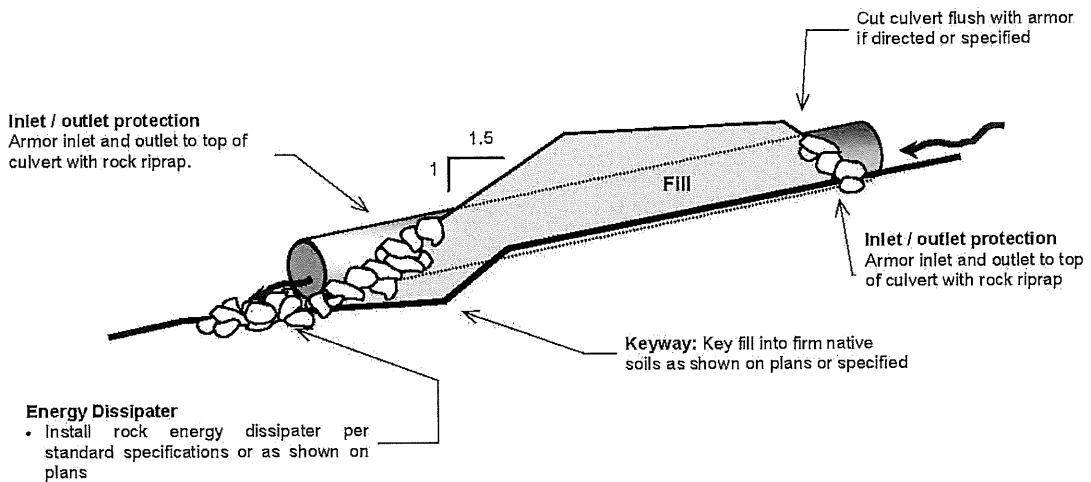
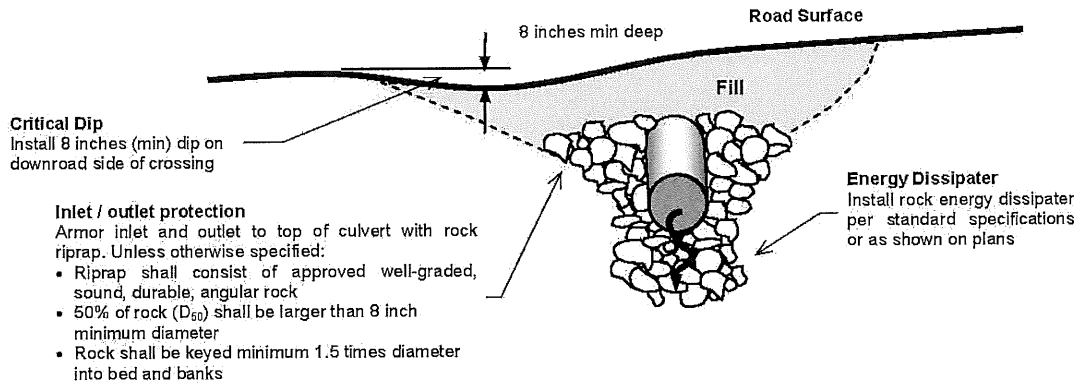
Critical Dip shall be installed at all culverted Seasonal Road Watercourse crossings to be constructed or reconstructed per 14 CCR 923.9(j).

An approved CDFW LSAA 1600 Agreement shall be amended to the plan prior to operations and the requirements of the approved 1600 Agreement shall be applied at locations listed in the Map Point Table.



PERMANENT CULVERT- FOREST ROAD

NTS



PERMANENT CULVERT TYPICAL SPECIFICATIONS

Standard Detail B1

2013

NOTES

- **Culvert Orientation**
 - Culvert should be installed at the natural stream level, grade and orientation.

- **Culvert bed**
 - The width of trenches shall permit satisfactory joining and thorough tamping of the backfill material.
 - The culvert bed shall be clean and free of large woody debris and large rocks. Unsuitable material shall be replaced with selected granular foundation material and compacted to obtain uniform bed.
 - Where rock, hardpan, or other unyielding material is encountered, it shall be removed below the foundation grade for a depth of at least 1 foot and a width of at least 2 feet plus the culvert diameter. This material shall be replaced with selected engineered fill.
 - The inlet to the culvert should be countersunk 10% of the pipe diameter below stream grade so that the water falls into the culvert inlet.

- **Laying Pipe**
 - Culvert shall be laid in center of trench on uniform grade line to conform to the flow line of the stream. The entire length of pipe shall be in contact with the culvert bedding.
 - Unless otherwise specified, the culvert shall have a minimum grade of 2%.
 - Culvert shall be joined and anchored per manufacturer's guidelines.

- **Backfill**
 - Fill shall be keyed and benched into firm native soils. Areas to receive fill shall be stripped to remove vegetation, near-surface roots, brush, highly organic soils, and other unsuitable fill material.
 - Select mineral soil shall be used for culvert backfill. The backfill shall have no rocks greater than 3 inches in any dimensions placed closer than 1 foot to the culvert.
 - Backfill shall be adequately compacted throughout the entire process to a degree greater than the surrounding materials (approximately 85 percent relative compaction). During placement and compaction of fill, the moisture content of the materials being placed shall be maintained.
 - Fill shall be brought up to grade at a 1.5:1 slope unless otherwise specified.

- **Culverts**
 - Culverts shall be smooth bore, double wall (ASTM D3350 and AASHTO M294, Type S).
 - Culverts distorted more than 10% of normal dimension, ruptured, or broken shall be replaced.
 - Culverts shall be cut flush with armored embankment/headwall if directed or specified.

- **Inlet/outlet protection**
 - Armor inlet and outlet to top of culvert with rock riprap.
 - Riprap shall consist of approved well-graded, sound, durable, angular rock unless otherwise specified.
 - 50% of rock (D_{50}) shall be larger than 8 inch minimum diameter unless otherwise specified.
 - Rock shall be keyed minimum 1.5 times diameter into bed and banks unless otherwise specified.

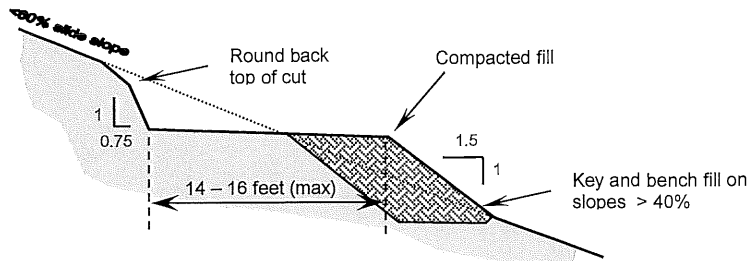
- **Energy dissipater**
 - Culvert shall discharge onto rock apron per general specifications.

- **Erosion Control**
 - On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
 - Critical dip (8 inch min) shall be installed on the downroad side of crossing.
 - Exposed soils shall be mulched per standard specification. Install coir roll at base of exposed soils

- **California Department of Fish and Wildlife Agreement**
 - Conform to CDFW Fish and Game Code 1600 where applicable.

	PERMANENT CULVERT NOTES TYPICAL SPECIFICATIONS	Standard Detail B1
		2013

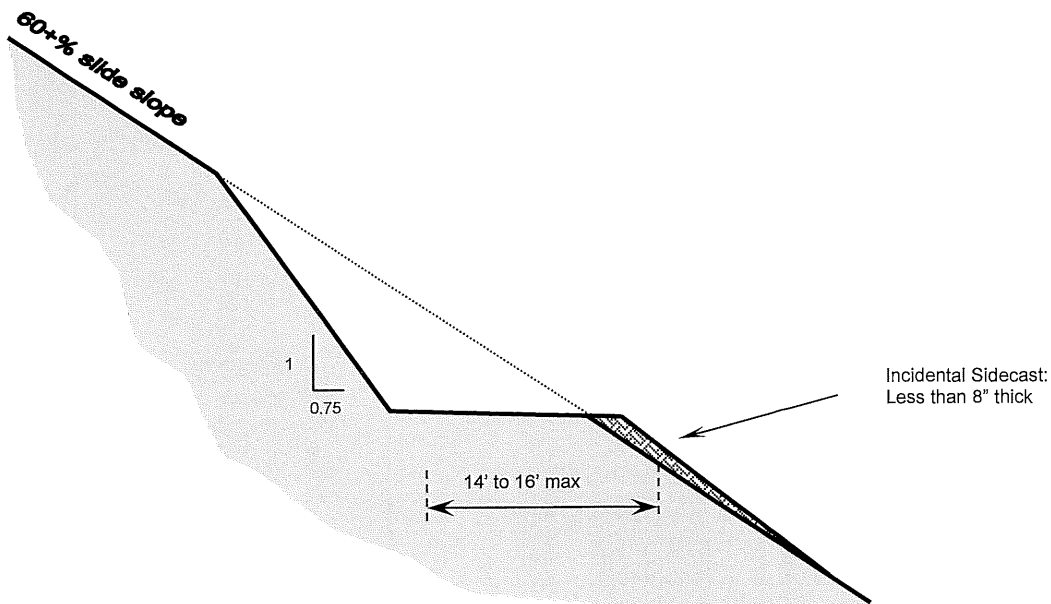
BALANCED CUT AND FILL: < 60% SLOPES (Typical)



NOTES

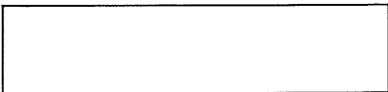
- Road shall be constructed at a maximum width less than 16 feet
- Cuts shall be inclined no steeper than 0.75:1
- Areas to receive fill shall be striped to remove all vegetation, roots, brush and other unsuitable fill material.
- On slopes greater than 40%, fill shall be keyed and bench into firm native soils. Keyways shall be inclined 5% into slope.
- Fill materials shall contain no sod, brush, roots, or other perishable or unsuitable material. Rocks or clods greater than 4" shall be removed prior to fill placement.
- Fill shall be placed in maximum 8 inch thick horizontal lifts and adequately compacted. If a dozer is used to compact the fill the tracks of the equipment must pass over 90 percent of the surface of each lift before a new lift is placed, and the entire surface of each layer shall receive 8 passes of this equipment.
- During placement and compaction of fill, the moisture content of the materials being placed shall be maintained
- Exposed souls shall be mulched

FULL BENCH: > 60% SLOPES (Typical)



NOTES

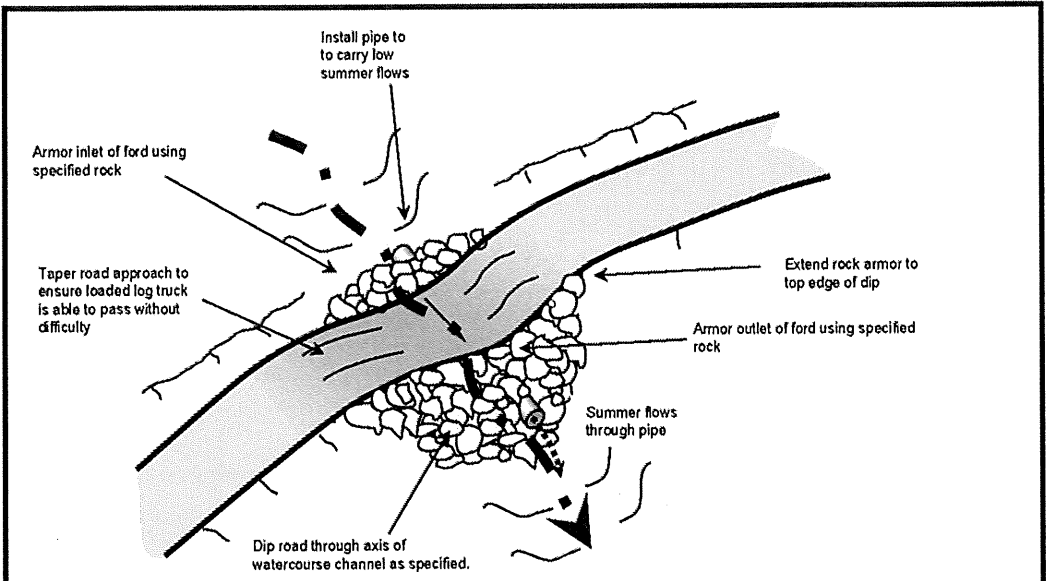
- Trail shall be constructed at a maximum width less than 16'
- The road shall be constructed on a full bench with spoils endhauled to a stable location on slopes less than 30% gradient.
- Incidental fill shall not exceed 8 inches in maximum thickness nor extend downslope more than 12 feet
- Cuts shall be laid back to maximum slopes of 0.75:1
- The top edge of the cut shall be rounded back



ROAD CONSTRUCTION TYPICAL SPECIFICATIONS

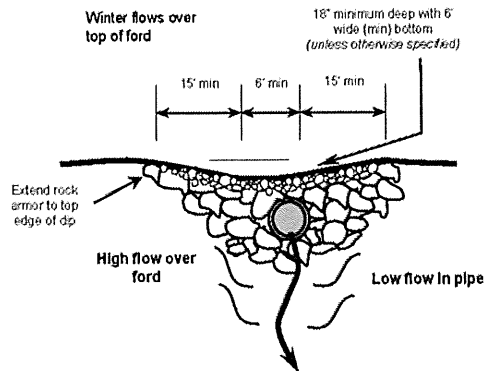
Standard Detail R1

Date: June 11, 2008

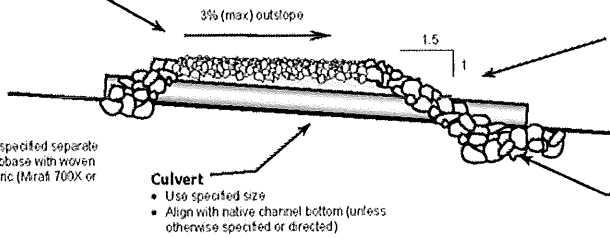


VENTED FORD

A vented ford is a cross between a ford and a typical culvert-based crossing: Water passes through a culvert (the vent) during normal summer flows, but the structure is designed to accommodate flows over the ford during peak storm events.



AGGREGATE SUB BASE
 Diameter: 6" to 12" ±
 Depth: 12" deep



Note: Where specified separate base from subbase with woven geotextile fabric (Miraf 700X or equivalent)

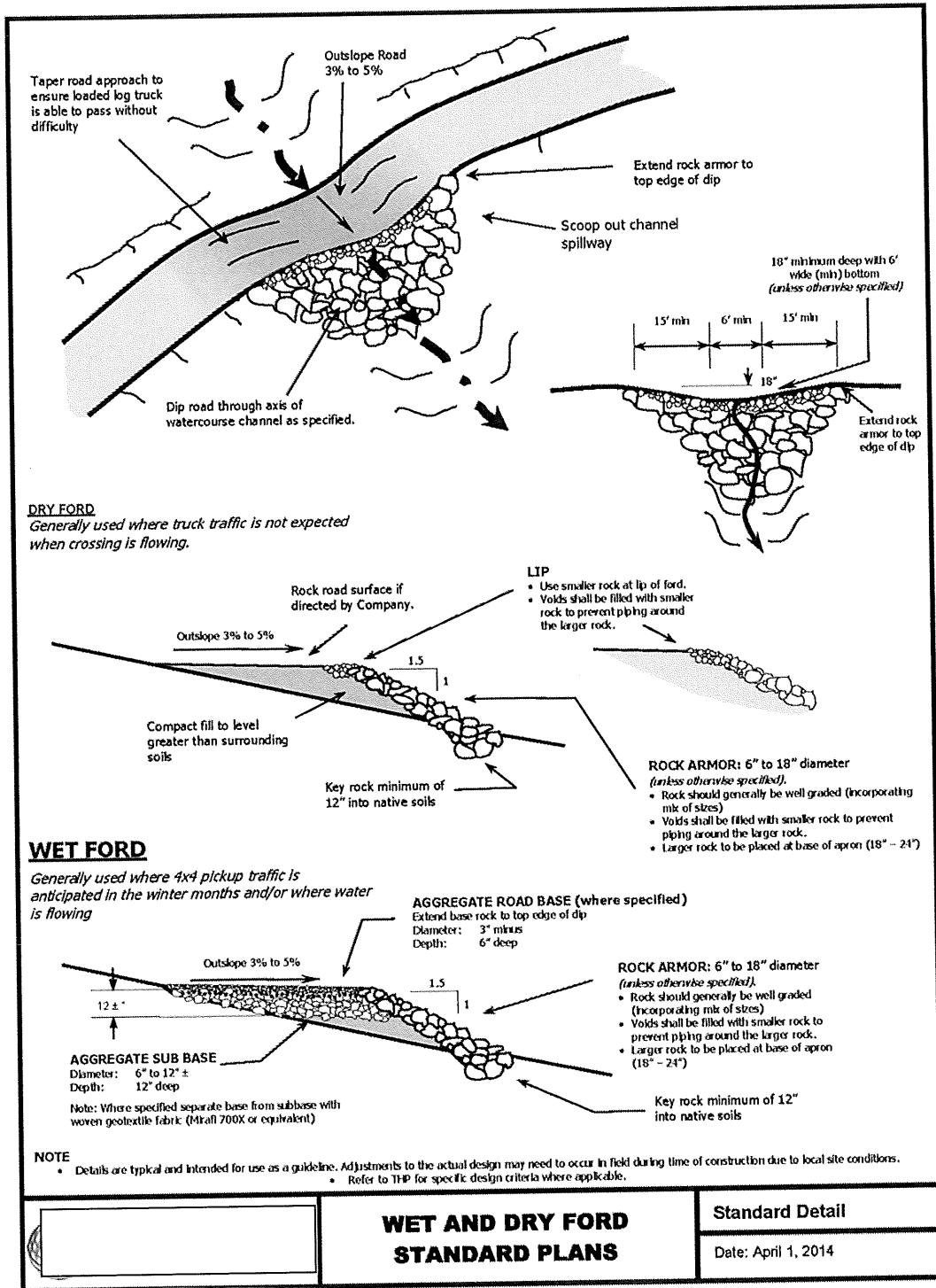
- Culvert**
- Use specified size
 - Align with native channel bottom (unless otherwise specified or directed)

- ROCK ARMOR:**
- Use specified sized rock
 - Rock should generally be well graded (incorporating mix of sizes)
 - Voids shall be filled with smaller rock to prevent piping around the larger rock
 - Larger rock to be placed at base of apron

NOTE

- Details are typical and intended for use as a guideline. Adjustments to the actual design may need to occur in field during time of construction due to local site conditions.
- Refer to THP for specific design criteria where applicable.

	VENTED FORD STANDARD PLANS	Standard Detail
		Date: April 1, 2014



Taper road approach to ensure loaded log truck is able to pass without difficulty

Outslope Road 3% to 5%

Extend rock armor to top edge of dip

Scoop out channel spillway

18" minimum deep with 6' wide (min) bottom (unless otherwise specified)

Dip road through axis of watercourse channel as specified.

DRY FORD
Generally used where truck traffic is not expected when crossing is flowing.

- LIP**
- Use smaller rock at lip of ford.
 - Voids shall be filled with smaller rock to prevent piping around the larger rock.

Outslope 3% to 5%

Rock road surface if directed by Company.

Compact fill to level greater than surrounding soils

Key rock minimum of 12" into native soils

- ROCK ARMOR: 6" to 18" diameter (unless otherwise specified).**
- Rock should generally be well graded (incorporating mix of sizes)
 - Voids shall be filled with smaller rock to prevent piping around the larger rock.
 - Larger rock to be placed at base of apron (18" - 24")

WET FORD
Generally used where 4x4 pickup traffic is anticipated in the winter months and/or where water is flowing

AGGREGATE ROAD BASE (where specified)
Extend base rock to top edge of dip
Diameter: 3" minus
Depth: 6" deep

Outslope 3% to 5%

12 ± "

AGGREGATE SUB BASE
Diameter: 6" to 12" ±
Depth: 12" deep

Note: Where specified separate base from subbase with woven geotextile fabric (Mifall 700X or equivalent)

- ROCK ARMOR: 6" to 18" diameter (unless otherwise specified).**
- Rock should generally be well graded (incorporating mix of sizes)
 - Voids shall be filled with smaller rock to prevent piping around the larger rock.
 - Larger rock to be placed at base of apron (18" - 24")

Key rock minimum of 12" into native soils

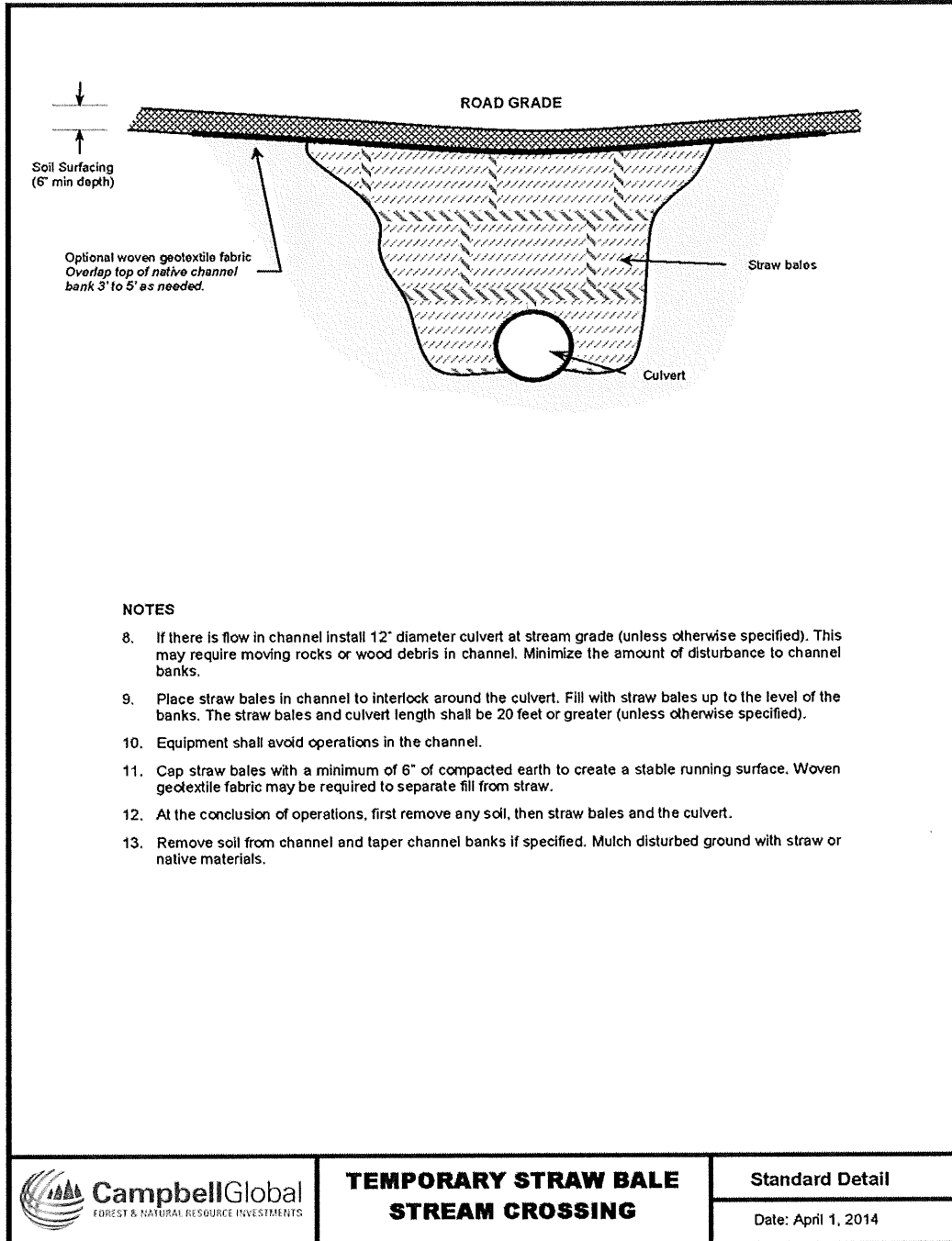
NOTE

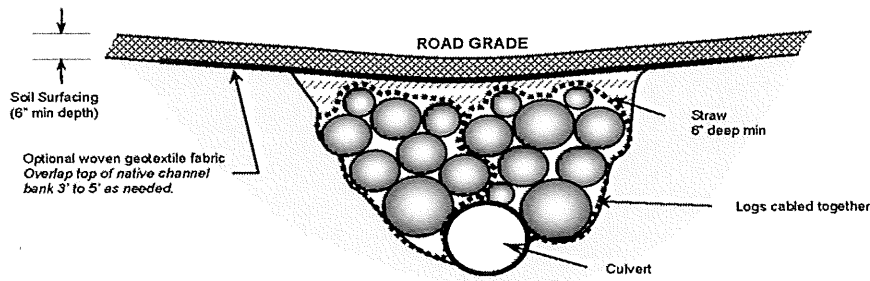
- Details are typical and intended for use as a guideline. Adjustments to the actual design may need to occur in field during time of construction due to local site conditions.
- Refer to 11P for specific design criteria where applicable.

**WET AND DRY FORD
STANDARD PLANS**

Standard Detail

Date: April 1, 2014





NOTES

1. If there is flow in channel install 12" diameter culvert at stream grade (unless otherwise specified). This may require moving rocks or wood debris in channel. Minimize the amount of disturbance to channel banks.
2. Groups of logs cabled together shall be carefully placed in the axis of the channel to raise the road surface to grade. Placement of the cable logs should be done in a manner to minimize the amount of ground disturbance to the channel banks. The length of fill logs or culvert shall be 20' or greater (unless otherwise specified).
3. Equipment shall avoid operations in the channel.
4. Cables may be used to choke logs in bundles in the channel.
5. Place 6" minimum layer of straw over the logs and then capped by a minimum of 6" of compacted earth to create a stable running surface. Woven geotextile fabric may be required to separate fill from straw.
6. At the conclusion of operations, first remove any soil, then straw, and finally logs and the culvert.
7. Remove soil from channel and taper channel banks if specified. Mulch disturbed ground with straw or native materials.

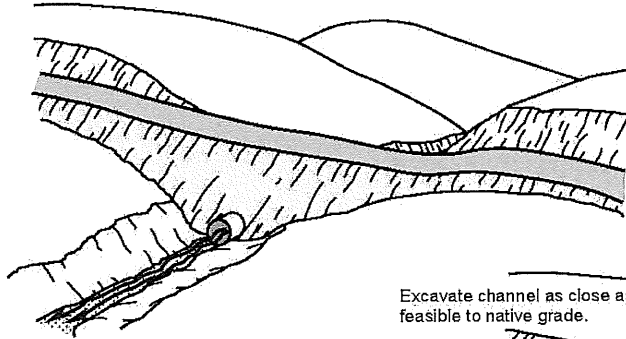
**TEMPORARY "SPITTLER"
STREAM CROSSING**

Standard Detail

Date: April 1, 2014

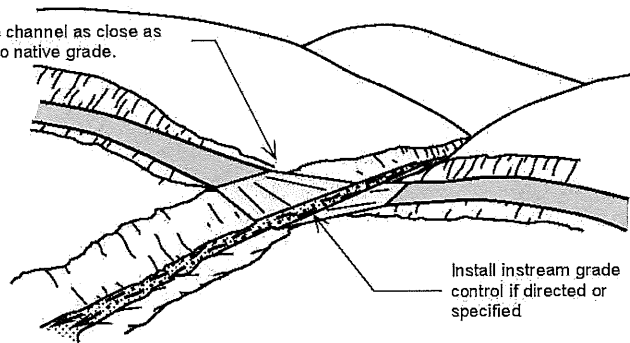
E2 **STREAM CROSSING REMOVAL**
NTS

EXISTING CROSSING

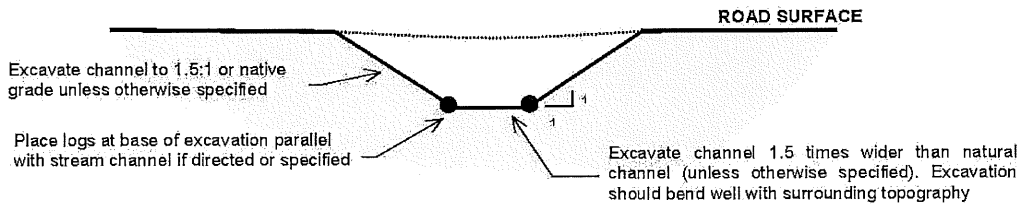


REMOVED

Excavate channel as close as feasible to native grade.

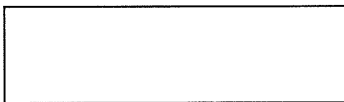


Install instream grade control if directed or specified



NOTES

- Excavate a channel that is 1.5 times wider than the natural channel (unless otherwise specified).
 - Excavated channel shall be as close as feasible to the grade and orientation of the natural channel.
 - Channel banks shall be excavated to a 1.5:1 slope or native grade (whichever is steepest) unless otherwise specified in the plan or directed.
 - Excavation should blend well with surrounding natural topography.
 - Spoils shall be placed and compacted along a stable portion of the inboard edge of the road, unless otherwise specified.
 - Fill shall be placed in a manner to prevent future erosion. Fill shall be compacted to 85% relative compaction unless otherwise specified or directed.
- Install instream grade control if specified in the plan or directed. Grade control shall consist of large wood or rock and is intended to prevent stream down-cutting. See general specifications.
- Place logs at base of excavated channel if directed. Logs to be placed parallel with stream with upstream log overlapping downstream log. Logs to be embedded into channel bank to minimize stream bank erosion. Log diameter to be determined by project geotechnical consultant or designee.
- Mulch disturbed ground.
 - If available and directed by project geotechnical consultant, the excavated channel banks and spoil sites may be slash mulched using 6-inch minus woody debris with 90% coverage. Slash should be packed using a dozer or the bucket of an excavator.
- Install a straw roll at base of disturbed areas as directed by geotechnical consultant or designee.
- Conform to requirements of CDFW 1600 where applicable.
- Specifications are intended only as guidelines; modifications may be made in the field by geotechnical consultant or designee.



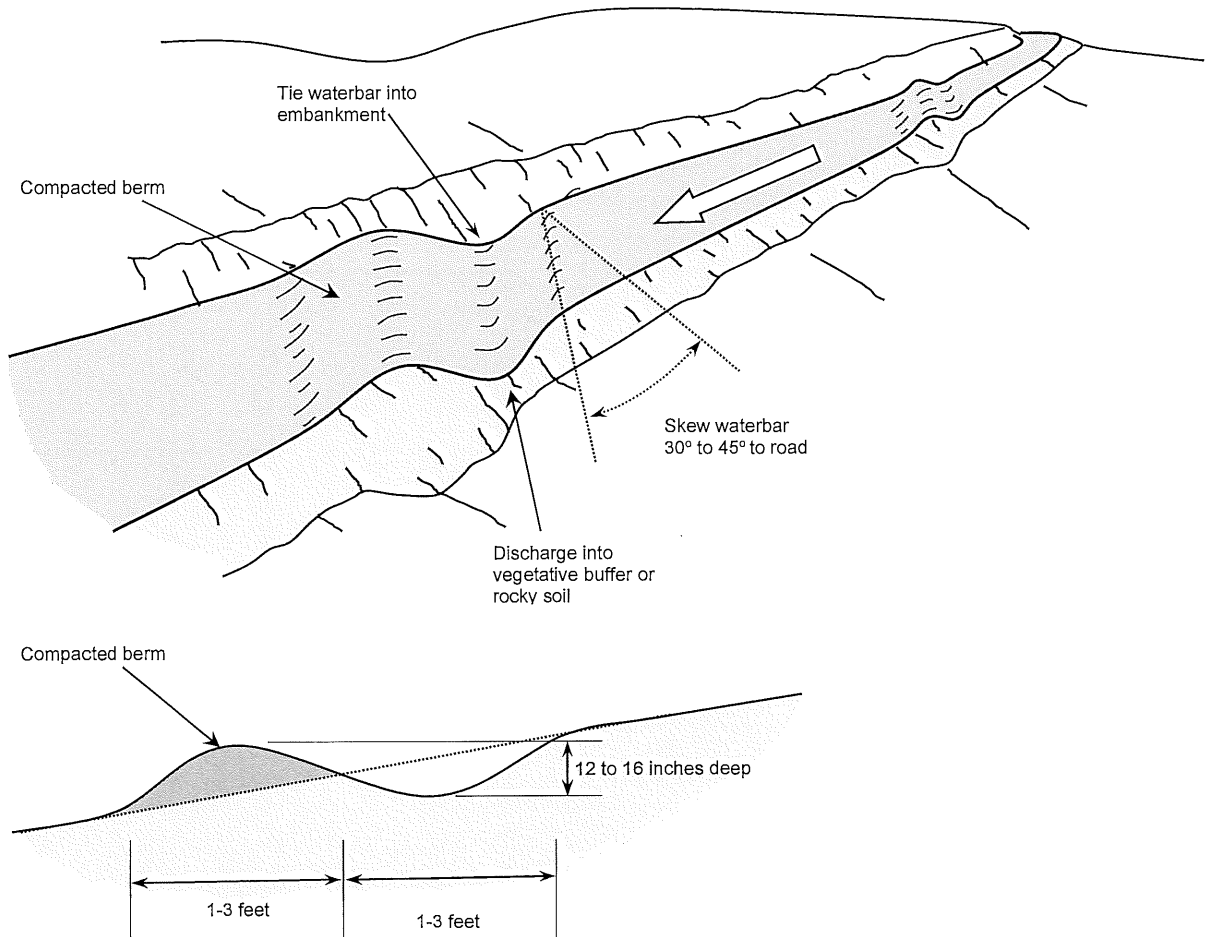
CROSSING REMOVAL
TYPICAL SPECIFICATIONS

Standard Detail E2

2013

6C

WATERBAR (Typical)
NTS



NOTES

- Identify waterbar locations that take advantage of natural drainage features and minimize the amount of disturbance required for waterbar construction.
- All waterbars shall begin at the intersection of the roadbed surface and the cut slope and run the entire width of the road surface prism.
- Waterbar length shall not exceed 1.5 times the width of the road surface.
- Acceptable waterbars shall be skewed 30 to 45 degrees.
- All waterbars shall have free-flowing outlets with minimum 2% grade in the bottom of the channel that discharges onto vegetative surfaces or less erodible material where possible.
- Native materials used to construct downslope berm shall be compacted with equipment to minimize wear resulting from trespass and/or administrative use.
- Waterbar depth measured from the bottom of the waterbar channel to the top of the compacted berm must be between 12 and 16 inches high.
- Compacted waterbars must be passable in a 4WD vehicle unless otherwise specified in the contract.



WATERBAR

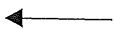
TYPICAL

Standard Detail 6C

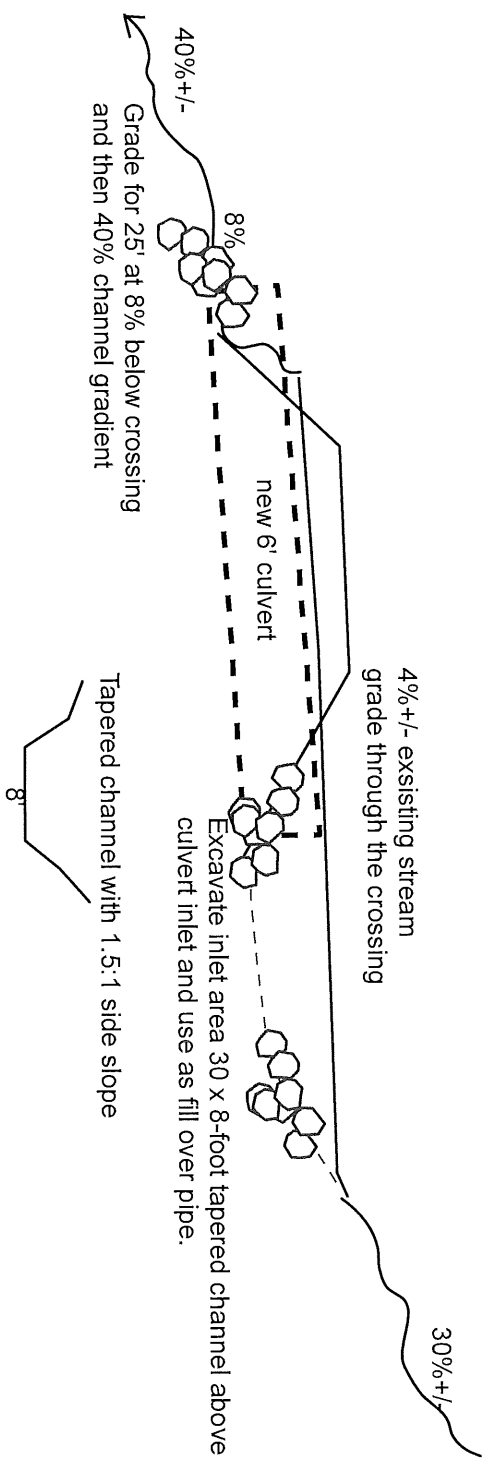
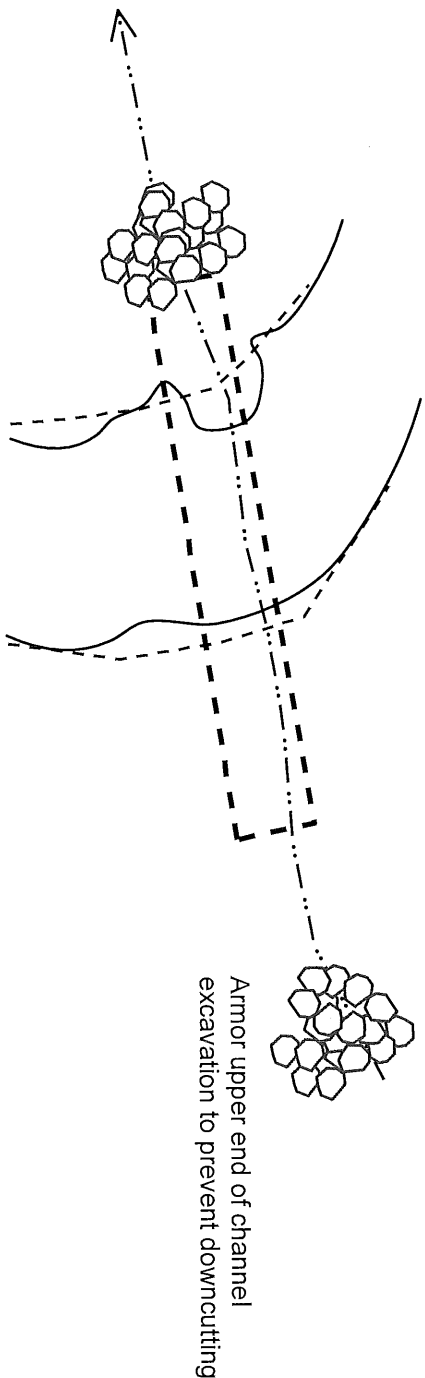
Date: March 8, 2013

South THP Crossing #14

North



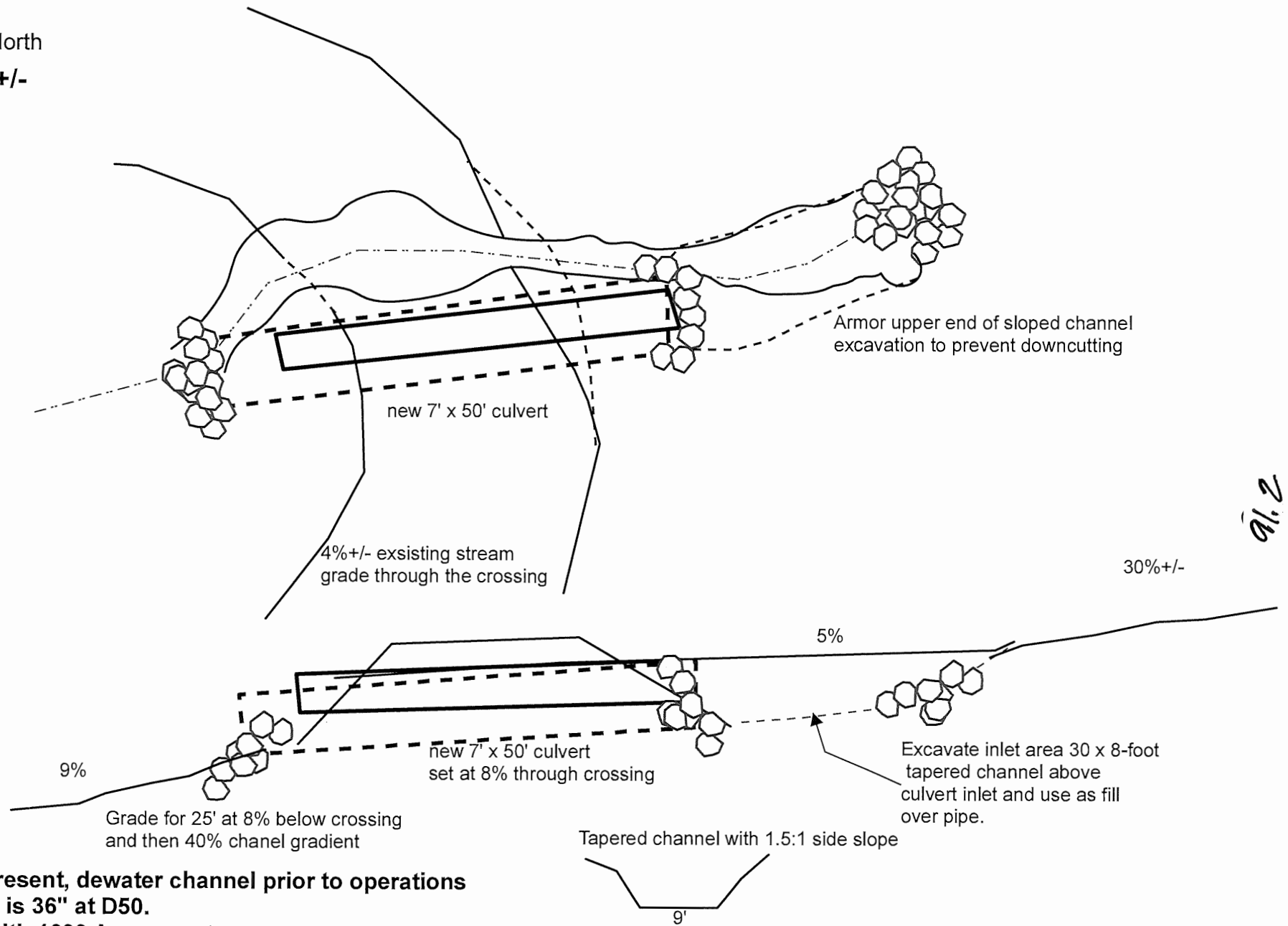
1"=15'±/-



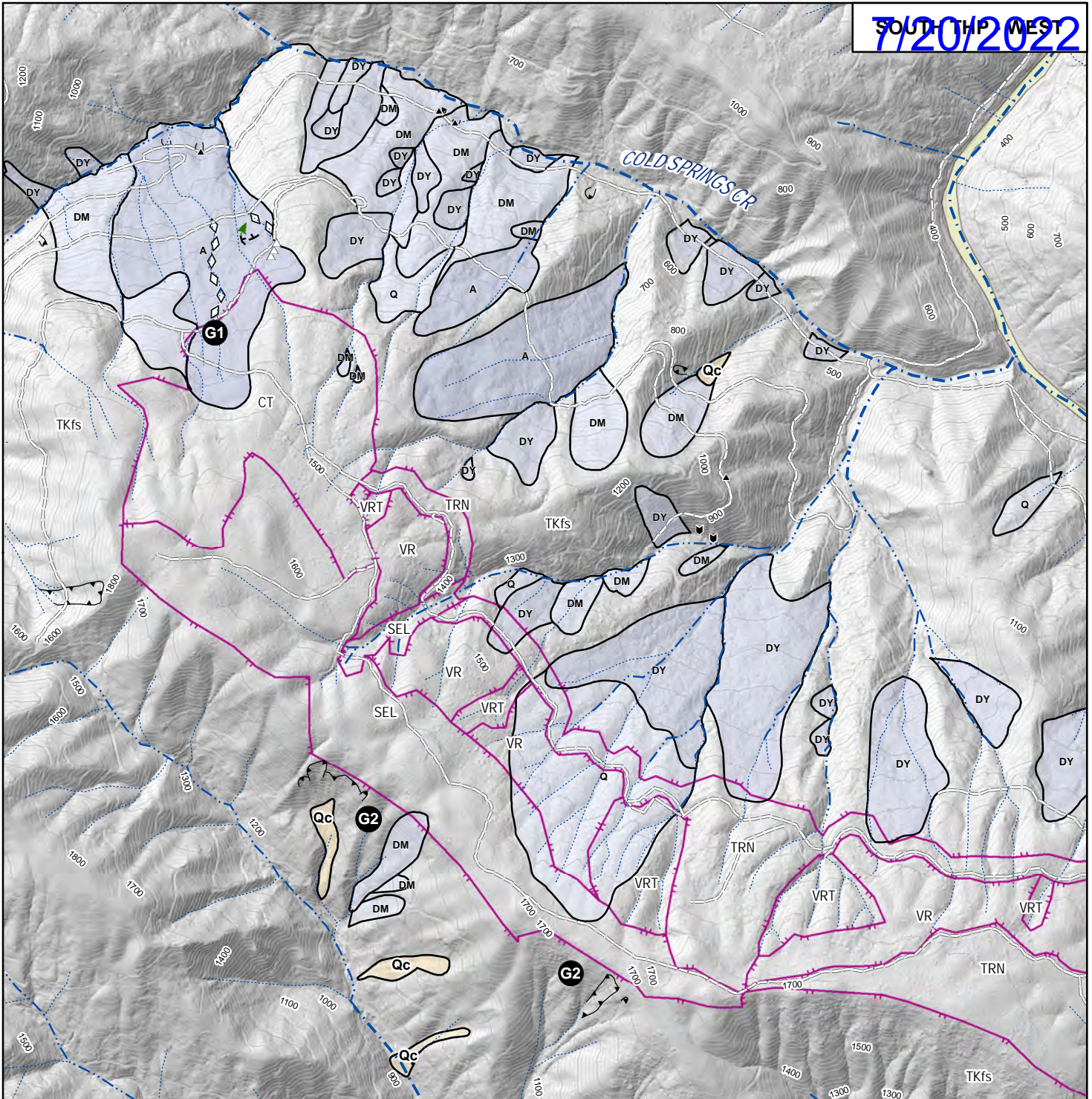
Dewater channel prior to operations
Rock size is 24" at D50
Comply with 1600 Agreement
Treat for erosion per Item 18

South THP Crossing #15

← North
1"=20'+/-



If water present, dewater channel prior to operations
Rock size is 36" at D50.
Comply with 1600 Agreement
Treat for erosion per Item 18



EARTH MATERIALS

- Qc** Colluvium
- Qal** Alluvium
- TKfs** Franciscan Formation

SYMBOLS

- Geologic Contact
- dashed where approximate
- dotted where concealed
- queried where uncertain
- Fault
- dashed where approximate
- dotted where concealed
- queried where uncertain

Deep-seated landslide

Undifferentiated translational block slide and earthflows. Boundaries may be approximate

- Historically Active
- Dormant - Young
- Dormant - Undifferentiated
- Dormant - Mature
- Questionable
- Recent scarp
- Leaning Tree

Shallow Landslide

- Hillslope Failure
- Road/Skid Fill Failure
- Cutbank Failure
- Channel Bank Failure
- Undifferentiated
- Large Failure (typ. >750 cy)
- Debris slide slope (approx)

Watercourse

- Class 1
- Class 2
- Class 3

Roads

- Seasonal

THP and silviculture boundary

- SEL** SELECTION
- TRN** TRANSITION
- CT** COMMERCIAL THIN
- VT** VARIABLE RETENTION
- VTT** VR RETENTION AREA

1 MAP POINT (SEE TEXT)

NOTE:
CONTOURS DERIVED FROM MENDOCINO COUNTY LIDAR
GEOLOGY FROM MANSON (1984)
LANDSLIDES MAPPED FROM LIDAR

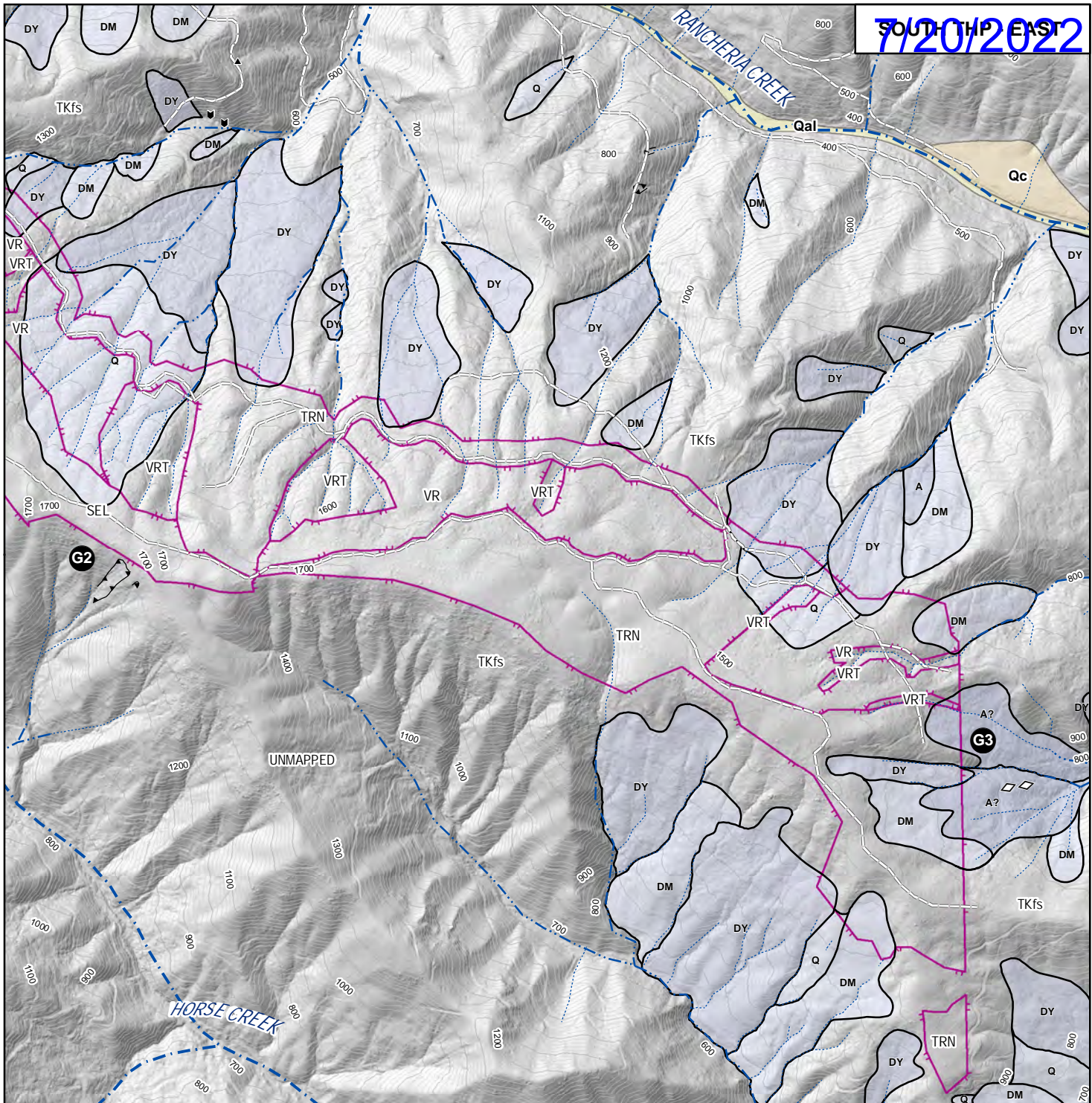
Note: Map is in color



TIMOTHY C. BEST, CEG
ENGINEERING GEOLOGY AND HYDROLOGY
1002 Columbia Street, Santa Cruz, CA 95060
(831) 425 5832 (831) 425 5830 (fax)

GEOLOGIC AND LANDSLIDE MAP
SOUTH THP
Mendocino County, CA

FIGURE: 1A
Job: NCRM-SOUTH-897
Date: 1/26/2022



<p>EARTH MATERIALS</p> <p>Qc Colluvium Qal Alluvium TKfs Franciscan Formation</p>	<p>SYMBOLS</p> <p>— Geologic Contact dashed where approximate dotted where concealed queried where uncertain</p> <p>— Fault dashed where approximate dotted where concealed queried where uncertain</p>	<p>Deep-seated landslide Undifferentiated translational block slide and earthflows. Boundaries may be approximate</p> <p>A Historically Active DY Dormant - Young D Dormant - Undifferentiated DM Dormant - Mature Q Questionable</p> <p>Recent scarp Leaning Tree</p>	<p>Shallow Landslide</p> <p>■ Hillslope Failure ▲ Road/Skid Fill Failure △ Cutbank Failure ● Channel Bank Failure ○ Undifferentiated ○ Large Failure (typ. >750 cy)</p> <p>Debris slide slope (approx)</p>	<p>Watercourse</p> <p>— Class 1 - - - Class 2 · · · Class 3</p> <p>Roads</p> <p>==== Seasonal</p>	<p>THP and silviculture boundary</p> <p>SEL SELECTION TRN TRANSITION CT COMMERCIAL THIN VT VARIABLE RETENTION VTT VR RETENTION AREA</p> <p>1 MAP POINT (SEE TEXT)</p>
<p>North arrow and scale bar (0 to 1,000 Feet)</p>		<p>NOTE: CONTOURS DERIVED FROM MENDOCINO COUNTY LIDAR GEOLOGY FROM MANSON (1984) LANDSLIDES MAPPED FROM LIDAR</p>			

Note: Map is in color

TIMOTHY C. BEST, CEG
ENGINEERING GEOLOGY AND HYDROLOGY
1002 Columbia Street, Santa Cruz, CA 95060
(831) 425 5832 (831) 425 5830 (fax)

GEOLOGIC AND LANDSLIDE MAP
SOUTH THP
Mendocino County, CA

FIGURE: 1B
Job: NCRM-SOUTH-897
Date: 1/26/2022

**Notification Information List Pursuant to Fish and Wildlife Code Section
1611**

There are 24 proposed THP related instream activities that require a CDFW Agreement. The specific requirements of the approved CDFW agreement, specifically the Project Description and Conditions or PDC, shall be amended to the plan prior to operations at these locations. This THP is being used as the CEQA review mechanism for the CDFW 1600 series agreement for the following sites specific to this THP. The 1600 sites are listed in the Road Points Table located in Item 38 of Section II and are shown on the North and South Road Points and Features Map also in Item 38 of Section II.

(THP) #: 1-22-00091-MEN

(THP) Name: South THP

IMPORTANT: In order to facilitate processing of Streambed Alteration Notifications via Fish and Wildlife Code (FWC) Section 1611, the Department of Fish and Wildlife (Department) recommends all information requested below be attached in Item 26(d) of Timber Harvesting Plans (THP's) in Sections II or III, as appropriate. In accordance with CDFW Section 1611, the Department is not required to process the notification until the THP has been received by the Department.

Please provide the following information for notification of Lake or Streambed Alteration Activities in accordance with the "Guidelines for Lake or Streambed Alteration Notification via Timber Harvesting Plans".

1. Basic data, including all the following:

a. The name, address, and telephone number of the

Applicant:	Redwood 1 Holdings LLC 250 University Avenue, Suite #300 Palo Alto, CA 94301 (707) 799-3302
Operator:	Unknown, to be amended to the plan.
Contractor:	Unknown, to be amended to the plan
Contact Person:	Thomas E. Smythe, RPF c/o NCRM Inc. 2501 North State Street Ukiah, CA 95482 (707) 485-7211, ext 215 Email: tsmythe@ncrm.com
Property Owner(s):	Redwood 1 Holdings LLC 250 University Avenue, Suite #300 Palo Alto, CA 94301 (707) 799-3302

- b. The name of each lake and the name and watercourse classification of each stream the lake or streambed alteration activities will affect, including the nearest downstream watercourse or water body.**

Activities will occur at 24 sites. Sites within the plan area are all associated with watercourses which are tributaries to Rancheria Creek and Cold Creek.

- c. The township, range and section numbers and the latitude and longitude of each lake and stream encroachment.**

There are 24 encroachments.

Map Point Number	Township, Range, Section	Latitude	Longitude
11	T14N R15W Sec. 33	39.034679	-123.511459
14	T14N R15W Sec. 33	39.030747	-123.511002
15	T14N R15W Sec. 34	39.029967	-123.509254
16	T14N R15W Sec. 34	39.030516	-123.509167
17	T14N R15W Sec. 34	39.032448	- 123.509058
18	T14N, R15W Sec. 34	39.034685	-123.506989
24	T14N R15W Sec. 34	39.035635	-123. 505413
25	T14N R15W Sec.34	39.032353	-123.508843
27	T14N R15W Sec. 34	39.034111	-123.504974
28	T14N R15W Sec. 34	39.034209	-123.504241
46	T14N R15W Sec. 34	39.027297	-123.498140
54	T14N R15W Sec. 34	39.023313	-123.493161
55	T14N R15W Sec. 35	39.023175	-123.491876
63	T13N R15W Sec. 2	39.021927	-123.482514
65	T13N R15W Sec. 2	39.020161	-123.477001
66	T13N R15W Sec. 2	39.019853	-123.476602
69	T13N R15W Sec. 2	39.018334	-123.474788
72	T13N R15W Sec. 2	39.019656	-123.478037
73	T13N R15W Sec. 2	39.019892	-123.478619
78	T14N R15W Sec. 34	39.029433	-123.500478
79	T14N R15W Sec. 34	39.029720	-123.500205
80	T14N R15W Sec. 33	39.033916	-123.511269
Tank 1	T14N R15W Sec. 33	39.030853	-123.511273
Tank 2	T14N R15W Sec. 34	39.035472	-123.505702

- d. A single map or diagram clearly showing all of the following:**
- i. All lake and stream encroachments, with a number or other appropriate identifying label.**
 - ii. All roads, with a number or other appropriate identifying label**
 - ii. All watercourse classifications (i.e., Class I, II, or III).**

- iii. Access from a named public road.
- iv. A north arrow and scale.

Refer to the North and South Road Point Maps and diagrams at the end of Section II.

- e. **A description of the types of lake or stream encroachments the applicant intends to construct, install, use or remove (e.g., a corrugated metal pipe, “Humboldt” crossing, impoundment for water diversion, water drafting sites, bank stabilization, rocked ford, bridge, etc.), and whether they will be temporary or permanent. If multiple lake or stream encroachments are proposed, the applicant should include a table that describes each type of encroachment (e.g., permanent culvert, temporary bridge, rock revetment, etc.), watercourse classification, culvert size and encroachment map reference number.**

See Map Point Table in Item 38 for information required above of each encroachment.

- f. **A description of the fish and wildlife and botanical resources the work could adversely affect, including riparian resources and special status species (i.e., species listed under the California Endangered Species Act (“CESA”) and/or the federal Endangered Species Act (“ESA”), species fully protected under state law, and/or species of special concern). If the work could adversely affect any listed species, the applicant should indicate whether consultation under CESA or ESA has commenced and if so, the current status of the consultation. Applicant should also provide the biological opinion, as applicable.**

The proposed activities are part of Timber Harvest Plan (THP), a document reviewed by those standards established within the Forest Practice Act – a process functionally equivalent to that of an EIR, with CalFire acting as the lead agency. Coho salmon, Chinook salmon and steelhead trout have been observed downstream of the proposed activity sites. Mitigations proposed in the THP are designed to avoid significant adverse impacts to these species. A floristic survey and report will be amended into the THP prior to operations. Please refer to the THP Sections 2 and 3, Item 32 for additional information concerning wildlife and botanical resource issues.

- g. **Indicate if the work takes place in, adjacent to, or near a river that has been designated as “wild and scenic” under state or federal law.**

The proposed activities do not take place adjacent to or near a wild or scenic river.

2. Information about each lake and stream encroachment, including the following:

- a. **Construction plans, including specific details, cross sections, and dimensions.**

See descriptions in the Map Point Table under Item #38, standard diagrams and drawings for Map Points 14 and 15.

- b. **If water will be present and diversion of flow around the work site is necessary, the volume of water to be diverted and the method of diversion.**

Minimal volumes of water (average <5 cfs) may need to be diverted by coffer dams and pumping around project #14 area if necessary.

- c. **If water drafting is proposed, provide drafting site information (i.e. estimated volume, drafting rate, timing, etc.). Indicate if the activity will be done pursuant to a water right application or permit.**

Water drafting shall adhere to the CONDITIONS for WATER DRAFTING stated in the Streambed Alteration Agreement.

- d. **The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled.**

See Map Point Table in Item #38.

- e. **Specify the type of equipment to be used.**

Tractors, excavators, dump truck, grader, compactor and backhoes.

- f. **Proposed work periods including the date or conditions requiring temporary crossing removal.**

Map 1 through October 15. See also Item 18 of the THP for specific erosion control timing.

- g. **The species composition and density of vegetation to be removed or disturbed as a result of lake or streambed alteration activities. Indicate if sensitive plant surveys have been completed within areas which will be affected by lake or stream encroachments. Include any plans to restore the affected riparian or hydrophytic vegetation.**

The small amounts of herbaceous and aquatic vegetation disturbed during operations will be limited to the vegetation within and around the existing crossings. Disturbance will be isolated to the various site locations. Conifer and hardwood trees, annual grasses, forbs along with minor amounts of riparian vegetation may potentially be disturbed during operations. A floristic survey is being prepared will be amended into the THP prior to operations.

- h. **Mode of impact to fish, wildlife and botanical resources (i.e., changes in sediment and/or flow delivery rates, dewatered or impounded watercourses, destabilized stream banks, erosion causing sediment deposition, changes to or elimination of riparian vegetation, reduced canopy effects on microclimate and/or water temperature, etc.)**

Direct disturbance will be limited to the project vicinities. Sediment production occurring at these sites will be the primary mode of impact to wildlife resources. Significant changes in flow, stream volume, bank stability, reduced riparian vegetation, canopy reduction and water temperature increase are not anticipated in association with the crossing upgrade activities.

- i. Measures included to protect fish, wildlife and botanical resources (i.e., avoidance measures, sediment control measures, construction time periods, methods to divert water around or away from the work site, special measures necessary to protect special-status species, a post-work action plan including measures to minimize soil erosion, re-vegetation, etc.).**

Crossings work will be conducted when there is no surface flow. If water is present, a temporary coffer dam will be constructed, and water diverted around the project site using a pump. Bare mineral soil will be stabilized as per Section II, Item 18 “Soil Stabilization Measure” of the THP.

- j. Calculations or other data used to size culverts.**

Culvert Calculations are on attached spread sheets and are based on CGS spreadsheet for rock-armored crossing nomograph for rock size and Q100 calculations using Magnitude and Frequency and Rational Method for 100-year flood flow.

- k. For bridge installations: indicate if the abutments or road approaches will encroach into the floodplain or channel; provide the calculations or data used to determine bridge height and flow capacity; describe the type of abutments and scour protections with dimensions; provide any engineering reports or plans; etc.**

N/A


- l. Describe any torrent, debris or landslide conditions at each encroachment.**

Refer to Road Points Table in Item #38, Operations Maps in Section II.

DIRECTOR OF FORESTRY AND FIRE PROTECTION

This Timber Harvesting Plan conforms to the rules and regulations of the Board of Forestry and Fire Protection and the Forest Practice Act:

By:

DocuSigned by:

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10/14/2022

Signature

Date

Adam Deem RPF #2759

Forester II

Printed Name

Title