

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		EVENAGED REGENERATION METHODS (14 CCR § 913.1 [933.1, 953.1]) (All Districts) NOTE: variation by District in (a)(4)(A) and (d)(3) Shelterwood Removal Step
<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"/>	Single Tree Selection	604	
<input type="checkbox"/>	Group Selection		
<input type="checkbox"/>	Transition		
	Intermediate Treatments		INTERMEDIATE TREATMENTS (14 CCR § 913.3 [933.3, 953.3])
<input type="checkbox"/>	Commercial Thinning		
<input type="checkbox"/>	Sanitation Salvage		
	Alternative		ALTERNATIVE PRESCRIPTIONS (ALL DISTRICTS) (14 CCR § 913.6 [933.6, 953.6])
<input type="checkbox"/>	Alternative Prescription		
	Special Prescriptions		SPECIAL PRESCRIPTIONS (14 CCR § 913.4 [933.4, 953.4]) 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.
<input checked="" type="checkbox"/>	Special Treatment Area Prescription	169	
<input type="checkbox"/>	Rehabilitation of Understocked Area Prescription		
<input type="checkbox"/>	Fuel Break / Defensible Space		
<input checked="" type="checkbox"/>	Variable Retention	35	
<input type="checkbox"/>	Restoration – Aspen, Meadow, & Wet Area		
<input type="checkbox"/>	Ca. Black and Oregon White Oak Woodland Management		
	Non-regeneration		NON-REGENERATION HARVESTING
<input type="checkbox"/>	Conversion		
<input type="checkbox"/>	Road Right-of-way		
<input checked="" type="checkbox"/>	No Harvest	16	

TOTAL ACREAGE:	824	If acreage is different than acreage listed in the legal description provide explanation:

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
Single-Tree Selection (485 acres)	III	<ul style="list-style-type: none"> The post-harvest minimum stocking standard to be met shall be 14 CCR 913.2(a)(2)(A)(2): On site II and III lands, at least 75 square feet per acre of basal area shall be retained of Group A species only. This standard shall be met immediately upon completion of timber operations. No group openings shall be located within areas designated as Single Tree Selection. Within 100 feet of the property line, slash created during operations shall be lop and scattered to a maximum of 30' in height from the ground surface. The Plan Submitter, at their discretion, may opt to conduct further work regarding brush and non-merchantable ladder fuels including but not limited to lop and scatter, mastication or crushing with tracked equipment throughout the THP.
WLPZ Single- Tree Selection (119 acres)	III	<ul style="list-style-type: none"> Please see Item 26 for the breakdown of watercourse and WLPZ types for this THP as there are both ASP and non-ASP watersheds. The post-harvest minimum stocking standard to be met shall be 14 CCR 913.2(a)(2)(A)(2): On site II and III lands, at least 75 square feet per acre of basal area shall be retained of Group A species only. This standard shall be met immediately upon completion of timber operations. In order to comply with 916.9 and to provide protection to anadromous salmonids, a Selection silvicultural prescription shall be applied to the WLPZ. Additional specifications for ASP retention standards, large tree recruitment, core zones and protection measures for all WLPZs are described in Item 26 of the THP.
Special Treatment Area- Coastal Commission Zone -Gualala River STA (Designated) -Sea Ranch Area STA (Designated) -Gualala Point Regional Park STA (Buffer Zone) Single-Tree Selection	III	<ul style="list-style-type: none"> Portions of two designated Coastal Commission Zone STAs are located within the THP. Portions of one buffer zone within the Coastal Commission Zone for the Gualala Point Regional Park is located within the THP. The Selection Method as defined by 14 CCR 913.2 is chosen for the STAs, however the post-harvest minimum stocking standard to be met shall be 14 CCR 921.4 (a): The average residual basal area, (measured in stems 1 in. or larger in diameter) shall be at least 100 square feet per acre on Site II and Site III lands. In addition, the STAs have more than one age class present, and the Selection method was chosen, therefore, leave at least 50% by number of those trees over 12 in. d.b.h. leave trees and established conifer regeneration shall amount to 50% of the pre-existing tree crown canopy cover. All leave trees shall be thrifty coniferous trees which are free from substantial damage caused by Timber Operations and leave trees shall have the characteristics of a "countable tree" described in Sec. 4528(b) PRC. No conifer tree shall be cut which is more than 75 ft. from a 3-point countable tree within the logging area. The Gualala Point Regional Park Buffer Zone STA (200' buffer) is approximately 1 acre, and overlaps the Gualala River STA. There is approximately 0.4 acres of this buffer zone that lies outside of the designated Gualala River STA. The silvicultural prescription described in this section shall apply to all STA areas. For the Gualala Point Regional

		<p><u>Park Buffer Zone STA, skid trails, roads, and landings will be blocked from view with a screen of trees in areas where disturbance would be visible to a substantial number of viewers from the public. Please note that there are powerlines with cleared vegetation currently present in this area.</u></p> <ul style="list-style-type: none"> • <u>A report of stocking as described in PRC 4587 shall be filed within six months following completion of work as described in the plan.</u> • <u>The STA acreage includes 30 acres of WLPZ within the STA. Because the STA retention is higher than the WLPZ, the acres were counted under STA for the WLPZ, and the STA silvicultural standards shall apply in addition to the stated standards above for WLPZ Single-Tree Selection.</u>
Variable Retention-Aggregate	III/IV	<p><u>Regeneration Plan for Variable Retention</u></p> <ul style="list-style-type: none"> • <u>VR 1 (35 acres): Retention standards will be met immediately after harvest with aggregate retention measures as allowed for in 14 CCR 913.4 (d)(3)(B). 15% of the pre-harvest area (5.25 acres) will be composed of aggregate retention patches.</u> • <u>The objectives of retention are to maintain and improve slope stability, canopy cover, and biological structure within the unit boundaries. Aggregates shall be retained for at least 80 years, except where described below. Harvests outside of retention are intended to regenerate and restore conifer growth, and reduced fire hazard and fuel loading outside of retained areas. Hardwoods such as tanoak occupy much of this area of the THP and are currently inhibiting conifer growth.</u> • <u>Hardwoods may be harvested or controlled to reduce tanoak site occupancy to levels found historically, outside of aggregate patches, if determined necessary in order to meet the requirements of 14 CCR 912.7 (d). Site preparation may be used outside of aggregates to improve the efficacy of regeneration establishment but will not be required to meet minimum stocking standards. The units will be artificially regenerated the first or second season (depending on the timing of the hardwood harvest/control), following harvest operations. The stocking standards of 14 CCR 912.7 (b)(1) will be met within five years following completion of operations. All retained trees/patches will be protected to the extent feasible during timber operations consistent with 14 CCR 913.4 (d)(6).</u> • <u>General Description of Aggregate Retention Group Locations (14 CCR 913.4 (d)(8)): Aggregate retention groups shall be at least ¼ acre and larger. These groups shall be located and distributed throughout the units protecting topographic features such as headwall swales, rock outcrops, as well as in-tact forest patches and Class III watercourse ELZs. Aggregates may also be located around unique habitat features of the unit such as springs/seeps, old growth trees, nest trees, large woody debris and/or snags, where present. Aggregates shall be flagged prior to operations.</u> • <u>The area outside of retained aggregate patches may be re-entered for intermediate treatments/harvests as the stand grows and requires proper thinning treatments and fire prevention work. Another VR, however, may not be applied to the entire VR harvest area for 80 years as per 14 CCR 913.4(d)(11).</u> • <u>The area inside of aggregate patches may, at the time of Intermediate treatments of the regenerated portion, be entered and up to 50% of the retained trees within the patches may be harvested or treated in order to reduce fire hazard and fuel loading where present. Please see Section III for further explanation and justification for the harvesting of retained trees prior to 80 years as per 14 CCR 913.4 (d)(1) and (d)(3)(K).</u> • <u>Existing skid trails within aggregates are available for ground-based operations/ingress and egress of equipment, as there are no unstable areas within the unit. All aggregates are no harvest areas and trees shall not be cut inside of any aggregate during this harvest. A retention tree may only be felled if it poses a safety concern.</u>
No-Harvest Areas	III	<ul style="list-style-type: none"> • <u>All unstable features shown on the Section II maps are “No Harvest” and Equipment Exclusion Zones. All unstable areas are flagged within the WLPZ of either a Class II watercourse or a wet area. Their acreage was</u>

calculated independently and removed from the WLPZ areas.

- Note: While there are small areas of site class IV timberland present within and throughout the THP amongst Site Class III timberland, only the stocking standards for Site Class II/III timberland shall apply for all portions of the THP, EXCEPT for the timing for aggregate retention in the VR. Aggregates shall be retained for 80 years as per Site Class IV timberlands. The Silviculture Map at the end of Section II depicting the silvicultural boundaries of the VR unit indicates the location of applied stocking standards.

c. EVENAGED REGENERATION SIZE	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will even-aged regeneration step Units be larger than those specified in the rules?</p> <p><input type="checkbox"/> 20 acres TRACTOR</p> <p><input type="checkbox"/> 30 acres AERIAL or CABLE</p> <p>If YES is the RPF proposing:</p> <p><input type="checkbox"/> An increase to even-aged TRACTOR Units to 30 acres because Erosion Hazards Rating is Low and the slopes are less than 30%</p> <p><input type="checkbox"/> An increase to any even-aged harvest unit up to 40 acres</p> <p>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</p> <p>Operational Instruction to the LTO, needed to meet subsections (A) – (E) above shall be included in SECTION II</p> <p>NOTE: Oversized Units should be designated on the THP map(s) by size.</p>
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)
Single-Tree Selection/WLPZ/STAs	Harvest Mark (blue paint: halo at breast height and stump mark)	RPF and Designee	Entire	All WLPZ is marked prior to the PHI
Variable Retention-Aggregate	Retention trees are flagged inside of aggregate patches (pink "Do Not Cut" flagging) Retention Mark (orange paint: halo at breast height and stump mark)	RPF and Designee	Entire	All aggregates are flagged in pink "Do Not Cut" flagging Any other trees to be retained, shall be marked with orange paint prior to operations. All other merchantable trees outside of aggregate patches and without orange paint are to be harvested.

Desirable residual trees and regeneration of commercial species shall not be damaged or destroyed by operations except where unavoidable due to safety concerns. Residual trees may only be removed for safety reasons. A sample mark of 10% of the area, up to a maximum 20 acres per stand type, shall be done prior to the PHI.

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the RPF requesting a waiver of required marking?
	If YES, provide directions explaining how the LTO will determine what trees shall be harvested or retained:
	If more than one silvicultural method or group selection is used, provide instructions to the LTO identifying

	<p>how boundaries of the different methods or groups have been identified:</p> <p>-VR unit will be differentiated from the Selection unit using Silviculture (green glo) with orange highlighter flagging.</p> <p>-The STA units are flagged with STZ (orange and white stripe) and pink highlighter flagging.</p> <p>-The WLPZ selection areas are flagged with WLPZ (blue and white stipe) and orange highlighter flagging.</p>
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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 checked="" type="checkbox"/> Yes <input 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 and Pacific Madrone	<u>Hardwoods may be managed in accordance with 14 CCR 912.7(d), prior to the final completion of timber operations. Hardwoods may be reduced through mechanical, physical, or chemical means. If postharvest conditions warrant the application of an herbicide(s), a license Pest Control Advisory (PCA) will be consulted to provide site-specific prescriptions(s) at the time of application. Herbicide used shall be conducted under the guidelines established by the Department of Pesticide Regulations.</u>		<u>There are no fire protection zones associated with the project area.</u>

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: <u>12" DHB and smaller tanoak may be removed, cut and knocked down by equipment to release conifer during or post operations as necessary to maintain conifer site occupancy. Hand crews may manually cut, lop, and scatter, tanoak to reduce stocking of hardwood and maintain conifer site occupancy. Planting of conifer will also increase the relative site occupancy of Group A to Group B species.</u> <p><input checked="" type="checkbox"/> Herbicide Treatments</p> <ul style="list-style-type: none"> - Describe: <u>A PCA will make recommendations for treating hardwood with herbicide with limiting diameter to 16" 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.</u> <p><input checked="" type="checkbox"/> Both</p> <p>If YES who will be responsible?</p>
2. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Will a Licensed Pest Control Advisor be involved in the process?</p> <p>If YES explain when an advisor will be needed:</p> <p><u>If postharvest conditions warrant the application of an herbicide(s), a license Pest Control Advisory (PCA) will be consulted to provide site-specific prescriptions(s) at the time of application. Herbicide used shall be conducted under the guidelines established by the Department of Pesticide Regulations.</u></p>

g. LTO FELLING INSTRUCTIONS PLAN AREA	
	Fallers will attempt to fall trees towards skid trails, fall trees away from the residual stand and keep tractor roads away from the residual stand.

when and where feasible. Fallers shall also fall trees away from Class II and Class III watercourses, and wet areas. If a tree is inadvertently felled into a watercourse or wet area, the LTO shall remove any accidental depositions from wet areas, Class II, Class III watercourses, including any material that may need to be cleared by hand. The removal of material shall occur on the same day as the deposit occurs.

The LTO shall instruct fallers to be aware of retention trees and sub merchantable stocking intended to be left in a good thrifty condition, and avoid unnecessary damage to snags and if any, and to trees designated for wildlife retention. Retention Trees include trees that were not marked for harvest which exhibit the following characteristics which can be favorable for wildlife habitat:

1. Large lateral branches: A branch equal to or greater than 6-in in diameter located just outside of the branch collar.
2. Cavities: Trees with cavities greater than 3-in and 10-ft or more above the ground.
3. Hollow: trees with "goose pen" boles (basal cavities) extending 3-ft or more above ground level and extend at least 6-in vertically inside the cavity from the topmost point of the entrance hole.
4. Evidence of Decay: Extensive decayed wood as evidenced by large and/or extensive fungal fruiting bodies (conk), cavity entrances, and sloughing wood and/or bark.
5. Trees with multiple tops, broken tops, or snag tops, all minimum 12-in dbh, with a minimum 6-in dbh at the break or separation into multiple leaders.
6. Old growth redwood trees and stand-alone Douglas-fir trees with "wolfy" branching structure, including large, spreading limbs and/or a large crown.
7. Redwoods with boles having at least 75% defect, trees with vegetative deformities, high presence of lichens or moss, deeply fissured, cracked bark or loose slabs of flaking bark.
8. Trees with known raptor nests.
9. Stand-alone granary trees having at least 100 small holes on the tree that are either filled with acorns or capable of containing acorns.

The LTO shall also instruct fallers to search for active bird/wildlife nests prior to timber falling operations. If an active bird/wildlife nest is discovered, the LTO shall flag the tree to aid in avoidance. The LTO shall contact the Plan Submitter to determine if additional mitigations will be required.

h. REGENERATION	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Will artificial regeneration be required to meet stocking standards? Describe:</p> <p><u>Artificial regeneration may be needed to meet the Resource Conservation Standards for Minimum Stocking within the VR unit. Minimum stocking standards specified in 14CCR 912.7 (b)(1) will be met within five years after completion of timber operations. The Single-tree Selection and STA units shall meet stocking standards of described in item 14(b) above immediately upon completion of operations.</u></p> <p style="text-align: center;"><u>Regeneration Plan</u></p> <ol style="list-style-type: none"> 1. <u>Site preparation provisions are covered following this Regeneration Plan in the Site Preparation Addendum.</u> 2. <u>Planting stock will be sourced from seed or clones representing the best-available phenotypic specimens within the local area, and will be appropriate to the local seed zone, species composition and elevation. Seed-tree species shall be any of those 'Group A' species naturally occurring on the site.</u> 3. <u>Planting shall be done manually by hand-crews utilizing appropriate implements and supervised by landowner designees to meet or exceed internal company quality standards.</u> 4. <u>Artificial regeneration may be needed to meet the Resource Conservation Standards for Minimum stocking with the Clearcut units. 14CCR 912.7 (b)(1) will be met within five years after completion of timber operations.</u>

i. SITE PREPARATION	
<p>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>	
<p>1 <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> <p>(a) <u>Whether site preparation will be required to meet stocking: Site preparation will not be required to meet stocking, however, it may be employed to improve efficacy of regeneration activities in areas designated for VR silviculture, where ground-based yarding is employed. Heavy equipment used for site preparation shall only operate on slopes less than 30 percent, with no greater than moderate EHR (unless used to construct firelines). Heavy equipment shall not be used for site preparation</u></p>

	<p><u>under saturated soil conditions that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters; that violates Water Quality Requirements; or when it cannot operate under its own power due to wet conditions.</u></p> <p>(b) <u>The general methods of site preparation to be used: Mechanical crushing, ripping, and raking will be the methods used, as well as piling of slash and construction of fire lines around piles. Mechanical site preparation, including brush crushing, ripping, raking and piling and fireline construction, shall conform to 14 CCR 915.1, CCR 915.3, and CCR 916.3. After post-harvest conditions are evaluated, the final decision will be made regarding the appropriate site preparation method(s) to employ on site.</u></p> <p>(c) <u>The types of equipment, if any, to be used for mechanical site preparation and firebreak construction: Site Preparation and Firebreaks may be constructed using hand techniques and/or ground based equipment except where restricted. Restricted areas for ground-based equipment include WLPZ, EEZ, and Unstable Areas. STA's and ELZs have limited equipment use.</u></p> <p>(d) <u>The Methods for protecting any desirable residual trees in accordance with 14 CCR 917.7: Mechanical: site preparation activities will take place in areas with heavy hardwood stocking and understory brush, the LTO will be given site specific instructions not to damage desirable residual trees within those areas prior to treatment.</u></p> <p>(e) <u>Explanations and justifications for any exceptions or alternatives to the standard rules: None are proposed.</u></p> <p>(f) <u>A map identifying the boundaries of site preparation areas, if different from logging area boundaries, and distinguishing areas by type of site preparation activity: Site prep activities may be used where VR is proposed, as indicated on the THP Map(s). Mechanical treatments shall not occur on slopes greater than 30%. Resource Conservation Standards for Minimum Stocking (14 CCR 912.7 (b) (1) and (2)), will not be compromised by this activity.</u></p> <p>(g) <u>The name, address, and telephone number of the person responsible for conduct for site preparation activities shall be provided prior to conducting of site preparation activities: The LTO shall be responsible for the following activities: brush crushing, raking, ripping, fire line construction and piling. The burning shall be the responsibility of the landowner.</u></p> <p>(h) <u>The estimated timing of site preparation operations: Heavy equipment shall not be used for site preparation during the winter period, and also shall not be used under saturated soil conditions that may produce significant sediment discharge or when it cannot operate under its own power due to wet conditions.</u></p>
2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will site preparation be required to meet stocking?
	<ul style="list-style-type: none"> General method(s) of site preparation: <u>Refer to Site Preparation Addendum, Item B above.</u>
	<ul style="list-style-type: none"> Type of equipment to be used for mechanical site preparation and/or firebreak construction: <u>Refer to Site Preparation Addendum, Item C above</u>
	<ul style="list-style-type: none"> Methods to protect desirable residual trees per 14 CCR § 917.7 [937.7, 957.7]: <u>Refer to Site Preparation Addendum, Item F above</u>
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. <u>Refer to Site Preparation Addendum, Item D above</u>
	<ul style="list-style-type: none"> Prior to conducting site preparation activities provide the name of the person responsible for site preparation: <u>The LTO will be responsible for site preparation activities. At this time, we have not identified an LTO for</u>

this project. The LTO responsibilities will be amended into the THP prior to operations.

- Name:

- Address:

- Phone #:

- Estimated timing of site preparation activities:
Refer to Site Preparation Addendum, Item H above.

j. **REGENERATION PLAN (rehabilitation of understocked areas or variable retention)**

☒ Yes ☐ No

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.

Regeneration plan: **Please see item 14(h) above.**

ITEM #15 – PESTS

PESTS / FOREST DISEASES																					
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)																					
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of:</p> <p>1. <input checked="" type="checkbox"/> Infestation Zone of Infestation for Sudden Oak Death and Pine Pitch Canker</p> <p>2. <input type="checkbox"/> Infection</p> <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>Proposed measures:</p> <p><u>Pine Pitch Canker</u></p> <p>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 bishop and Monterey pine trees within this THP. These trees may be harvested. However, should incidental pine trees end up being 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></p> <p>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> <p>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.</p> <p>b) There are both “Regulated Host Species” and Associated Species”.</p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Regulated Hosts Scientific Name</th> <th style="text-align: left;">Common Name</th> </tr> </thead> <tbody> <tr> <td>1. <i>Acer macrophyllum</i></td> <td>Bigleaf maple</td> </tr> <tr> <td>2. <i>Acer pseudoplatanus</i></td> <td>Planetree maple</td> </tr> <tr> <td>3. <i>Adiantum aleuticum</i></td> <td>Western maidenhair fern</td> </tr> <tr> <td>4. <i>Adiantum jordanii</i></td> <td>California maidenhair fern</td> </tr> <tr> <td>5. <i>Aesculus californica</i></td> <td>California buckeye</td> </tr> <tr> <td>6. <i>Aesculus hippocastanum</i></td> <td>Horse chestnut</td> </tr> <tr> <td>7. <i>Arbutus menziesii</i></td> <td>Madrone</td> </tr> <tr> <td>8. <i>Arctostaphylos manzanita</i></td> <td>Manzanita</td> </tr> <tr> <td>9. <i>Calluna vulgaris</i></td> <td>Scotch heather</td> </tr> </tbody> </table>		Regulated Hosts Scientific Name	Common 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	8. <i>Arctostaphylos manzanita</i>	Manzanita	9. <i>Calluna vulgaris</i>	Scotch heather
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10. <i>Camellia</i> spp.	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</i> v. <i>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</i> v. <i>shrevei</i>	Shreve oak
37. <i>Rhamnus californica</i>	California coffeeberry
38. <i>Rhamnus purshiana</i>	Cascara
39. <i>Rhododendron</i> spp cultivars	Rhododendron (including azaleas) – all species, hybrids, and
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 tanoak/madrone logs and redwood basal burls. 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.

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 only valid for 1 year.

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 Mendocino or Sonoma Counties, sawlogs may be transported to Scotia, Eureka, Samoa, Arcata, Fortuna, Ukiah, Calpella, Philo, Cloverdale, Asti, 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/coast redwood 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, saws, boots, and any other equipment prior to departure from the plan area and arrival into the plan area. The usual inspection shall consist of walking around each vehicle/piece of heavy or light equipment, including any load, and visually scanning for the presence of host debris, prior to movement from the THP area. Individuals shall inspect their personal equipment (saws, boots, and vehicles) 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. The LTO shall post informational signs regarding SOD mitigation measures (provided by RPF) at the entrance(s) to the plan area.

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	<p>Are there any other significant insect or forest disease problems within the THP area if outside a declared zone?</p> <p>1. <input type="checkbox"/> Insect(s)</p> <p>2. <input type="checkbox"/> Disease(s)</p> <p>3. <input type="checkbox"/> Pest problems</p> <p>4. <input type="checkbox"/> Other (provide description of the forest problem)</p> <p>If YES, describe proposed measures to improve the health, vigor, and productivity of the stand(s).</p>
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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)

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 checked="" type="checkbox"/>	HIGH	150	100	75	50
<input type="checkbox"/>	EXTREME	100	75	50	50

NOTE:

- 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:
There is a distinct ~26 acre portion of the HhF- Hugo Loam, 30-50% slopes soil within the THP area located primarily in a Class II drainage that has steep slopes, unlike other areas where this soil occurs. The area was broken out and given its own factor rating on the EHR worksheet located in Section V. The erosion hazard rating for this area is High, and is mapped as such on the EHR map at the end of Section II. This area is proposed as Tractor Long lining

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 style="text-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> *rice straw or weed-free straw in upland areas; weed-free straw in riparian areas</p> <p><input checked="" type="checkbox"/> SLASH Mulch <input type="checkbox"/> Scattered Depth (inches): _____ Percent coverage: _____ <input checked="" type="checkbox"/> Packed Depth (inches): <u>2-4</u> Percent coverage <u>75%</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</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>		

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. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

All WATERSHEDS Logging roads / Landings	N/A	Description of Treatments Protection Measures	Timing
c. 923.5[943.5, 963.5](i): treatments to prevent significant discharge where features cannot be hydrologically disconnected.	N/A	<p><u>Primary mechanisms for decreasing hydrologic connectivity are:</u></p> <p>(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;</p> <p>(3) converting crowned or insloped roads with inside ditches to outsloped roads with rolling dips;</p> <p>(4) removing or breaching outside berms on crowned or outsloped roads to facilitate effective drainage;</p> <p>(5) applying treatments to dissipate energy, disperse flows, and minimize erosion at road drainage outlets not connected to watercourses;</p> <p>(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>	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.
24 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.	N/A	<p><u>Soil stabilization measures</u></p> <p>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 outsloping 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>	See “c.” above.

		<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. • 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></p> <p>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 75% 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>		See (d.) above and (i.) below where applicable	See “c.” above.
<p>f. 923.5[943.5,963.5](o): Exceptions to soil stabilization treatment timing.</p>	N/A		

Watercourse crossings on logging roads			
g. 923.9[943.9,963.9] (t)(1)-(3): Bare soil on fills, sidecast, timing of treatment.		See (d.) above and (i.) below where applicable	See "c." above.

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.

Non ASP & Exempt ASP watersheds 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.		<p>Within the logging area and excluding landings, areas associated with logging roads or the traveled surface of the road, the following shall apply: within the WLPZ adjacent to Class I and Class II waters, areas where mineral soil exceeding 800 continuous square feet in size are exposed by timber on approaches to watercourse crossing on Class II waters or Class III waters if an ELZ or WLPZ is required, the disturbed area shall be stabilized to the extent necessary with mulching and/or slash packing shall be used to retain and improve the natural ability of the ground cover within the standard width of the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes. When slash packing or mulching are employed the application area shall be at least 75% of the affected area and applied to a depth of at least two inches.</p> <p>Heavy Equipment that may be employed to execute stabilization treatments shall not enter any WLPZ, ELZ or EEZ except on associated tractor watercourse crossings where construction and/or stabilization treatments will occur.</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.

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.

ASP WATERSHEDS 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.	See "c." above.

		<p>(1) Soil stabilization is required for the following areas:</p> <p>(A) Areas exceeding 100 contiguous square feet where timber operations have exposed bare 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, 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.</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>	
j. 923.5[943.5,963.5](q)(3): as it pertains to roads, landings, etc.		See (c.), (d.) and (i.) above	See "c." above.
k. 923.9[943.9,963.9](t)(4): as it pertains to watercourse crossings.		See (c.), (d.) and (i.) above	See "c." above.

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>
<p>Per 14 CCR 914.3 [943.3, 954.3](e) Tractors shall not be used in areas designated for cable yarding except:</p> <ul style="list-style-type: none"> • 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 <p>Such exception(s) shall be explained and justified in the THP, and require Director's approved</p>	
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>
<input type="checkbox"/>	Pulling trees away from watercourses
<input type="checkbox"/>	Yarding logs from areas with low deflection
<input type="checkbox"/>	Swing yarding
<input type="checkbox"/>	Construct fire breaks
<input type="checkbox"/>	Construct layouts
<input type="checkbox"/>	Providing tail-holds
<input type="checkbox"/>	Other Describe:
<p>If YES, specify the location (consider mapping) and provide LTO instructions</p>	
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>

<p>Per 14 CCR § 914.9 [934.9, 954.9](a) Alternatives to Standard Rules:</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(b) <u>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.</u></p> <p>(c) Alternative practices stated in an approved THP shall have the same force and authority as those practices required by the standard rule.</p>	
d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the RPF proposing any Alternative Practices to the standard rule on a site-specific basis?

	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.
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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.	<ul style="list-style-type: none"> (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. <ul style="list-style-type: none"> 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. Slope restriction are identified in subsection (d), (f) [Coastal, Northern], (j) [Southern] <p>The LTO shall be aware of these rule requirements prior to operations</p>
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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.	
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Will ground based equipment be used on:	
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g. <input type="checkbox"/> Yes <input checked="" 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><u>All unstable areas within the THP are No-Harvest areas located within and included in the WLPZ and are therefore Equipment Exclusion Zones. Trees within unstable areas included within the WLPZ flagging are not marked for harvest.</u></p>
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h. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Slopes steeper than 65%</p> <p>if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p> <p><u>There are areas within the THP in which tractor operations are proposed on skid trails where slopes are over 65%. The EHR in these areas is Moderate. The skid trails in these areas are identified as "Exception Skid Trails" on the "Yarding Methods" maps at the end of Section II. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise. Upon completion of use, exception skid trails shall be water barred to High EHR Standards. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification.</u></p>
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i. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Slopes steeper than 50% where the erosion hazard rating (EHR) is HIGH or EXTREME.
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	<p>if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p> <p><u>The High EHR area within the THP is proposed as tractor exception in which only the flagged and mapped trails are to be used at the top of the unit, with the remaining area to be logged as tractor-long line only. There are multiple short segments of skid trails to be used within this area located near the break in slope. The High EHR area is flagged and included within the WLPZ of the Class II watercourse that runs through it. Therefore, the trails proposed are also considered WLPZ trails and are addressed under Section II, Item 27.</u></p> <p><u>The skid trails in these areas are identified as "Exception Skid Trails" on the "Yarding Methods" maps at the end of Section II. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise. Upon completion of use, exception skid trails shall be water barred to Extreme EHR Standards. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, relatively small area in relation to the rest of the THP and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification.</u></p>
<p>j. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Existing tractor roads that do not require reconstruction.</p> <p><input type="checkbox"/> [NORTHERN and SOUTHERN only] New tractor roads that have been flagged by an RPF or supervised designee prior to use.</p> <p><input type="checkbox"/> [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>Slopes between 50% and 65% with a MODERATE EHR at: (percentage based on average slope on sample areas of 20 acres)</p> <p>if YES, provide site specific instructions to the LTO in SECTION II.</p> <p><u>There are areas within the THP in which tractor operations are proposed on skid trails where slopes are between 50% - 65%. The EHR in these areas is Moderate. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise. Upon completion of use, skid trails shall be waterbarred to Moderate EHR standards and the slope percentage must be considered.</u></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?</p> <p>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. 	

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”** 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 type="checkbox"/> Yes <input checked="" 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 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 type="checkbox"/> Yes <input checked="" 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 <u>Logging road use is proposed during the extended wet weather period. Please see Winter Operating Plan below. No logging road construction is proposed during the extended wet weather period.</u>
m. <input type="checkbox"/> Yes <input checked="" 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 <u>Landing use is proposed during the extended wet weather period. Please see Winter Operating Plan below. No landing construction is proposed during the extended wet weather period.</u>
o. <input type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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:	<u>The Erosion Hazard Rating for the plan area is Moderate and High.</u>
2) Mechanical Site preparation methods:	<u>Mechanical Site Preparation is not proposed during the winter period.</u>
3) Yarding system: (Constructed skid trails and tractor road watercourse crossings)	<u>Tractor and Tractor Long-line Yarding.</u>
4) Operating Period:	<p>a) <u>Timber falling may be conducted during the winter period. The felling of trees that have a chance of accidentally entering a Class II watercourse shall be deferred until such time as when equipment is available on-site to remove such trees from the watercourse.</u></p> <p>b) <u>Cable harvesting: Not applicable to this plan.</u></p> <p>c) <u>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 is prohibited during the winter period.</u></p> <p><u>Indicators of saturated soil conditions:</u></p> <p><u>In yarding, this condition may be evidenced by:</u></p> <p>i) <u>reduced traction by equipment indicated by spinning or churning of wheels or tracks in excess of normal performance,</u></p> <p>ii) <u>inadequate traction without blading wet soil,</u></p>

	<p>iii) <u>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</u></p> <p>iv) <u>creation of ruts greater than would be normal following a light rainfall.</u></p> <p><u>On logging roads and landing surfaces, this condition may be evidenced by:</u></p> <p>i) <u>reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance,</u></p> <p>ii) <u>inadequate traction without blading wet soil,</u></p> <p>iii) <u>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</u></p> <p>iv) <u>pumping of road surface materials by traffic, or</u></p> <p>v) <u>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.</u></p> <p>vi) <u>soils or road and landing surfaces that are hard frozen are excluded from this definition.</u></p> <p>d) <u>Road and landings use: Hauling may occur during the winter period, however: 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)}.</u></p> <p>e) <u>Road construction and reconstruction (defined in 14 CCR 895.1) will not occur during the winter period. This also includes the construction or reconstruction of watercourse crossings.</u></p> <p>f) <u>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."</u></p> <p>g) <u>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, 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.</u></p>
<p>5) Erosion Control facilities timing:</p>	<p><u>During the winter period, erosion control structures shall be installed on all tractor roads prior to the endo of the day if the US Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to a weekend or other shut down periods (14 CCR 914.7 (c) (2) in all watersheds. Additionally, to ensure compliance with (14 CCR 914.7 (c) (2), the amount of tractor roads open at any given time during the winter period, will be limited to the amount that can be winterized in a single day. Un-graded permanent roads will have drainage facilities and structures installed prior to the winter period at intervals along the road no greater than the guidelines in Table 19 (Handbook for</u></p>

	<u>Forest and Ranch Roads, Weaver and Hagans, Rev 2015) and frequent enough to disperse road surface run off so as to avoid gully formation and minimize erosion of the road surface, erosion of the inside ditches, and erosion at the outfalls of drainage facilities and structures.</u>
6) Consideration of form of precipitation: (rain or snow)	<u>Precipitation is expected to occur in the form of rain and dense fog.</u>
7) Ground conditions: (soil moisture conditions, frozen)	<u>Ground Based Yarding and road use shall cease when soils are saturated as defined in Item 4(c) and (d), Operating Period, above.</u>
8) Silvicultural system ground cover:	<u>Silviculture is Single-Tree Selection, Variable Retention and Coastal Commission STA Selection. 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.</u>
9) Operations within the WLPZ:	<u>Operations within the WLPZ/ELZ during the winter period will be limited to:</u> <u>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.</u> <u>b) Long lining of logs.</u> <u>c) Road Maintenance as defined in Item 4 (g) above.</u> <u>The in-lieu WLPZ facilities proposed in Item 27 are not proposed for use during the winter period.</u>
10) Equipment limitations:	<u>See Section II, Item 23, 4(b-g), 7, and 9 (b-d) above.</u>
11) Known Unstable Areas:	<u>All unstable areas, as depicted on the THP maps at the end of Section II, are excluded from harvest, and are equipment exclusion zones located within or incorporated in the WLPZ.</u>
12) Logging roads and landings:	<u>See item 4(d) above.</u>

The following additional provisions shall apply during the winter period:

Prior to operations past Nov. 15, straw bales/wattles shall be placed along drainage features, as necessary, to serve as sediment traps where natural ground cover is not sufficient to effectively filter and trap sediment. Drainage features may also be rocked as necessary. Additional, site-specific measures such as insloping, outloping, installation of waterbreaks, rolling dips etc. shall be applied as necessary to hydrologically disconnect the road from watercourses.

The RPF or designee shall monitor the road system on a regular basis during the winter period to identify potential sources of sediment and ensure preventative measures are functioning.

Accidental depositions of debris within any watercourse channel shall be removed by the LTO immediately.

IN-LIEU WINTER PERIOD OPERATION PLAN	
r. <input type="checkbox"/>	RPF chooses the in-lieu winter operating plan option as allowed per 14 CCR 914.7 [934.7, 954.7](c)(1-3) Specify the procedures listed in subsections (1) and (2), and list the site specific measures for operations in the WLPZ and unstable areas as required by subsection (3). <u>Not Applicable.</u>
s. <input type="checkbox"/> Yes <input type="checkbox"/> No	Will the in-lieu winter operating plan include operations within WLPZ(s) or unstable area(s) during the winter period? If YES, provide site specific measures per 14 CCR 914 [934, 954] to protect the beneficial uses of water in SECTION II as instructions to the LTO. <u>Not Applicable.</u>
Hauling and heavy equipment use roads and landings	
t. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will <u>ROADS</u> be used for log hauling and heavy equipment use during the winter period where there will not be a stable operating surface or surfaced with rock to a depth and quantity sufficient to maintain a stable operating surface? If YES, the required explanation and justification should be provided in SECTION III per 14 CCR 923.6 [943.6, 963.6](g) and 914.7[934.7,954.7].

u. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will <u>LANDINGS</u> be used for log hauling and heavy equipment use during the winter period where there will not be a stable operating surface or surfaced with rock to a depth and quantity sufficient to maintain a stable operating surface?</p> <p>If YES, the required explanation and justification should be provided in SECTION III per 14 CCR 923.6 [943.6, 963.6](g) and 914.7[934.7,954.7].</p>
Hauling and heavy equipment use on hydrologically disconnected or saturated soils.	
v. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will <u>ROADS</u> be used for log hauling and heavy equipment use during the winter period on roads that are NOT hydrologically disconnected and exhibit saturated soil conditions?</p> <p>If YES, provide a required explanation and justification in SECTION III. per 14 CCR 923.6 [943.6, 963.6](g) and 914.7[934.7,954.7].</p>
w. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will <u>LANDINGS</u> be used for log hauling and heavy equipment use during the winter period on roads that are NOT hydrologically disconnected and exhibit saturated soil conditions?</p> <p>If YES, provide a required explanation and justification in SECTION III. per 14 CCR 923.6 [943.6, 963.6](g) and 914.7[934.7,954.7].</p>
Watercourse crossing removal	
x. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will any logging road watercourse crossing proposed for removal and/or stabilization be left in place during the winter period?</p> <p>If YES, provide operational instructions to the LTO addressing the specifics of the applicable CDFW 1600 agreement, Lake and Streambed alteration agreement or otherwise specify in the plan. Per 14 CCR 923.9[943.9, 963.9](p)(4) In SECTION II</p>

ITEM # 24 – ROADS AND LANDINGS

ITEM #24		ROAD CONSTRUCTION
a. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any road(s) be CONSTRUCTED? 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 _____	
b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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)	
c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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 If YES, address pursuant to 14 CCR 923.1 [943.1, 963.1](d)	
d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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 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).	
e. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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 type="checkbox"/> Class III Watercourse or Lake <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. 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. If YES, address per 14 CCR 923 [943, 963](c)	
f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any constructed road be located across 100 feet or more lineal distance on? <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)	
g. 1. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will any road(s) be deactivated?	

2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any road(s) be abandoned? Road classification: Approximate length Feet: <input type="checkbox"/> Permanent _____ <input type="checkbox"/> Seasonal _____ <input checked="" type="checkbox"/> Temporary <u>10,024 feet</u>
3. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will any watercourse crossing(s) be deactivated?
4. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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)	
<u>Road Points #A, 3, 4, 5, B, 6, 11, 12, 13, 20, 27, 28, 29, 30, 42, 43, and 44 are located on existing temporary roads and have existing temporary crossings. These crossings shall be deactivated prior to the winter period. See Item 24 Road Point Table for a description of these crossings.</u>	
<u>See the following standards for RP # A, 3, 4, 5, B, 6, 11, 12, 13, 20, 27, 28, 29, 30, 42, 43, and 44 (watercourse crossings) and the Map Point table for additional specifications:</u>	
<u>(1) Fills shall be excavated to form a channel that is as close as feasible to the natural Watercourse grade and orientation, and that is wider than the natural channel as observed upstream and downstream of the Logging Road Watercourse crossing to be removed.</u>	
<u>(2) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge. Exposed soil located between the Watercourse crossing and the nearest adjacent drainage facility or hydrologic divide, whichever is closer, including cut banks and excavated material, shall be stabilized by seeding, mulching, rock armoring, replanting, or other suitable treatment to prevent soil erosion and significant sediment discharge.</u>	
<u>(3) Where it is not feasible to remove a Logging Road Watercourse crossing or its associated fill to the above standards, the plan shall identify how soil erosion and significant sediment discharge will be prevented.</u>	
<u>(4) All Logging Road Watercourse crossings proposed for removal shall be removed upon completion of use, prior to the winter period or as specified in the applicable CDFW 1600 agreement, whichever is earlier, or as otherwise specified in the plan.</u>	
If Logging road(s) are to be abandoned provide the blockage design Per 14 CCR 923.8 [943.8, 963.8](d)	
h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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)

ROAD RECONSTRUCTION	
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any roads be RECONSTRUCTED?
	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 _____
j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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)
k. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	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. 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. If YES, address per 14 CCR 923 [943, 963](c)
l. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any reconstructed road be located across 100 feet or more lineal distance on? <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	Is there any exception to flagging or otherwise identifying the location of any road(s) to be reconstructed? If YES, address per 14 CCR 923.3 [943.3, 963.3](c)
LANDING CONSTRUCTION	
n. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any Landing(s) be CONSTRUCTED?
o. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any landing(s) 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 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. NOTE: Exceptions are permitted per 14 CCR 923.1 [943.1, 963.1](b)(1) – (3) at: - 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. If YES, address per 14 CCR 923 [943, 963](c)
p. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any landing(s) exceed one half acre in size? 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)
q. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will any Landing(s) be located on? <input type="checkbox"/> Unstable areas <input type="checkbox"/> Connected headwall swales (14 CCR 895.1 "Connected Headwall Swale") <input type="checkbox"/> Both 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>	<p>Will any landing construction 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>If YES, address per 14 CCR 923.2 [943.2, 963.2](a)(7) and 923.4 [943.4, 963.4](n)</p>
<p>s. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any Landing(s) be deactivated?</p> <p>Will any Landing(s) be abandoned?</p> <p>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><u>The landings at the end of and along the Temporary Roads will be deactivated as the road is a Temporary Road. Prior to the winter period, exposed soils on the landings shall be treated as per item 18, Soil Stabilization Measures and the landings shall be shaped and waterbarred to allow for long-term, maintenance-free function of drainage. These landings shall not be used during the winter period. The location of these Temporary Roads are identified on the Roads and Features Maps in Section II.</u></p>

LANDING RECONSTRUCTION	
<p>t. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Will any Landing(s) be RECONSTRUCTED?</p>
<p>u. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<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>If YES, address per 14 CCR 923 [943, 963](c)</p>

SIGNIFICANT EROSION SITE(S)	
<p>v. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<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>

	referenced identifier consistent with mapped locations.
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CALTREES THP Item 24

1	CSDS Class II-L Watercourse Q100= 118.7 cfs	Moderate, 20 yds	Yes	A Class II-L watercourse and northern bank seep cross an existing permanent road via a double-culverted crossing. Both culverts are 36" steel pipes. The northern culvert is set ~6" lower than the southern one, is spaced 2' from the southern culvert, and is the main culvert passing flows under the road. This culvert is completely rusted through, and water is running under the pipe. The channel bottom has a rocky and hard substrate both up and down stream of the crossing. The southern culvert passes water during high flows and is functional/ not rusted through. <ul style="list-style-type: none">Remove both culverts and install a 72" diameter culvert to watercourse grade.Rock armor the fill slope where the inside ditch outlets into the culvert inlet area with 10" D₅₀ rock.Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
2	CSDS Bank seep inside ditch; Draining to Class II-S Watercourse	Low, 1 yd	Yes	An inside ditch draining a bank seep leads to the inlet of a functional Class II-S watercourse crossing located on an existing permanent road. The ditch is shallow for ~75' upgrade of the crossing and is saturating the road, due to road rocking maintenance. <ul style="list-style-type: none">From the 3 orange flags (75' upgrade of crossing), to the culvert inlet, improve the ditch line by excavating the ditch approximately 2' wide and 1-2' deep.
		No	No	
2.1	Ditch Crossing	N/A	No	At an intersection of an existing seasonal and permanent road, an 18" CMP crosses the seasonal road for a ditch line that runs along the inside of the permanent road. The culvert outlet is crushed and the pipe is caved in part way through. <ul style="list-style-type: none">Remove the culvert and replace with an 18" culvert.
		No	No	
2.2	Ditch Relief Culvert	N/A	No	An 18" ditch relief culvert crosses an existing permanent road. The outlet is 50% plugged with sediment. <ul style="list-style-type: none">Clean outlet of DRC.
		No	No	
A	Unstable Area Below Road	N/A	No	An existing temporary road crosses above an unstable area located within the WLPZ of a Class II-L watercourse. The road segment is outside of the WLPZ. There are two existing dips on this segment of road to drain the road. The current location of these dips is functional. <ul style="list-style-type: none">After operations and prior to the winter period of use, reinstall both dips at the flagged locations.
		No	No	
3	CSDS Class II-S Watercourse	10 yds, Low	Yes	A Class II-S watercourse crosses an existing temporary road via a temporary crossing with vertical banks. Currently, the watercourse cuts through the road prism with a 2-4' wide channel that is 3-5' deep. <ul style="list-style-type: none">During operations, install a spittler crossing as per Diagram #2 to cross the watercourse.If wet during operations, the spittler crossing shall include a minimum 18" culvert at the base.After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade.Layback side slopes 1.5H:1V.Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
4	CSDS Class II-S Watercourse	5 yds, Low	Yes	A Class II-S watercourse crosses an existing temporary road via a low gradient temporary crossing with slight vertical banks. <ul style="list-style-type: none">During operations, install a spittler crossing as per Diagram #2 to cross the watercourse.If wet during operations, the spittler crossing shall include a minimum 18" culvert at the base.After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade.
		No	No	

				<ul style="list-style-type: none"> Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
5	Class III & Wet Area	N/A	Yes	A Class III and wet area cross an existing temporary road via a dip. <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade and reinstalling the dip. Layback side slopes 1.5H:1V (i.e. reinstall dip). Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
B	Unstable Area Below Road	N/A	No	There is an unstable, steep swale located within the WLPZ of a Class II-L watercourse and below an existing temporary road. This swale leads to the Class II-L watercourse. <ul style="list-style-type: none"> To prevent concentrated drainage onto the swale, install a waterbar or dip on the western approach to the swale to direct drainage away from/prior to the swale, at the flagged location. The outlet of the waterbar shall be directed to the west of trees closest to the swale.
		No	No	
6	Class II-S Watercourse	N/A	Yes	A Class II-S watercourse crosses an existing temporary road via a low water crossing. Water from a ditch relief culvert (RP #10) is currently running down the southern approach to this crossing. <ul style="list-style-type: none"> During operations, install a spittler crossing as per Diagram #2 to cross the watercourse. If wet during operations, the spittler crossing shall include a minimum 18" culvert at the base. After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
7	CSDS Class II Watercourse (Non-ASP) Q100= 18.6 cfs	20 yds, Moderate	Yes	A Class II watercourse crosses an existing seasonal road via a 36" CMP. The inlet is ½ blocked with sediment, boulders and debris, and water is partially flowing underneath the culvert. The culvert is not set to grade, and there is approximately 10' of backcutting underneath the pipe, and a 2.5' drop to natural channel grade. The culvert is also rusty at the bottom but is not rusted through. <ul style="list-style-type: none"> Remove the culvert and replace with a 36" diameter culvert to watercourse grade. Install a trash rack at the inlet of the culvert. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
8	Wet area	N/A	No	A wet area crosses an exiting seasonal road via a dip and is functional. <ul style="list-style-type: none"> If wet during operations, install a temporary small pipe. After operations, remove the pipe and reinstall the dip.
		Yes	No	
9	CSDS Class II Watercourse Q100= 9.3 cfs	20 yds, Low	Yes	A Class II watercourse crosses an existing seasonal road via a 30" CMP. The pipe is rusty and water runs under the culvert. The culvert is not set to grade, and there is a ~2.5' drop at the outlet. <ul style="list-style-type: none"> Remove the culvert and replace with a 30" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
10	CSDS	5 yds, Moderate	No	A ditch drains along an existing permanent road and crosses a spur road via an 18" culvert with a rocked inlet. The culvert outlet is ¾ plugged with sediment and the

	Ditch Relief Culvert	No	No	<p>ditch is transporting a significant amount water; After the pipe crosses the spur road, water is discharged into the stand on flat topography. The water makes its way back to the road's edge, flows alongside it for a ~20', then eventually makes its way to the southern approach of RP 6. Water flows down the spur road for 100' to RP 6, and there is gully erosion leading to the Class II-S watercourse. There is an existing ditch line with a lower ditch relief culvert along the permanent road on the southern side of the road that would be more appropriate for this system.</p> <ul style="list-style-type: none"> Remove the cross drain for the spur road. Replace the culvert as per Diagram # 3. Improve and deepen the ditch line on the southern side of the permanent road from RP #10 to the next DRC downgrade where the ditch is currently too shallow.
11	Class III Watercourse	N/A	Yes	<p>A Class III watercourse crosses an existing temporary road via a dip.</p> <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade and reinstalling the dip. Layback side slopes 1.5H:1V (i.e. reinstall dip). Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
12	Wet Area	N/A	No	<p>A wet area crosses an existing temporary road via a waterbar.</p> <ul style="list-style-type: none"> After operations, reinstall the waterbar at this location.
		No	No	
13	Wet Area	N/A	No	<p>A wet area crosses an existing temporary road via a rocked dip with oversized rock in the road prism.</p> <ul style="list-style-type: none"> Hauling log trucks across this rocked dip may be difficult and require a smoother running surface; Rock in the road prism may need to be crushed or a layer of road rock will be needed to place on top of the dip. After operations, reinstall and maintain the rocked dip.
		No	No	
14	CSDS Class III Watercourse Q100: 5 cfs	5 yds, Low	Yes	<p>A Class III watercourse runs down an existing seasonal road to the inlet of RP #15 (down grade of RP #14), as well as off of the road towards the outlet of RP #15, with no crossing in place. There is minor erosion in the road prism and the fillslope of the road.</p> <ul style="list-style-type: none"> Install an 18" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
15	CSDS Class III Watercourse Q100: 11.1 cfs	10 yds, Low	Yes	<p>A Class III watercourse crosses an existing seasonal road via an 18" CMP. At the inlet, the culvert is rusty and at the outlet there are rust holes from the outlet to about 10' back.</p> <ul style="list-style-type: none"> Remove the culvert and install a 30" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
16	Bank Seep	N/A	No	<p>A bank seep crosses an existing seasonal road via a waterbar.</p> <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, reinstall the waterbar at this location, or a rolling dip.
		No	No	
17	Bank Seep	N/A	No	<p>A wet ditch crosses an existing seasonal road via a waterbar.</p> <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, reinstall the waterbar at this location, or a rolling dip.
		No	No	
18	Bank Seep	N/A	No	<p>A bank seep and wet area cross an existing seasonal road via a waterbar. No erosion</p>

		No	No	<p>is occurring in the road prism or edge.</p> <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, reinstall the waterbar at this location, or a rolling dip.
19	Bank Seep	N/A	No	<p>A wet ditch overtops and runs down an existing seasonal road towards a landing and crosses the road at the head of a Class III watercourse. No erosion is occurring in the road prism or edge.</p> <ul style="list-style-type: none"> Improve the ditch for 200' upgrade of the crossing. At the crossing, install a ___" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
20	Class III Watercourse	N/A	Yes	<p>A Class III watercourse crosses an existing temporary road via a temporary/pulled crossing.</p> <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
20.1	CSDS Class III Watercourse Q100: 1.7 cfs	10 yds, Low	Yes	<p>A Class III watercourse crosses an existing seasonal road via an 18" CMP. The culvert is rusted through and is shotgunned with a 4' drop at the outlet.</p> <ul style="list-style-type: none"> Remove the culvert and install an 18" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
21	CSDS Class III Watercourse Q100: 2.7 cfs	5 yds, Low	Yes	<p>A Class III watercourse crosses an existing seasonal road via an 18" CMP with a rocked fill face. The culvert is buried at the outlet. At the inlet, there are rust holes.</p> <ul style="list-style-type: none"> Remove the culvert and install an 18" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
22	CSDS Class III Watercourse Q100: 1.1 cfs	10 yds, Low	Yes	<p>A Class III watercourse crosses an existing seasonal road via an 18" CMP. The culvert is rusted through and is shotgunned with a 1' drop at the outlet.</p> <ul style="list-style-type: none"> Remove the culvert and install an 18" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
23	CSDS Class III Watercourse Q100: 5.3 cfs 1.5:1 outfall gradient	7 yds, Moderate	Yes	<p>A Class III watercourse crosses an existing seasonal road with no crossing in place, however there is a large cavity in the road prism near the out-board edge, with water running ~10' below the road surface via a soil pipe. The channel directly above the road is poorly defined.</p> <ul style="list-style-type: none"> Install a rock armored fill crossing as per Diagram #1 using 18" D₅₀ rip rap. In the road prism, excavate to the apparent channel bottom and place larger rip rap for a minimum of 5' prior to adding road rock above. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
24		N/A	Yes	<p>A wet area crosses an existing seasonal road via a large broad dip with underlain</p>

	Class III Watercourse and Wet Area	No	No	<p>geotextile fabric. There are waterbars prior to the dip on both approaches.</p> <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, reinstall the dip. Reinstall the waterbars in the same locations at both approaches.
25	Head of Class III Watercourse and Wet Area	1 yd, Low	No	<p>A Class III watercourse originates below an existing seasonal road at this location, and a dip with a moderately eroded outlet drains here. This dip, as well as 2 other dips upgrade of this crossing drain a 300' stretch of road that crosses through a wet area. The outlets of the two upgrade dips are slightly eroded. There is one more dip downgrade of this point as well that drains more of the road.</p> <ul style="list-style-type: none"> At this location, install a rock armored fill crossing as per Diagram #1 using 12" D₅₀ rip rap. After operations, maintain/reinstall the two dips upgrade and the one dip downgrade of the crossing.
		No	No	
26	Head of Class III Watercourse and Wet Area	1 yd, Low	No	<p>A Class III watercourse originates below an existing seasonal road at this location. The approaches to this low point are gentle but still drain to this point, and the road is saturated for ~75'.</p> <ul style="list-style-type: none"> If wet and saturating the road prism during operations, apply enough road rock to the prism to obtain a stable running surface through this area.
		No	No	
27	Head of Class III Watercourse	N/A	No	<p>The road drains to the head of a Class III watercourse on an existing temporary road via a dip.</p> <ul style="list-style-type: none"> After operations and prior to the winter period of use, reinstall the dip and ensure disconnection on either approach by waterbarring.
		No	No	
28	Class III Watercourse	N/A	Yes	<p>A Class III watercourse crosses an existing temporary road via a temporary/pulled crossing.</p> <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
29	Class II Watercourse	N/A	Yes	<p>A Class II watercourse crosses an existing temporary road via a temporary/pulled crossing.</p> <ul style="list-style-type: none"> During operations, install a spittler crossing as per Diagram #2 to cross the watercourse. If wet during operations, the spittler crossing shall include a minimum 18" culvert at the base. After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
30	Class III Watercourse	N/A	Yes	<p>A Class III watercourse crosses an existing temporary road via a dip.</p> <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
31	CSDS	10 yds, Low	Yes	<p>A Class III watercourse crosses an existing seasonal road via a 24" CMP. The culvert is rusted through.</p>

	Class III Watercourse Q100: 5.1 cfs	Yes	No	<ul style="list-style-type: none"> Remove the culvert and install a 24" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
32	CSDS Bank Seep upgrade of Class II Watercourse	1 yd, Low	No	A bank seep drains to an inside ditch which drains to the inlet of a Class II watercourse. Water from the bank seep currently saturates road and is minorly eroding the road prism. <ul style="list-style-type: none"> Improve and deepen the ditch from this point to the inlet of the Class II watercourse crossing. Rock armor the outlet of the ditch at the culvert inlet with 10" D₅₀ rock. Spoils shall be removed from site and placed in a stable location outside of the WLPZ.
		No	No	
33	CSDS Class II Watercourse Q100: 51.0 cfs	15 yds, Low	Yes	A Class II watercourse crosses an existing seasonal road via a 36" CMP. The culvert is breaking apart and rusted at the inlet, rusty all the way through, and has rust holes allowing water to run underneath the culvert. The culvert is not set to grade and there is a 4' drop at the outlet. The fillslope beneath the outlet of the culvert is back cutting due to water running beneath the culvert. <ul style="list-style-type: none"> Remove the culvert and install a 54" diameter culvert to watercourse grade. Install a critical dip over the pipe. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
34	CSDS Class III Watercourse Q100: 2.9 cfs	15 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via a 24" CMP. The culvert is rusted through. <ul style="list-style-type: none"> Remove the culvert and install a 24" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
35	CSDS Class III Watercourse Q100: 7.1 cfs	12 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via a 24" CMP. The culvert is rusted through. <ul style="list-style-type: none"> Remove the culvert and install a 24" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
C	CSDS Rolling dips and Wet Area	3 yds, Low	No	A steep segment of through-cut road with a high watertable and wet areas has seven existing rolling dips. Between the 6 th and 7 th dip at the bottom of the road segment, additional bank seep water is contributing to the last dip. This is eroding the road prism down by about 2.5' into a gully. The road is insloped towards this dip. <ul style="list-style-type: none"> At the location of the three orange flags just upgrade of the dip, excavate an inside ditch that is 1.5' wide by 2 feet deep in order to drain the wet bank seep to the outlet of the dip without eroding the road prism. Maintain all other 6 dips at their current location.
		No	No	
36	CSDS Wet Area	1 yd, Low	No	A wet area crosses an existing seasonal road via a rockered dip with large sandstone rip rap at the outlet. There is a small nick point where the road prism meets the rip rap at the edge of the road. <ul style="list-style-type: none"> Restack and reposition the existing rip rap at this location to ensure the edge of the road is fully armored at the dip.
		No	No	
37	CSDS	5 yds, Low	Yes	A Class III watercourse and wet area collect in a ditch and cross an existing seasonal road via an 18" CMP. The culvert is rusted through. Downgrade of this

	Class III Watercourse Q100: 14.7 cfs	Yes	No	crossing there is another inside ditch with a 24" CMP as a ditch relief culvert that is functional. <ul style="list-style-type: none"> Remove the culvert at the watercourse crossing and install a 36" diameter culvert to watercourse grade. Install a critical dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
38	Class III Watercourse and Wet Area	N/A	No	A Class III watercourse and wet area cross an existing seasonal road via a rocked ford. The ford is functional. <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe. Maintain rocked ford after operations.
		N/A	No	
39	Head of Class III Watercourse	N/A	No	An existing seasonal road crosses over the head of a Class III watercourse via a rocked dip. The outlet of the dip has no rock and is minorly eroding. <ul style="list-style-type: none"> Rock armor the outlet of the dip with 12" D₅₀ rip rap.
		No	No	
40	CSDS Class III Watercourse	2 yds, Low	No	A Class III watercourse runs down an existing seasonal road for ~45' before crossing the road via an earthen dip. There are no signs of major erosion at the outlet of the dip or in the road prism. <ul style="list-style-type: none"> Where the Class III watercourse first hits the road, reestablish the dip upgrade of the watercourse. Install an inside ditch for 45' that leads to the dip to keep the water off of the road prism. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
41	Wet Area	N/A	No	A large wet area crosses an existing seasonal road via a dip. <ul style="list-style-type: none"> If wet during operations, install a temporary pipe, or rock the road enough to ensure a stable running surface.
		No	No	
42	Class III Watercourse	N/A	Yes	A Class III watercourse crosses an existing temporary road via a temporary/pulled crossing. <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
43	Class III Watercourse and Wet Area	N/A	Yes	A Class III watercourse crosses an existing temporary road via a temporary/pulled crossing. <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
44	Class III Watercourse	N/A	Yes	A Class III watercourse crosses an existing temporary road via a temporary/pulled crossing. <ul style="list-style-type: none"> After operations and prior to the winter period of use, remove the crossing by excavating the channel to watercourse grade. Layback side slopes 1.5H:1V. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
45	Wet Area	N/A	No	Water sheds off of a hillside and saturates the road for 150' before leaving the road prism again to the east. <ul style="list-style-type: none"> Install a rolling dip where the water first hits the road. Install an inside ditch where the dip outlets that leads to the existing kick-out flagged location.
		No	No	

				<ul style="list-style-type: none"> At the flagged location, direct the water off the road to the west where there is an existing kick out and large blackberry patch.
46	Class III Watercourse	N/A	Yes	A Class III watercourse crosses an existing seasonal road via a large dip. <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe. After operations, remove culvert and maintain dip. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		No	No	
47	Class III Watercourse	N/A	No	A Class III watercourse crosses an existing seasonal road via a rock armored fill crossing. The rock in the road prism is large of large cobble size 8-12". <ul style="list-style-type: none"> Add smaller road rock to create a smooth-running surface.
		No	No	
48	CSDS Class III Watercourse Q100: 1.5 cfs	8 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via 12" CMP. The outlet is buried. <ul style="list-style-type: none"> The LTO shall locate and clean the outlet if possible. If the culvert is crushed or damaged at the outlet, replace the culvert with an 18" culvert to watercourse grade.
		Yes	No	
48.1	Bankseep	N/A	No	A bankseep and saturated road segment drain via a rolling dip on an existing seasonal road. <ul style="list-style-type: none"> If wet during operations, install a small temporary pipe to avoid saturation of the road prism during hauling and operations. After operations and prior to the winter period of use, reinstall the waterbar at this location, or a rolling dip.
		No	No	
49	CSDS Class III Watercourse Q100: 4.9 cfs	15 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via a 30" CMP. The pipe is rusted through at least 5' from the outlet. <ul style="list-style-type: none"> Remove the culvert and install a 30" diameter culvert to watercourse grade. Install a critical dip no more than 50' downgrade of the culvert. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
50	CSDS Class III Watercourse Q100: 6.8 cfs	8 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via a 30" CMP. The pipe is rusted through the entire length of the culvert. <ul style="list-style-type: none"> Remove the culvert and install a 30" diameter culvert to watercourse grade. Install a critical dip over the pipe. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
51	Class III Watercourse	N/A	No	A Class III watercourse crosses an existing seasonal road with no crossing in place. Water sheets over the road and there is no channelized erosion. <ul style="list-style-type: none"> Install an earthen dip.
		No	No	
52	CSDS Class II Watercourse Q100: 28.9 cfs	15 yds, Low	Yes	A Class II watercourse crosses an existing seasonal road via a 36" CMP. The pipe is rusted through the entire length of the culvert. A 3' long x 4' wide x 1.5' deep hole exists in the road prism over the culvert. A Class III watercourse at RP 53 delivers to the crossing at RP 52 by way of a shallow inside ditch and saturates the road prism. <ul style="list-style-type: none"> Remove the culvert and install a 36" diameter culvert to watercourse grade. The inside ditch will outlet the Class III watercourse to the inlet of this Class II watercourse. Rock armor the fill face and inside ditch at the southern side of the inlet with 10" D₅₀ rip rap. Install a critical dip over the pipe. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	

53	CSDS Class III Watercourse	5 yds, Low	Yes	A Class III watercourse runs down an inside ditch, then on the road prism towards RP 52. <ul style="list-style-type: none"> Re-establish the inside ditch to connect to the inlet of RP 52. As stated above, rock armor the inlet and fill face of culvert where the ditch intercepts it.
		No	No	
54	CSDS Class II Watercourse Q100: 22.0 cfs	10 yds, Low	Yes	A Class II watercourse crosses an existing seasonal road via a 30" CMP. The culvert is rusted through for 5-10' at the outlet, and the inlet bottom is broken apart. <ul style="list-style-type: none"> Remove the culvert and install a 36" diameter culvert to watercourse grade. Install a critical dip over the pipe. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
55	CSDS Class III Watercourse Q100: 0.6 cfs	4 yds, Low	Yes	A Class III watercourse crosses an existing seasonal road via a 24" CMP. The culvert is rusted through at both the inlet and outlet. It is not to watercourse grade, and has a flume at the the outlet (20'). The culvert is located on an inside turn in the road, the road is outsloped, and there is an old fillslope failure at the outlet. The fillslope at the edge of the road is vertical in some places, but overall is stable, mostly vegetated and has young straight redwood and Douglas-fir trees (6-16" DBH) growing throughout the feature. The road upgrade (east) of the crossing is shedding water off the road onto the feature in various locations prior to the culvert. There is a shallow, overflowing inside ditch that is also allowing water to cross the road rather than flow into the inlet of the crossing. <ul style="list-style-type: none"> Remove the culvert and install a 24" diameter culvert to the base of where the flume is outletting (~25' from road edge). Layback the vertical fillslopes to the extent feasible; cut into the cutbank to gain appropriate road width if needed. Install a rolling dip 65' upgrade of the culvert, to outlet where "dip" is painted on a tree. After the dip, reinstall the inside ditch to approximately 6" deep. Install a critical dip over the pipe. Exposed soil shall be stabilized as per Item 18 Soil Stabilization Measures.
		Yes	No	
T1	Class III Tractor Crossing (in WLPZ)	N/A	Yes	A Class III watercourse crosses an existing skid trail. <ul style="list-style-type: none"> After operations and prior to the winter period of use, pull the crossing and excavate the channel to watercourse grade. Layback the banks of the crossing 1.5H:1V. Exposed soil shall be stabilized as per Item 18, Soil Stabilization Measures.
		No	No	
T2	Class III Tractor Crossing (in WLPZ)	N/A	Yes	A Class III watercourse and wet area cross an existing skid trail. <ul style="list-style-type: none"> After operations and prior to the winter period of use, pull the crossing and excavate the channel to watercourse grade. Layback the banks of the crossing 1.5H:1V. Exposed soil shall be stabilized as per Item 18, Soil Stabilization Measures.
		No	No	
T3	Class III Tractor Crossing (in WLPZ)	N/A	Yes	A Class III watercourse crosses an existing skid trail. <ul style="list-style-type: none"> After operations and prior to the winter period of use, pull the crossing and excavate the channel to watercourse grade. Layback the banks of the crossing 1.5H:1V. Exposed soil shall be stabilized as per Item 18, Soil Stabilization Measures.
		No	No	

L1	Partial WLPZ Landing	N/A	No	<p>This landing is proposed for use and is located partially within the WLPZ of a Class II-S and wet area, on an existing temporary road. The fillslopes on the northern edge of the landing are moderate towards the watercourse.</p> <ul style="list-style-type: none"> Once operations are complete, the landing surface shall be shaped to drain water away from the Class III watercourse channel at T1, where necessary, ensuring hydrologic disconnection. No operations will occur at L1 during the winter period. Exposed soil within the WLPZ shall be straw mulched or slash packed as per Item 18, Soil Stabilization Measures
		No	No	
L2	Partial WLPZ Landing	N/A	No	<p>A landing located on either side of an existing seasonal road is partially within the WLPZ at its edges. This landing and the areas that may extend into the WLPZ is proposed for use. There are no fillslopes at the edge of the landing as the area is fairly flat.</p> <ul style="list-style-type: none"> Once operations are complete, the landing surface shall be shaped to drain water away from the Class II watercourse. No operations will occur at L2 during the winter period. Exposed soil within the WLPZ shall be straw mulched or slash packed as per Item 18, Soil Stabilization Measures
		No	No	
1248	Class I Direct Drafting Site	N/A, N/A	Yes	<p>Temporary water drafting pit along the Class I South Fork Gualala River.</p> <ul style="list-style-type: none"> It will consist of a shallow pit excavated into the gravel bar no closer than 10 feet from the wetted channel of the stream, and shall not disturb established vegetation. This drafting site has been used in previous plans and is featured in several current plans (1-22-00042 SON, 1-20-0003-SON, 1-19-0197-MEN, 1-15-0042-SON). <p>See Item 26s and Item 26- Drafting Parameters for details.</p>
		No	No	
2061	Class I Direct Drafting Site	N/A, N/A	Yes	<p>Temporary water drafting pit along the Class I South Fork Gualala River.</p> <ul style="list-style-type: none"> It will consist of a shallow pit excavated into the gravel bar no closer than 10 feet from the wetted channel of the stream, and shall not disturb established vegetation. This drafting site has been used in previous plans and is featured in several current plans (1-22-00042 SON, 1-20-0003-SON, 1-19-0197-MEN, 1-15-0042-SON). <p>See Item 26s and Item 26- Drafting Parameters for details.</p>
		No	No	

***High Immediacy Sites: Must be completed within one year of plan approval.**

Moderate Immediacy Sites: Must be completed within the first full year of operation.

Low Immediacy Sites: Must be completed during the life of the plan.

No significant existing and potential erosion sites that do not have feasible measures were identified for treatment within the plan area (14 CCR 933.1(e)(4)).

Please refer to the Roads and Features Map for location of these sites.

Prior to upgrading any road segment from seasonal to permanent, within or appurtenant to the plan, the Plan Submitter shall notify the director, through a minor deviation to the THP, which roads will change in classification. This amendment will ensure compliance with 14 CCR 1034(X)(4)(A).

Any amendments filed for shared crossings under a different THP, will also be amended into this THP.

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:

General Recommendations for Road Work

The following are general measures to be taken to minimize soil movement, concentrated surface runoff and maintenance of drainage structures to keep road beds and fills stable which shall also protect the beneficial uses of water:

For ditch relief culverts (crossdrains):

- Ditch relief culverts shall have a skew of 35% or greater.
- Ditch relief culverts shall have a gradient of 10% or 2% greater than the ditch it drains.
- Ditch is blocked after ditch relief culvert installation to prevent water continuing on down ditch line.

For watercourse culverts:

- Install critical dip.
- Install trash rack if the watercourse shows signs of debris movement.
- Install culverts to watercourse grade. Culvert outlets installed on grade may not need an energy dissipater.
- Road surface drainage is diverted before the crossing either by outsloping or by waterbreaks as per the rules.
- If inboard ditches drain to a crossing they shall be drained prior to the crossing by waterbreaks or shall be rock lined, mulched or use straw bales which shall be placed in the ditch line prior to the crossing to reduce sediment transport. If the inboard ditch is rock lined or mulched then at least the length of the WLPZ or ELZ shall be treated.
- Exposed soil within any WLPZ or ELZ, outside of the traveled way, shall be stabilized as per Item #18 **SOIL STABILIZATION MEASURES**.
- The road surface within any WLPZ or ELZ shall be rocked, mulched or seeded upon completion of operations.

For rock armored fill crossings and rocked fords:

- Road surface drainage is diverted before the crossing either by outsloping or by waterbreaks as per 14 CCR 914.6 (c).
- If inboard ditches drain to a crossing they shall be drained prior to the crossing by waterbreaks or shall be rock lined, mulched or use straw bales which shall be placed in the ditch line prior to the crossing to reduce sediment transport. If the inboard ditch is rock lined or mulched then at least the length of the WLPZ or ELZ shall be treated.
- Exposed soil, outside of the traveled way, shall be stabilized as per Item #18 **SOIL STABILIZATION MEASURES**.

Road Cutbank Seeps and Springs:

- Where road cutbank seeps drain onto the road surfaces, the LTO shall install rolling dips with rock armored outlets to drain the water across the road surface unless otherwise specified in a map point or road point.

Other Specifications

- Road work, where applicable, shall follow the guidelines in the **2014 Handbook For Forest, Ranch and Rural Roads** by Weaver, Weppner and Hagans.
- Due to existing pipe inventories, pipe installations may be upgraded to larger diameters.
- Unless otherwise noted above, if any of the above road points are wet prior to operations or any time during operations, a minimum 4" pipe shall be installed for drainage and/or the road point may be rocked. Remove pipe at completion of operations if not associated with a rolling dip or ford.
- "Riprap" means rock or other suitable non-erodible material placed to prevent or reduce erosion.
- Rock armored fill crossings or rolling dips shall be constructed to accommodate log truck hauling.
- Pipes shall be installed to watercourse grade, without "shot-gunned" outlets.
- Maintain existing and functional rolling dips within the plan area and along the appurtenant road.
- In order to reduce erosion, waterbreaks shall be placed so that water runs into duff, slash, rocks, stumps etc..

- Spoils hauled to a stable location means those areas < 30% slope and located outside of any WLPZ / ELZ / EEZ.
- Any proposed new culverts have been sized to pass the 100 year flood flow including debris and sediment loads.
- During major storm events waterbreaks shall be checked for functionality.
- **Roads shall be hydrologically disconnected from watercourses to the extent feasible to minimize sediment delivery from road runoff to watercourse and reduce the potential for hydrologic changes that alter the magnitude and frequency of runoff delivery to water. This may be achieved by using the following mitigations:**
 - Installing waterbreaks before rock fords or culverts.
 - Installing ditch relief culvert before watercourse crossing.
 - Installing sediment traps within ditches that lead to watercourse crossings
 - Installing straw waddles filter sediment in inside ditches that lead to watercourse crossing.
 - Outslope insloped or crowned roads.
 - Rock road surface which is hydrologically connected on seasonal road.
 - Straw mulch or slash roads that are hydrologically connected to watercourses.

ASP WATERSHEDS	
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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	
<ul style="list-style-type: none"> • When logging road(s) or landing(s) construction or reconstruction is proposed identify: <ol style="list-style-type: none"> 1) How the proposed operations will fit into the systematic layout pattern. Per 14 CCR 923.1 [943.1. 963.1](g) <u>Not applicable to this Timber Harvest Plan</u> 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) <u>Not applicable to this Timber Harvest Plan</u> • Provide specific provisions for the protection of salmonid habitat for all logging road(s) construction: <ol style="list-style-type: none"> 3) On slopes, greater than 50% with access to a watercourse or lake. Per 14 CCR 923.4 [943.4, 963.4](s)(1) <u>Not applicable to this Timber Harvest Plan.</u> 4) Provide specific erosion control measures for all permanent and seasonal roads: <ol style="list-style-type: none"> 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) <u>Not applicable to this Timber Harvest Plan.</u> 	

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

ITEM #26		WATERCOURSES	
<p>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.</p> <p>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.</p>			
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? (Check all that apply)	
		<p><u>Within plan area</u></p> <p><input type="checkbox"/> Class I:</p> <p><input checked="" type="checkbox"/> Class II:</p> <p><input checked="" type="checkbox"/> Class III:</p> <p><input type="checkbox"/> Class IV:</p> <p><input type="checkbox"/> Lakes:</p> <p><input checked="" type="checkbox"/> Other (Springs, Seeps)</p>	<p><u>Adjacent to plan area</u></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/> Seeps</p>

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	<p>Will Class III or IV watercourses be protected with a WLPZ or ELZ?</p> <p>If YES, describe below</p>
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LTO instructions:

Slope Class	Class II-L WLPZ Width (feet) Core/Inner Zones	Class II-S WLPZ Width (feet) Core/Inner Zones	Non-ASP Class II WLPZ Width (feet) No Core Zone	Class III ELZ Width (feet)	Wet Area with WLPZ Width (feet)
<30%	30/70=100	15/35 = 50	50	30	25
30-50%	30/70=100	15/60 = 75	75	50	50
>50%	30/70=100	15/85 =100	100	50	50

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

Class II Watercourses:

The plan area is located within both ASP watersheds and Non-ASP watersheds.

The northern part of the THP is located within the Big Pepperwood Creek Planning Watershed (an ASP-watershed) and a small portion of the southeaster portion of the plan is located within the Mouth of Gualala River Planning Watershed (an ASP-watershed) in which watercourses drain to the Gualala River and South Fork Gualala River, outside of the THP boundary. There is one Class II-L watercourse (drainage area equal to or greater than 100 acres) and multiple Class II-S watercourses (drainage area less than 100 acres) located within and adjacent to the plan area. In the very southeastern tip of the THP, a wet area and Class III drain east to the Gualala

River. The classification between Class II-S or a 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 936.9(g)(1)(A) and (B). The remainder of the plan area is within the Black Point Planning Watershed (Non-ASP-watersheds) in which Class II watercourses drain to the Pacific Ocean outside of the THP boundary.

Class II-L Protection Measures:

- The enforceable standard for shade canopy retention for Class II-L watercourses is:
- Core zone, within 30 feet of the watercourse transition line, operations are limited to actions to allow for full suspension cable yarding per 936.9(e)(1)(D).
- Inner zone, a minimum 70% overstory canopy shall be retained within 70 feet of the core zone.
- The WLPZ is flagged at 100 feet with blue/white striped "Watercourse and Lake Protection Zone" flagging in addition to solid orange flagging for greater visibility.
- 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.
- Per 14 CCR 936.9(f)(2)(B)(4), the thirteen largest DBH conifers (live or dead) on each acre of the area that encompasses the core and inner zones shall be retained. The retained conifers shall be selected from the THP area that lies within 100 feet of the watercourse transition line.
- 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.
- No Salvage logging or hardwood harvest within the WLPZ.
- 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.
- Groups shall not be located in a WLPZ.
- No Salvage logging or hardwood harvest within the WLPZ.

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 936.9(e)(1)(D).
- 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 in addition to solid orange flagging for greater visibility.
- 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.
- Groups shall not be located in a WLPZ.
- No Salvage logging or hardwood harvest within the WLPZ.

Class II (Non-ASP) Protection Measures:

- The enforceable standard for shade canopy retention for Class II watercourses is:
- At least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations.
- 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 in addition to solid orange flagging for greater visibility.
- 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 were completed prior to the PHI.

- Harvest trees will be marked with a horizontal blue stripe at breast height with a corresponding base mark below stump level.
- 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 greater than 30%. The ELZ is measured from the WTL. 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 § 932.7 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 § 936.9, 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 WLPZ:

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 25 foot ELZ when slopes are less than 30% and 50 foot ELZ when slopes are greater than 30% 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 and orange glo.

Seeps:

A seep is a feature created by anthropogenic structures (e.g. roads, landings) which intercept 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 road points) if specific work is associated with such sites.

c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there any tractor road watercourse crossings that require mapping per 14 CCR 1034(x)(7)
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<input checked="" type="checkbox"/> Yes <input 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.
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Map Reference Points (MRP)	Culver Diameter	Culvert Length
T2	4"	10'

d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>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: _____</p> <p>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.</p>
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MATO or SAA INSTRUCTIONS TO LTO

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

e. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<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 Road Point Table in Item #24 for list of watercourses that require 1600 Agreement.

f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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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g. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<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> <p><u>See Maps and Road Point Table for Class II crossing treatments.</u></p>
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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,	
h. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any NEW PERMANENT constructed logging road watercourse crossings requiring mapping?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any NEW RECONSTRUCTED logging road watercourse crossings requiring mapping?
<input checked="" type="checkbox"/> Yes <input 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><u>See Maps and Road Point Table for location and descriptions of crossings. The crossings are existing and will require some reconstruction or upgrading. Temporary roads shall be deactivated (see Item 24 & 25) and Temporary Crossings A, 3, 4, 5, B, 6, 11, 12, 13, 20, 27, 28, 29, 30, 42, 43, and 44 are proposed for deactivation following use.</u></p> <p>Method for sizing crossing:</p> <p><u>Q₁₀₀ in cfs was found using the Rational Method, with the exception of RP #1, which had a drainage acreage of 106 acres. The magnitude and Frequency Method was used to calculate the cfs for RP #1. The cfs calculations can be viewed in a table in Section V. The culverts sizes are sized using the Norman et.al 1985 Culvert sizing nomograph using their Q₁₀₀ and a HW/D of 0.67.</u></p> <p><u>See Section V for culvert calculations.</u></p>	
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>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> <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	<p>Will other methods for diversion of overflow at culvert crossings be utilized (<u>other than critical dips</u>) in the construction or reconstruction of logging road watercourse crossings which culverts?</p> <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>
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.	
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	<p>Are there any watercourse crossing proposed for construction located on logging roads within the logging area?</p> <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><u>See Section II Maps and Map Point Table for list of crossings and their requirements.</u></p>
l. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Will rock be used to stabilize crossing outlets?</p> <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>

	See Maps and Map Point Table for list of crossings and their requirements.
m. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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>
n. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Do logging road watercourse crossing drainage structures and other erosion control features have a high historical fail rate within the project area?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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>
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" (1 st Edition, revised 10/27/14)	
o. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<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>Please see the Road Point Table in Section II item 24. There are no high-risk sites within the THP, but there are temporary crossings to be removed (but not abandoned).</p>

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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will there be any timber operations within the channel zone of any watercourse? If YES, Indict the location and type of timber operations to be conducted and provide instructions to the LTO in SECTION II.
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. <u>Water drafting shall be done in accordance to Fish and Game Code Section 1600, et seq.</u>
t. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there a Fish and Game Code Section 1600 Mater 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) <u>Water Drafting is proposed at the 2 Class I drafting sites labeled "1248" and "2061" on the Section II Appurtenant Road Map.</u>

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: <u>Water may be purchased from a private source for road watering on this plan.</u>	
<u>Water may be drafted from the active channel of the South Fork Gualala River at 2 locations (1248- Pepperwood and 2061-Valley). Operational instructions for the LTO regarding active channel water drafting are summarized below. A new 1600 agreement is being prepared for this THP. The water drafting requirements will be similar to the 1600 agreement (1600-22-0004-R3) that covered these site as approved for THP #1-22-00042-SON, as well as many other past THPs.</u>	
Watercourse Classification: <u>Class I Watercourse</u>	
Drafting parameters including: <u>The likely drafting requirements in the 1600 being prepared for this THP will include:</u>	
<p>(A) <u>To avoid take of fish and other aquatic species, Permittee shall not draft water from the flowing stream (wetted channel); instead, all water shall be drafted from pits dug in gravel bars or upland locations. Gravel bar holes shall be no less than 10 feet from the wetted channel. Excavation of gravel bar holes shall be conducted in isolation from the flowing stream.</u></p> <p>(B) <u>Before commencing any water drafting operation, the RPF and the drafting operator shall conduct a pre-operations field review to discuss the water drafting measures in the plan and in the 1600 Agreement.</u></p> <p>(C) <u>The diversion rate shall not exceed 300 gallons per minute.</u></p> <p>(D) <u>In aggregate, for GRT operations, GRT will use less than 25,000 gallons per day from active channel water holes on the Gualala River.</u></p> <p><u>General Water Drafting Measures</u></p> <p><u>All water drafting for timber operations are subject to the requirements below, unless the Department of Fish and Wildlife modifies requirements in the Lake or Streambed Alteration agreement that authorizes the drafting operation.</u></p> <p>(A) <u>All water drafting intakes shall be screened to prevent impingement of aquatic species. The following requirements apply to screens and water drafting:</u></p> <ol style="list-style-type: none"> <u>1. Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters). Slot openings in wedge wire screens shall not exceed 1/16 inches (1.75 millimeters).</u> <u>2. The screen surface shall have at least 2.5 square feet of openings submerged in water.</u> <u>3. The drafting operator shall regularly inspect, clean, and maintain screens to ensure proper operation whenever water is drafted.</u> <u>4. The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.</u> <u>5. The diversion rate shall not exceed 300 gallons per minute.</u> <p>(B) <u>Approaches and associated drainage features to drafting locations within a WLPZ or channel zone shall be surfaced with rock or other suitable material to minimize generation of sediment.</u></p> <p>(C) <u>Barriers to sediment transport, such as straw waddles, logs, straw bales or sediment fences, shall be installed outside the normal high water mark to prevent sediment delivery to the watercourse and limit truck encroachment.</u></p> <p>(D) <u>Water drafting trucks parked on streambeds and floodplains shall use drip pans or other devices such as absorbent blankets, sheet barriers or other materials as needed to prevent soil and water contamination from motor oil or hydraulic fluid leaks.</u></p> <p>(E) <u>Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream.</u></p>	
Month(s) of use – April through November	
Estimated volume needed per day - 12,000 gallons per day (3-4 loads per day)	
Estimated maximum instantaneous drafting rate and filling time - 300 gallons per minute. Fill time approximately 15 minutes	
Other water drafting activities in same watershed – There are a number of active THPs within the same watershed that are using the same water drafting sites as in this THP, along with additional drafting locations within those THPs.	
Drainage area (acres) above point of diversion.	
Map Point 1248: Approx. 165,000 acres	
Map Point 2061: Approx. 115,000 acres	

Estimated:	
	Unimpeded stream flow – On the Gualala River, drafting will have no impact on unimpeded flow. Summer flows are regularly 1-2cfs.
	Pumping rate – 300 gmp
	Drafting duration -For a 4000 gallon truck, approximately 15 minutes
	<p>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> <p><u>A hydrological study by O'Connor Inc. dated June 11, 2010 (previously submitted to CDFW) indicates that at the rate of 25,000 gallons per day, GRT would be using between 0.3% and 0.5% of the available daily flow on the South Fork of the Gualala River. Considering this, it seems safe to assume that there will be no substantial adverse effects on downstream habitat. The periodic, low level of diversion will be unlikely to result in appreciable reduction in flows on the South Fork Gualala River or Rockpile Creek. These locations may be used under different THPs, but their inclusion does not significantly increase the amount of water drafted from the watersheds – as all plans utilize the same appurtenant road systems, and watering for one THP may be adequate for all other THPs active at the same time. Other sites (not identified above) within the greater South Fork Gualala watershed may be used but given the size of the watershed along with the minor amount of water consumed, there will not be a significant adverse effect on downstream habitat.</u></p>
	<p>A discussion of proposed alternatives and measures to prevent adverse effects to fish and wildlife resources, such as reducing hose diameter; using gravity-fed tanks instead of truck pumping; reducing the instantaneous or daily intake at one location; describing allowances for recharge time; using other dust palliatives; and drafting water at alternative sites:</p> <ol style="list-style-type: none"> <u>1. GRT has used magnesium chloride in the past as a dust palliative and may do so again.</u> <u>2. Drafting takes place at sites closest to the roads needing dust abatement, which spreads out the impacts at the three separate gravel pits along Rockpile Creek and the South Fork of the Gualala River. However, as the O'Connor Report (2010, and response to public comments 2015) indicates, this is not really a concern.</u> <u>3. Water holes were previously dug at the request of CDFW and with their approval far from existing watercourses in order to provide an alternate source for water drafting. These water holes will be used again, and effectively cause less need for water uptake from the gravel pits.</u>

Notification Information List Pursuant to Fish and Wildlife Code Section 1611

There are **41** 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 to govern 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 24 of Section II and are shown on the THP Roads and Features Maps at the end of Section II.

(THP) #: To be determined

(THP) Name: Steam Donkey 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: Gualala Redwood Timber, LLC.
P.O. Box 197
Gualala, CA 95445
(707)894-4245

Operator: Unknown, to be amended to the plan.

Contractor: Unknown, to be amended to the plan

Contact Person: John Bennett, RPF, Forest Manager
c/o Gualala Redwood Timber, LLC.
P.O. Box 197
Gualala, CA 95445
(707)894-4245

Property Owner(s): Gualala Redwood Timber, LLC.
P.O. Box 197
Gualala, CA 95445
(707)894-4245

- 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.

Sites within the plan area are associated with watercourses which are tributaries to the Gualala River, the South Fork Gualala River, and the Pacific Ocean.

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

Map Point Number	Township, Range, Section	Longitude	Latitude	APN
1	German Landgrant	-123.513	38.763	122-040-009
2	German Landgrant	-123.514	38.765	122-040-009
3	German Landgrant	-123.508	38.764	122-040-009
4	German Landgrant	-123.508	38.764	122-040-009
5	German Landgrant	-123.509	38.763	122-040-009
6	German Landgrant	-123.509	38.761	122-040-012
7	German Landgrant	-123.507	38.758	122-040-012
9	German Landgrant	-123.503	38.756	122-040-012
11	German Landgrant	-123.503	38.759	122-040-012
14	German Landgrant	-123.498	38.761	122-040-012
15	German Landgrant	-123.498	38.761	122-040-012
20	German Landgrant	-123.494	38.797	122-040-009
20.1	German Landgrant	-123.488	38.767	122-040-009
21	German Landgrant	-123.490	38.768	122-040-009
22	German Landgrant	-123.492	38.769	122-040-009
23	German Landgrant	-123.493	38.769	122-040-009
24	German Landgrant	-123.489	38.752	122-040-012
28	German Landgrant	-123.493	38.749	122-040-012
29	German Landgrant	-123.493	38.749	122-040-012
30	German Landgrant	-123.493	38.746	122-040-012
31	German Landgrant	-123.493	38.746	122-040-012
33	German Landgrant	-123.488	38.747	122-040-012
34	German Landgrant	-123.488	38.745	122-040-012
35	German Landgrant	-123.488	38.744	122-040-012
37	German Landgrant	-123.485	38.745	122-040-012
42	German Landgrant	-123.473	38.737	122-300-011
43	German Landgrant	-123.472	38.737	122-300-011
44	German Landgrant	-123.471	38.737	122-300-011
46	German Landgrant	-123.464	38.735	122-070-002
48	German Landgrant	-123.468	38.735	122-300-011
49	German Landgrant	-123.472	38.735	122-300-011

50	German Landgrant	-123.473	38.735	122-300-011
52	German Landgrant	-123.469	38.734	122-300-011
53	German Landgrant	-123.469	38.734	122-300-011
54	German Landgrant	-123.473	38.735	122-300-011
55	German Landgrant	-123.502	38.765	122-040-009
T1	German Landgrant	-123.51	38.763	122-040-009
T2	German Landgrant	-123.505	38.764	122-040-009
T3	German Landgrant	-123.488	38.737	122-300-011
1248	Section 25 T11N R15W	-123.485	38.769	122-010-003
2061	Section 21 T10N R14W	-123.420	38.704	122-070-017

- 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 THP Roads and Features 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, rock 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.

Map Point Number	Type of Activity	Permanent or Temporary	Culvert Size (Diameter in inches)	Watercourse Classification
1	Culvert Replacement	Permanent	72”	Class II-L
2	Improve Ditch to CII	Permanent	NA	Ditch to Class II-S
3	Temporary Crossing	Temporary	NA	CII-S
4	Temporary Crossing	Temporary	NA	CII-S
5	Temporary Crossing	Temporary	NA	CIII

6	Temporary Crossing	Temporary	NA	CII
7	Culvert Replacement	Permanent	36"	Class II
9	Culvert Replacement	Permanent	30"	Class II
11	Dip	Permanent	NA	CIII
14	Install Culvert	Permanent	18"	CIII
15	Culvert Replacement	Permanent	30"	Class III
20	Temporary Crossing	Temporary	NA	CIII
20.1	Culvert Replacement	Permanent	18"	Class III
21	Culvert Replacement	Permanent	18"	Class III
22	Culvert Replacement	Permanent	18"	Class III
23	Install RAF	Permanent	NA	Class III
24	Temporary Crossing	Temporary	NA	CIII
28	Temporary Crossing	Temporary	NA	CIII
29	Temporary Crossing	Temporary	NA	CIII
30	Temporary Crossing	Temporary	NA	CIII
31	Culvert Replacement	Permanent	24"	Class III
33	Culvert Replacement	Permanent	54"	Class II
34	Culvert Replacement	Permanent	24"	Class III
35	Culvert Replacement	Permanent	24"	Class III
37	Culvert Replacement	Permanent	36"	Class III
42	Temporary Crossing	Temporary	NA	CIII
43	Temporary Crossing	Temporary	NA	CIII
44	Temporary Crossing	Temporary	NA	CIII

46	Temporary Crossing	Temporary	NA	CIII
48	Culvert Replacement	Permanent	18"	Class III
49	Culvert Replacement	Permanent	30"	Class III
50	Culvert Replacement	Permanent	30"	Class III
52	Culvert Replacement	Permanent	36"	Class III
53	Ditch Improvement	Permanent	NA	Class III
54	Culvert Replacement	Permanent	36"	Class III
55	Culvert Replacement	Permanent	24"	Class III
T1	Temporary Tractor Crossing	Temporary	NA	CIII & Wet Area
T2	Temporary Tractor Crossing	Temporary	NA	CIII & Wet Area
T3	Temporary Tractor Crossing	Temporary	NA	CIII Within CII WLPZ
1248	Water Drafting-Direct	Temporary	NA	Class I
2061	Water Drafting-Direct	Temporary	NA	Class I

- 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. Northern spotted owls have been observed within the Big Pepperwood Creek and Mouth of Gualala River planning watersheds. Mitigations proposed in the THP are designed to avoid significant adverse impacts to these species. A floristic

survey has been completed and is located in Section V. Please refer to the THP Sections 2, 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 Road Points Table under Item #24 of THP.

- 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.**

It is expected the activities will be dry at time of operations and water diversions will not be necessary for this permit.

- 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 is proposed at the Gualala River at RP# 1248 and 2061, as depicted on the Appurtenant Roads Map. 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.**

Map Point Number	Material Removed (Volume)	Material Installed (Volume)	Comments
1	20 yds	20 yds	NA
2	NA	NA	Temporary Crossing
3	NA	NA	Temporary Crossing
4	NA	NA	Temporary Crossing
5	NA	NA	Temporary Crossing
6	NA	NA	Temporary Crossing
7	20 yds	20 yds	Culvert Replacement
9	20 yds	20 yds	Culvert Replacement
11	2 yds	0 yds	Dip
14	5 yds	5 yds	Install Culvert

15	10 yds	10 yds	Culvert Replacement
20	NA	NA	Temporary Crossing
20.1	10 yds	10 yds	Culvert Replacement
21	5 yds	5 yds	Culvert Replacement
22	10 yds	10 yds	Culvert Replacement
23	7 yds	7 yds	Rock Armored Fill Crossing
24	NA	NA	Temporary Crossing
28	NA	NA	Temporary Crossing
29	NA	NA	Temporary Crossing
30	NA	NA	Temporary Crossing
31	10 yds	10 yds	Culvert Replacement
33	15 yds	15 yds	Culvert Replacement
34	15 yds	15 yds	Culvert Replacement
35	12 yds	12 yds	Culvert Replacement
37	5 yds	5 yds	Culvert Replacement
42	NA	NA	Temporary Crossing
43	NA	NA	Temporary Crossing
44	NA	NA	Temporary Crossing
46	NA	NA	Temporary Crossing
48	8 yds	8 yds	Culvert Replacement
49	15 yds	15 yds	Culvert Replacement
50	8 yds	8 yds	Culvert Replacement
52	15 yds	15 yds	Culvert Replacement
53	5 yds	5 yds	Ditch Improvement
54	10 yds	10 yds	Culvert Replacement
55	2 yds	2 yds	Culvert Replacement
T1	NA	NA	Tractor Crossing
T2	NA	NA	Tractor Crossing
T3	NA	NA	Tractor Crossing
1248	NA	NA	Water Drafting
2061	NA	NA	Water Drafting

e. Specify the type of equipment to be used.

Tractors, excavators, trucks, grader, crawler tractor and backhoes.

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

April 1 through November 15.

- 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 specified 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 has been completed for project sites and is included in Section V of the THP. Protection measures are located in Section II of the THP.

- 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.**

See Cfs Calculations and Culvert and Rock Sizing Information Below

- 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

I. Describe any torrent, debris or landslide conditions at each encroachment.

Refer to Road Points Table, Roads and Features Maps, and Yarding Methods Maps in Section II of the THP.

Cfs Calculations For Culverts and Rock Armored Fill Crossings										
Location:		Steam Donkey THP		Gualala, CA						
Rational Method for 100-year flood flow (A < 200 acres)							Q100=CiA	C=runoff Coefficient	A=area (acres)	
			3.16	2.87	2.59	2.21		i= precipitation	100 yr return in/hr	
	Crossing	Runoff coefficient	100-year Return-Period Precipitation (in/hr)	50-year Return-Period Precipitation (in/hr)	25-year Return-Period Precipitation (in/hr)	10-year Return-Period Precipitation (in/hr)	Area (acres)	100-yr flood flow (cfs)	Minimum Culvert or Rock Size Required	Alternative Culvert Size Selected
No.		C	I ^a	I ^a	I ^a	I ^a	A	Q100		
	7	0.35	3.2	2.9	2.6	2.2	16.6	18.6	36	
	9	0.35	3.2	2.9	2.6	2.2	8.2	9.3	27	30
	14	0.35	3.2	2.9	2.6	2.2	4.4	5.0	18	
	15	0.35	3.2	2.9	2.6	2.2	9.8	11.1	27	30
	20.1	0.35	3.2	2.9	2.6	2.2	1.5	1.7	18	
	21	0.35	3.2	2.9	2.6	2.2	2.4	2.7	18	
	22	0.35	3.2	2.9	2.6	2.2	1	1.1	18	
	23	0.35	3.2	2.9	2.6	2.2	4.7	5.3	18" D50	
	31	0.35	3.2	2.9	2.6	2.2	4.5	5.1	21	24
	33	0.35	3.2	2.9	2.6	2.2	45	51.0	54	
	34	0.35	3.2	2.9	2.6	2.2	2.6	2.9	18	24
	35	0.35	3.2	2.9	2.6	2.2	6.3	7.1	24	
	37	0.35	3.2	2.9	2.6	2.2	13	14.7	33	36
	48	0.35	3.2	2.9	2.6	2.2	1.28	1.5	18	
	49	0.35	3.2	2.9	2.6	2.2	4.3	4.9	18	
	50	0.35	3.2	2.9	2.6	2.2	6	6.8	24	30
	52	0.35	3.2	2.9	2.6	2.2	25.5	28.9	36	
	54	0.35	3.2	2.9	2.6	2.2	19.4	22.0	36	
	55	0.35	3.2	2.9	2.6	2.2	0.5	0.6	18	24

Magnitude and Frequency Method for 100-year flood flow (A > 100 acres)

No.	Crossing	Area (acres) A	Area (mi ²) A	Avg. Annual Precipitation (in/yr) p	100-yr flood flow Q100 (cfs)	50-yr flood flow Q50 (cfs)	Magnitude & Frequency Q ₁₀₀ equations	Minimum Culvert Size Required	Alternative Culvert Size Selected
	1	106	0.17	41.6	81.2	64.0	North Coast Q100= (48.5*A ^{0.866})*(p ^{0.556})	72	

If questions, contact Mr. Wopat at 530-24-4748

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Map Point #	area (ac)	100 year flood (cfs)	Headwall to pipe diameter ratio	What does the pipe inlet look like?	100 yr	
					Culvert Size (in)	area (ft ²)
1	106	81.2	0.67	Mitred/bevel ->	66	23.7
				Projected pipe ->	72	28.3
				Mitred/bevel ->	66	23.7
			0.75	Projected pipe ->	66	23.7
				Mitred/bevel ->	54	15.9
			0.9	Projected pipe ->	60	19.6
				Mitred/bevel ->	51	14.2
			1	Projected pipe ->	54	15.9
				Mitred/bevel ->	36	7.1
7	17	18.6		Projected pipe ->	42	9.6
			0.67	Mitred/bevel ->	33	5.9
				Projected pipe ->	36	7.1
				Mitred/bevel ->	33	5.9
			0.75	Projected pipe ->	33	5.9
				Mitred/bevel ->	30	4.9
			1	Projected pipe ->	30	4.9
				Mitred/bevel ->	27	4.0
9	8	9.3		Projected pipe ->	27	4.0
			0.67	Mitred/bevel ->	27	4.0
				Projected pipe ->	27	4.0
				Mitred/bevel ->	24	3.1
			0.9	Projected pipe ->	24	3.1
				Mitred/bevel ->	21	2.4
			1	Projected pipe ->	24	3.1
				Mitred/bevel ->	18	1.8
14	4	5.0		Projected pipe ->	18	1.8
			0.67	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
73			0.75	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			0.9	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			1	Mitred/bevel ->	18	1.8
				Projected pipe ->	27	4.0
15	10	11.1		Projected pipe ->	30	4.9
			0.67	Mitred/bevel ->	27	4.0
				Projected pipe ->	30	4.9
				Mitred/bevel ->	24	3.1
			0.9	Projected pipe ->	27	4.0
				Mitred/bevel ->	24	3.1
			1	Projected pipe ->	24	3.1
				Mitred/bevel ->	18	1.8
20.1	2	1.7		Projected pipe ->	18	1.8
			0.67	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			0.75	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			0.9	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			1	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
21	2	2.7	0.67	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			0.75	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			0.9	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			1	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8

Map Point #	area (ac)	100 year flood (cfs)	Headwall to pipe diameter ratio	What does the pipe inlet look like?	100 yr	
					Culvert Size (in)	area (ft ²)
22	1	1.1	0.67	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			0.75	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			0.9	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			1	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
23	5	5.3	0.67	Projected pipe ->	21	2.4
				Mitred/bevel ->	21	2.4
				Projected pipe ->	21	2.4
			0.75	Mitred/bevel ->	21	2.4
				Projected pipe ->	18	1.8
			0.9	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			1	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
31	5	5.1	0.67	Projected pipe ->	21	2.4
				Mitred/bevel ->	21	2.4
				Projected pipe ->	21	2.4
			0.75	Mitred/bevel ->	21	2.4
				Projected pipe ->	21	2.4
			0.9	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			1	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
33	45	51.0	0.67	Mitred/bevel ->	54	15.9
				Projected pipe ->	60	19.6
				Mitred/bevel ->	48	12.6
			0.75	Projected pipe ->	54	15.9
				Mitred/bevel ->	48	12.6
			0.9	Projected pipe ->	48	12.6
				Mitred/bevel ->	48	12.6
				Projected pipe ->	48	12.6
			1	Mitred/bevel ->	48	12.6
				Projected pipe ->	48	12.6
				Mitred/bevel ->	48	12.6
34	3	2.9	0.67	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			0.75	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
			0.9	Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
			1	Projected pipe ->	18	1.8
				Mitred/bevel ->	18	1.8
				Projected pipe ->	18	1.8
35	6	7.1	0.67	Mitred/bevel ->	24	3.1
				Projected pipe ->	24	3.1
				Mitred/bevel ->	24	3.1
			0.75	Projected pipe ->	24	3.1
				Mitred/bevel ->	21	2.4
			0.9	Projected pipe ->	21	2.4
				Mitred/bevel ->	21	2.4
				Projected pipe ->	21	2.4
			1	Mitred/bevel ->	21	2.4
				Projected pipe ->	21	2.4
				Mitred/bevel ->	21	2.4
37	13	14.7	0.67	Projected pipe ->	33	5.9
				Mitred/bevel ->	33	5.9
				Projected pipe ->	30	4.9
			0.75	Mitred/bevel ->	33	5.9
				Projected pipe ->	27	4.0
			0.9	Mitred/bevel ->	30	4.9
				Projected pipe ->	30	4.9
				Mitred/bevel ->	27	4.0
			1	Projected pipe ->	27	4.0
				Mitred/bevel ->	27	4.0

		100 year flood	Headwall to pipe diameter ratio	What does the pipe inlet look like?	100 yr Culvert Size (in)	100 yr area (ft2)
Map Point #	area (ac)	(cfs)				
48	1	1.5		Mitred/bevel →	18	1.8
			0.67	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			0.75	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			0.9	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			1	Projected pipe →	18	1.8
49	4	4.9		Mitred/bevel →	18	1.8
			0.67	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			0.75	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			0.9	Projected pipe →	18	1.8
				Mitred/bevel →	18	1.8
			1	Projected pipe →	18	1.8
50	6	6.8		Mitred/bevel →	24	3.1
			0.67	Projected pipe →	24	3.1
				Mitred/bevel →	21	2.4
			0.75	Projected pipe →	24	3.1
				Mitred/bevel →	21	2.4
			0.9	Projected pipe →	21	2.4
				Mitred/bevel →	18	1.8
			1	Projected pipe →	18	1.8
52	26	28.9		Mitred/bevel →	36	7.1
			0.67	Projected pipe →	48	12.6
				Mitred/bevel →	42	9.6
			0.75	Projected pipe →	42	9.6
				Mitred/bevel →	36	7.1
			0.9	Projected pipe →	36	7.1
				Mitred/bevel →	33	5.9
			1	Projected pipe →	36	7.1
54	19	22.0		Mitred/bevel →	36	7.1
			0.67	Projected pipe →	42	9.6
				Mitred/bevel →	36	7.1
			0.75	Projected pipe →	42	9.6
				Mitred/bevel →	33	5.9
			0.9	Projected pipe →	33	5.9
				Mitred/bevel →	30	4.9
			1	Projected pipe →	33	5.9

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)</p> <p>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 checked="" type="checkbox"/> Yes <input 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, wet meadows and other wet areas unless explained and justified in the plan by the RPF.</p> <p>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. Provide the explanation and justification in SECTION III, (see table below)</p> <p><u>See Explanation and Justification in Section III.</u></p> <p><u>See the Yarding Methods Maps for WLPZ skid trail and WLPZ landing use locations. WLPZ landing L1 and skid trails are located within the WLPZ of unnamed Class II-S, tributary to the Gualala River (within ASP watershed). WLPZ landing L2 is located within the WLPZ of a Class II watercourse (non-ASP) which drains directly into the Pacific Ocean. There are no WLPZ skid trails associated with this landing. The High EHR area located on the Yarding Methods Map has multiple skid trail spurs that are all considered WLPZ trails since the High EHR area is included into the WLPZ.</u></p> <p><u>WLPZ Skid trail use: WLPZ skid trail use is proposed for mapped skid trails only. Avoid side cast and blading material from the trail. Skid logs with blade lifted to avoid disturbing soils. These trails are flagged in the field with yellow “Skid Trail” flagging. Following use, prior to the Winter Period: water bar to high EHR standards and treat exposed soil as per Item 18, Soil Stabilization Measures. For the trails in the High EHR area, the trails shall be waterbarred to Extreme EHR standards. Note that these trails are mapped as “Exception Skid Trails” on the Yarding Methods and Roads and Features Map, with a note indicating that the trails are also WLPZ trails.</u></p>

	<p>WLPZ landing use: RPF or Supervised designee familiar with WLPZ landings and their locations shall meet with the LTO and instruct the LTO on limitations of equipment operations near watercourses. Specifically minimizing disturbance close to the watercourse channel and spreading and compacting slash following operations. See L1-L2 in the Road Points Table in Item 24, as well in the WLPZ Facilities Table in Item 27.</p> <p>WLPZ Tractor Crossings: T1-T3 are tractor crossings that cross a Class III watercourse located within a WLPZ of another watercourse. These points are described in the Road Points table in Item 24, as well as in the WLPZ Facilities Table in Item 27. Their locations can be found on the Yarding Methods and Roads and Features Map at the end of Section II.</p>
b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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. Provide the explanation and justification in SECTION III, (see table below)</p>
c. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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. Provide the explanation and justification in SECTION III, (see table below)</p>
d. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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. Provide the explanation and justification in SECTION III, (see table below)</p>
e. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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, 956.5], Table I</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Provide the explanation and justification in SECTION III, (see table below)</p>
f. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<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.</p> <p>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. Provide the explanation and justification in SECTION III, (see table below)</p> <p><u>See Explanation and Justification in Section III.</u></p>

	<p><u>See the Yarding Methods Maps for WLPZ skid trail and WLPZ landing use locations. WLPZ landing L1 and skid trails are located within the WLPZ of unnamed Class II-S, tributary to the Gualala River (within ASP watershed). WLPZ landing L2 is located within the WLPZ of a Class II watercourse (non-ASP) which drains directly into the Pacific Ocean. There are no WLPZ skid trails associated with this landing. The High EHR area located on the Yarding Methods Map has multiple skid trail spurs that are all considered WLPZ trails since the High EHR area is included into the WLPZ.</u></p> <p><u>WLPZ Skid trail use: WLPZ skid trail use is proposed for mapped skid trails only. Avoid side cast and blading material from the trail. Skid logs with blade lifted to avoid disturbing soils. These trails are flagged in the field with yellow "Skid Trail" flagging. Following use, prior to the Winter Period: water bar to high EHR standards and treat exposed soil as per Item 18, Soil Stabilization Measures. For the trails in the High EHR area, the trails shall be waterbarred to Extreme EHR standards. Note that these trails are mapped as "Exception Skid Trails" on the Yarding Methods and Roads and Features Map, with a note indicating that the trails are also WLPZ trails.</u></p> <p><u>WLPZ landing use: RPF or Supervised designee familiar with WLPZ landings and their locations shall meet with the LTO and instruct the LTO on limitations of equipment operations near watercourses. Specifically minimizing disturbance close to the watercourse channel and spreading and compacting slash following operations. See L1-L2 in the Road Points Table in Item 24, as well in the WLPZ Facilities Table in Item 27.</u></p> <p><u>WLPZ Tractor Crossings: T1-T3 are tractor crossings that cross a Class III watercourse located within a WLPZ of another watercourse. These points are described in the Road Points table in Item 24, as well as in the WLPZ Facilities Table in Item 27. Their locations can be found on the Yarding Methods and Roads and Features Map at the end of Section II.</u></p>
g. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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)</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Provide the explanation and justification in SECTION III, (see table below)</p>
h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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"</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Provide the explanation and justification in SECTION III, (see table below)</p>
i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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"</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Provide the explanation and justification in SECTION III, (see table below)</p>
j. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Are there any additional in-lieu or alternative practices proposed for watercourse or lake protection?</p> <p>If YES, provide operational information to the LTO under each item selected YES, in SECTION II. Provide the explanation and justification in SECTION III, (see table below)</p>

Explanation and justification table for in-lieu WLPZ practices. SECTION III
This table is consistent with the table provided in the CalTREES online submission.

Map reference point	Standard rule	Describe each proposed practice	Explain how proposed practice differs from the standard practice	How is the proposed practice equal to the standard rule?
WLPZ Skid Trail	<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, wet meadows and other wet areas unless explained and justified in the plan by the RPF.</p> <p>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.) 	Existing skid trails within the WLPZ of Class II-S and Class II Watercourses are proposed for use.	As it pertains to WLPZ Skid trails the standard rule (14 CCR 916.3 (c)) states that timber operator shall not use tractor roads or landings within the WLPZ of a Class II watercourse unless explained and justified within the plan by the RPF and approved by the director.	The existing WLPZ Skid Trails are located within the WLPZ of Class II-S and wet area (leading to L1), a wet area near T2, a Class II (non-ASP) watercourse near T3, and within the WLPZ flagged around the High EHR area above a Class II (non-ASP) watercourse. The skid trails are in good condition, and fill slopes along the edge of the skid trails are stable. Once operations are complete, exposed soil within the WLPZ shall be stabilized as per Item 18 and 27 Soil Stabilization Measures. No operations will occur on any WLPZ Skid Trails during the winter period. Abiding by the standard rule is not feasible because the WLPZ tractor roads: 1) allow for access into areas that would be inaccessible if operations as proposed were not allowed, 2) allows for less ground disturbance as the timber operators will utilize the existing infrastructure (landings and tractor roads) and 3) cable yarding is not feasible at this location due to poor deflection, relatively small area and blind leads. The protection provided in the THP is equal to the standard rule and provides for the protection of the beneficial uses of water. The Yarding Methods Map, located at the end of Section II, depicts the location of the WLPZ Skid Trails and the High EHR WLPZ area.

L1	<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, wet meadows and other wet areas unless explained and justified in the plan by the RPF.</p> <p>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.) 	Existing WLPZ landing on existing temporary roads within the WLPZ for Class II-S watercourse.	As it pertains to L1 the standard rule (14 CCR 916.3 (c)) states that timber operator shall not use tractor roads or landings within the WLPZ of a Class II watercourse unless explained and justified within the plan by the RPF and approved by the director.	This existing landing is located along an existing temporary road, partially within the WLPZ of a wet area and a Class II-S. The landing is flat and has moderate fillslopes on the northern side, towards the Class II-S watercourse. The landing is located mostly outside of the WLPZ, but it does border the northern, western and southern portions of the landing. Once operations are complete, exposed soil within the WLPZ shall be stabilized as per Item 18 and 27 Soil Stabilization Measures. No operations will occur at L1 during the winter period. Abiding by the standard rule is not feasible because the WLPZ landings and tractor roads: 1) allow for access into areas that would be inaccessible if operations as proposed were not allowed, 2) allows for less ground disturbance as the timber operators will utilize the existing infrastructure (landings and tractor roads) and 3) cable yarding is not feasible at this location due to poor deflection and blind leads. The protection provided in the THP is equal to the standard rule and provides for the protection of the beneficial uses of water. The Yarding Methods Maps, located at the end of Section II, depicts the location of L1.
L2	<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, wet meadows and other wet areas unless explained and justified in the plan by the RPF.</p> <p>Except at:</p> <ul style="list-style-type: none"> • Prepared tractor crossing described in 14 CCR 914.8[934.8, 954.8](b) 	Existing WLPZ landing on existing seasonal road within the WLPZ for Class II (non-ASP) watercourses.	As it pertains to L1 the standard rule (14 CCR 916.3 (c)) states that timber operator shall not use tractor roads or landings within the WLPZ of a Class II watercourse unless explained and justified within the plan	This existing partial WLPZ landing is located along existing seasonal road within the WLPZs of two Class II watercourses (non-ASP). The landing is on both sides of the road, and may intercept both of the WLPZ's at the edges. The landing is flat and does not have fillslopes. Once operations are

	<ul style="list-style-type: none"> 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.) 		by the RPF and approved by the director.	complete, exposed soil within the WLPZ shall be stabilized as per Item 18 and 27 Soil Stabilization Measures. No operations will occur at L2 during the winter period. Abiding by the standard rule is not feasible because the WLPZ landings and tractor roads: 1) allow for access into areas that would be inaccessible if operations as proposed were not allowed, 2) allows for less ground disturbance as the timber operators will utilize the existing infrastructure (landings and tractor roads) and 3) cable yarding is not feasible at this location due to poor deflection and blind leads. The protection provided in the THP is equal to the standard rule and provides for the protection of the beneficial uses of water. The Yarding Methods Maps, located at the end of Section II, depicts the location of L2.
T1-T3	<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, wet meadows and other wet areas unless explained and justified in the plan by the RPF.</p> <p>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.) 	A Class III watercourse crosses a WLPZ skid trail.	As it pertains to T1, T2 and T3 the standard rule (14 CCR 916.3 (c)) states that timber operator shall not use tractor roads or landings within the WLPZ of a Class II watercourse unless explained and justified within the plan by the RPF and approved by the director.	T1, T2 and T3 are located on WLPZ skid trails proposed for use. These 3 crossings are for Class III watercourses. T1 and T3 will be dry during the time of operations, and the use of the WLPZ skid trail and crossing will allow for the CIII crossing location to be improved at these sites. T2 has a wet area located above, and may be wet during operations. As per item 26, a minimum 4" culvert shall be used at the crossing if wet during operations. The Yarding Methods Map at the end of Section II depicts the location for T1, T2 and T3.

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.</p> <p>If NO, notification exemption request below need not be answered.</p> <p><u>Please see Section V for an example copy of the Downstream Landowner Notification as well as the Newspaper Notification.</u></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><u>I reached out to the Gualala Community Services District additionally because there is a pump house and cement spill way located within a WLPZ within the THP. They confirmed these facilities, and that there were no additional facilities that required protection. The pump house and spillway are located within the WLPZ, therefore are excluded from heavy equipment use, and the LTO will be informed about these and their location to ensure no trees are felled onto or will damage the facilities.</u></p>

	<p><u>The Sea Ranch Water Company also confirmed a pump house located within a WLPZ within the THP. They also confirmed that there were no additional facilities that required protection. The pump house is located within the WLPZ, therefore is excluded from heavy equipment use, and the LTO will be informed about this facility and their location to ensure no trees are felled onto or will damage the facilities.</u></p> <p><u>All of these facilities do not actually qualify as surface domestic water use, however they do still need to be protected from timber operations.</u></p> <p><u>Please see the Infrastructure Protection Map in Section II for these locations.</u></p>
c2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>If YES, are there any additional mitigation measures needed beyond that required by standard watercourse and lake protection rules?</p> <p>If YES, provide the site-specific instruction to the LTO in SECTION II.</p>

<p>ITEM #29</p> <p style="text-align: center;">SENSITIVE WATERSHEDS</p>	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Is any part of the THP area within a Sensitive Watershed as designated by the Board of Forestry and Fire Protection?</p> <p>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.</p>

WATERSHED	SPECIAL RULE	MITIGATION MEASURES PROTECTING RESOURCES IDENTIFIED AT RISK

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>	
<p>a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Will slash treatment occur within 100 feet of the edge of the traveled surface of a PUBLIC road? Slash treatment will occur within 100' of the edge of CA State Route 1 where the project is adjacent to it in the southern portion. Treatment: Lopping & Scattering (Severing and spreading of slash/branches and limbs less than four (4) inches in diameter, and bark and split products debris left on the ground as a result of timber operations) so that no part is generally remains more than 30 inches above the ground; Mastication or crushing by tracked equipment.</p>
<p>b. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>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? Slash treatment will occur within 50' of the edge of Deer Trail where the project is adjacent to or near it. Treatment: Lopping & Scattering (Severing and spreading of slash/branches and limbs less than four (4) inches in diameter, and bark and split products debris left on the ground as a result of timber operations) so that no part is generally remains more than 30 inches above the ground; Mastication or crushing by tracked equipment.</p>
<p>c. <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>[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>
	<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) <input type="checkbox"/> lopping for Fire hazard reduction per (14 CCR 895.1) <input type="checkbox"/> Piling and burning per (14 CCR 917.2, 937.2, 957.2(a)(1-3)) <input type="checkbox"/> chipping <input type="checkbox"/> burying <input type="checkbox"/> removal <input type="checkbox"/> Other (explain)</p>
<p>d. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Are there any permanently located structures maintained for human habitation in the project area requiring slash treatment? If YES, identify distance slash treatment will occur and indicate the method of treatment <input checked="" type="checkbox"/> Within 100 feet of permanent structure <input checked="" type="checkbox"/> Removed <input type="checkbox"/> Piled and burned per (14 CCR 917.2, 937.2, 957.2(a)(1-3)) <input type="checkbox"/> Other (explain) <input checked="" type="checkbox"/> Between 100-200 feet of permanent structure <input checked="" type="checkbox"/> Lopped for fire hazard reduction (per 14 CCR 895.1) Lopping & Scattering (Severing and spreading of slash/ branches and limbs less than four (4) inches in diameter, brush, bark and split products debris left on the ground as a result of timber operations, so that no part is generally remains more than 30 inches above the ground. <input type="checkbox"/> removed <input type="checkbox"/> chipped <input type="checkbox"/> Piled and burned per (14 CCR 917.2, 937.2, 957.2(a)(1-3)) <input checked="" type="checkbox"/> Other (explain) Slash may also be treated by mastication or crushing by tracked equipment</p>

	<p>ADDITIONAL INFORMATION FOR SLASH TREATMENT</p> <ul style="list-style-type: none"> • The western THP boundary borders multiple residencies which are off-property from the plan submitter's property, but may be within 200 feet of the THP. There may be a few buildings that are within 100' of the property line. • The general prescription along this property line is Single-Tree Selection. The LTO shall treat all logging related/produced slash within 100 feet of the entire property line by reducing slash height to less than 30" using the above stated methods. • Where homes are within 100' of the line, slash will be removed entirely. • Where there are portions of WLPZ on this line, Lop and scatter only will be conducted in these areas where slash was created through operations. • The Coastal Commission Zone STAs require additional slash treatment within 300' of public roads and watercourses open to the public. • The Plan Submitter's property is adjacent SR 1 and will also be treated for slash created within 100', and will be treated within 50' for Deer Trail Road. These areas are already within the 100' Slash Treatment Buffer for the Steam Donkey THP. • The Plan Submitter, at their discretion, may opt to conduct further work including but not limited to lop and scatter, mastication or crushing with tracked equipment of brush and ladder fuels elsewhere within the THP. • Please see the Required Slash Treatment Map at the end of Section II for the location of all areas in the THP in which slash shall adhere to the language stated in this section. • Please see Section V for a letter of support for this fuel reduction work by Scott Upton, former CalFire Northern Region Chief
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>

f. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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>

g. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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 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>
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	<input 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.
h. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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>

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 / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
Northern Spotted Owl	Bird	Threatened	Threatened	Yes	<p><u>Northern Spotted Owl</u> According to the Northern Spotted Owl data base there is 1 known NSO AC within the 0.7 mile BAA- SON0082.</p> <p>SON0082 is not within 0.25 miles of the THP or the Appurtenant Road system and is more than 0.43 miles from the plan boundary.</p> <p><u>Note to LTO:</u> 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 and shall be conducted in compliance with Attachment A (Nov. 1, 2019). 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.</p> <p>Habitat retention, standard protection measures, operational limitations, and surveys shall be conducted in compliance with Attachment A (Nov. 1, 2019) for the Coast Forest District. NSO surveys for 2022 and 2023 have been included in the THP and are located in Section V. See NSO information in Section V for details of surveys.</p> <p><u>Activity Center Protections</u> Does not apply- AC is over 0.43 miles from the THP boundary. Exceptions to Attachment A: None</p> <p><u>Timber operations outside the 100-acre core area, but within 0.25 mile of an AC:</u> Does not apply- AC is over 0.43 miles from the THP boundary. Exceptions to Attachment A: None</p> <p><u>For all NSO ACs, prior to May 15 (until the required surveys are conducted on May 15 or later):</u> Does not apply- AC is over 0.43 miles from the THP boundary, and there is no helicopter operations proposed. Exceptions to Attachment A: None</p>

				<p><u>For all NSO ACs where reproductive status has been determined to be non-nesting or nesting failed:</u></p> <p>Does not apply- AC is over 0.43 miles from the THP boundary, and there is no helicopter operations proposed.</p> <p>Exceptions to Attachment A: None.</p> <p><u>For NSO ACs where reproductive status has been determined to be nesting, nesting unknown, or presumed nesting:</u></p> <p>Does not apply- AC is over 0.43 miles from the THP boundary, and there is no helicopter operations proposed.</p> <p>Exceptions to Attachment A: None.</p> <p><u>For any NSO ACs, regardless of current nesting status:</u></p> <p>a) If NSO move to a new location (>1,000 feet from the historical activity center), the appropriate protection measures should be provided to each activity center, or consultation with NSO review agencies should occur to evaluate the status of what may be multiple activity centers.</p> <p>Exceptions to Attachment A: None.</p> <p><u>Measures in addition to Attachment A:</u></p> <p>Activity centers may move over time or new territories may become established within the THP or within the biological assessment area of the THP prior to operations, but following THP approval. To ensure adequate take avoidance the landowner shall also:</p> <ul style="list-style-type: none"> • Conduct landscape habitat analysis (at 0.7 miles) on all newly established territories or designated activity centers that were not previously addressed in the THP. • Apply any applicable protection measures listed above (core area, habitat, and disturbance measures) to designated core areas, occupied owl site centers, and newly established territories not previously addressed in the THP. <p><u>Core Area Habitat Protections</u></p> <ol style="list-style-type: none"> 1. Once an AC has been accurately mapped, a 100-acre core area must be identified that contains the highest quality habitat (typically nesting/roosting) located contiguous with AC. 2. When an AC is surrounded by sufficient nesting/roosting habitat, the core area is typically mapped starting with a 1000-foot radius circle (72 acres) centered on the AC, and is connected on one side to the WLPZ and expanded until the core area includes 100 acres. Limited timber operations are allowed within the core area. 3. When an AC is closer than 500 feet to the outer edge of the nesting/roosting habitat, the
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					<p>acres of non-nesting/roosting habitat within 500 feet of the AC are included but should be augmented with additional nesting/roosting habitat elsewhere in the core area to make a total of 100 acres of the highest quality habitat.</p> <ol style="list-style-type: none"> 4. When the AC is closer than 1000 feet to, but not within 500 feet of, the outside edge of the nesting/roosting polygon, the protected core area should extend to the most distant edge of the nesting/roosting habitat but shall not be less than a 500-foot radius. 5. Operations conducted outside the core area but within 1000 feet of an AC should retain the functionality of any NSO habitat present pre-harvest within this area (i.e. maintain the pre-harvest habitat type post-harvest). 6. The 100-acre core use area should not be redrawn in subsequent entries, and the 500-foot radius should remain unchanged. Within the 0.7-mile radius (985 acres) of each activity center please use the following: 1) Retain habitat to maximize attributes desirable for NSO. 2) Retain at least 500 acres of suitable (nesting/roosting/foraging) NSO habitat, post-harvest, as follows: a) Retain 200 acres of nesting/roosting habitat within a 0.7-mile radius of the activity center consisting of: i) 100 acres of the 200 acres of nesting/roosting habitat retained should be contiguous, or as contiguous as possible with the activity center. ii) An additional 100 acres of nesting/roosting with in the 0.7-mile radius: (1) For the second 100 acres, maintain nesting/roosting habitat with a minimum of 66% of the harvest basal area per acre of trees at least 11" DBH. b) Retain at least 300 acres of suitable NSO habitat, post-harvest, of at least foraging quality. Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an activity center during the life of the timber operations. <p>Exceptions to Attachment A: None.</p> <p><u>Road Use</u></p> <p>To avoid take of NSO from noise disturbance (see U.S. Fish and Wildlife Service 2006) road use within 0.25 mile (1320 ft, 402 m) of an NSO activity center is prohibited until July 10, unless:</p> <ol style="list-style-type: none"> 1. Following an activity center search (2012 NSO Protocol) on or after May 15, the NSO is determined to be non-nesting, or nest failed, or; 2. The activity center is within 165 feet of, and closer to a major highway that typically has continuous traffic year-round (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the AC. 3. After July 9 and until the end of the breeding season road use within the 100-acre core is restricted to existing road use, maintenance and map point work. 4. At the discretion of the NSO review agencies, deviations to the above road use guidelines may be made
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					<p>depending on proposed noise minimizations (e.g., speed limits and compression brake restrictions), duration, distance of noise source from the activity center, site topography (i.e./ significant topography exists between the noise source and the activity center), and existing pre-project use</p> <p>Exceptions to Attachment A: None</p> <p>If this species is found within the plan area, cease operations and contact plan submitter who shall contact CDFW to develop protection measures.</p>
Marbled Murrelet	Bird	Threatened	Endangered	Yes	<p>No known occurrences within THP area. The nearest known occurrence of Marbled Murrelet is approximately 7 miles south of the plan area, where in 1999 CDF&W staff documented vocalizations and below canopy flight over the Clipper Mill Bridge. In 2015 Marbled Murrelets were reportedly seen again over the Clipper Mill Bridge area again. Habitat along the mainstem of the Gualala River has been determined to be possible future habitat, but is not currently. If a Marbled Murrelet is found to be nesting within the THP area, halt all operations, other than standard logging road use for egress, within 300 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter, accepted and approved by CDFW, and amended into the THP.</p>
Northern Goshawk	Bird	None	None	Yes	<p>No known occurrences within the THP area. For the Northern Goshawk, the buffer zone around active nest 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. For the Northern Goshawk, the critical period is March 15 until August 15. During this critical period, no timber operations are permitted. If a Northern Goshawk is found to be nesting within the THP area, halt all operations, other than standard logging road use for egress, within 263 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.</p>
Osprey	Bird	None	None	Yes	<p>There are 3 known Osprey nests within and adjacent to the THP area. The northern nest tree is located 250' above a Class II watercourse within the THP boundary in a large Douglas-fir snag, and the entire 500' buffer overlaps the THP and part of the road system. The central nest tree is located within the THP boundary in a large redwood tree and a 500' buffer overlaps 8 acres of a unit and the road system. The southern nest tree is located outside of the THP boundary along the appurtenant road system in a snag within a clearcut unit. A 500' buffer overlaps 0.5 acres of the THP and a road system and landing.</p>

					<p>Therefore there are 2 nests within the THP boundary and 1 nest within the buffers designated by 919.3b(5) that overlap either appurtenant roads or units. Please see the Biological Habitat Map in Section II for the location of these nests.</p> <p><u>All Osprey nests shall be surveyed prior to timber operations as follows:</u></p> <p><i>The RPF, or his supervised designee, or a consulting wildlife biologist who are familiar with identifying ospreys and their nests shall visit the known nest locations in the THP area twice, with surveys two weeks apart, during the period of March 15 through April 15 of an operating year to search the area to determine if ospreys are nesting prior to the start of operations. If the nest is determined to be unoccupied, operations may occur within the buffer zone after April 15. If an occupied osprey nest is found, no timber operations shall occur within 500 feet of the nest site until August 15, or until two weeks after fledging has occurred and the nest is determined to be no longer occupied. All survey data shall be submitted to CDFW 10 days prior to the start of operations. Additional consultation with CDFW shall be required if the locations and boundary lines of the harvest area are modified, or if CDFW received any new information regarding osprey occurrences near the proposed harvest.</i></p> <p>For any other 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.</p> <p>For the Osprey, all designated nest trees, perch trees, screening trees, and replacement trees shall be left standing and unharmed. These trees will be designated for retention in the field with an orange stripe at breast height and an orange butt mark at the base of the tree. If the RPF believes that retention is not feasible, he/she may propose construction of an artificial nest structure as an alternative.</p> <p>If an Osprey is found to be nesting within the THP area during the period of March 1 to August 1, halt all operations within 150 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.</p>
Bald Eagle	Bird	Fed Delisted	Endangered Fully Protected	Yes	Bald eagles were not seen or heard during plan layout. If a suspected Bald Eagle nest is observed during timber operations between January 15 and August 15 (919.3(d)(1)) halt all operations within 375' of the suspected nest (913.9(b)(1)), notify the RPF so that consultation may take place with the Director and CDFW to determine if special cutting

					<p>prescriptions are necessary to protect the nesting habitat per 919.3(c)(6). If suspected nest is observed outside of the above period, retain the nest tree, screening trees, perch trees, and replacement trees and notify the RPF so that CAL FIRE and CDFW may be consulted. The Buffer Zone shall be a minimum of ten acres in size.</p> <p>A pair has been seen for over the last few years in the Gualala Estuary. It is unknown where they nest, but they have not been seen on GRT property.</p>
Golden Eagle	Bird	None	Fully Protected	Yes	<p>No known occurrences within the THP area. The buffer zone around active nest sites shall be a minimum of 8 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 trees, shall be left standing and unharmed. If this species is found within the plan area, contact plan submitter who shall contact CDFW to develop protection measures.</p>
Peregrine Falcon	Bird	None	Fully Protected	Yes	<p>No known occurrences within the THP area. 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. If this species is found within the plan area, contact plan submitter who shall contact CDFW to develop protection measures.</p>
Great Blue Heron and Great Egret	Bird	None	None	Yes	<p>No known occurrences within the THP area. 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>
California Red-legged Frog	Amphibian	Threatened	None		<p>No known occurrences within the THP area or within a mile of the THP area. Protective measures for the Steelhead, Coho, Chinook, Pink 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. Potential Habitat has been previously identified adjacent to the THP and can be seen on the Biological Habitat</p>

				<p>Map at the end of Section II. The closest potential habitat is 370' from the THP boundary.</p> <p>The USFWS developed four take avoidance measures for THP's as being the most effective manner in avoiding take. This THP shall incorporate Scenarios III and IV from the California Red-legged Frog Take Avoidance Scenarios March 2, 2008 (Replaces 2/1/08 version) which are recommended tools to avoid take. The following definitions of wet and dry season definitions vary slightly from weather periods defined by the Forest Practice Rules.</p> <p><u>Scenario III:</u> Suitable habitat within 2 miles of the harvest units or in units where harvest activities are planned within 300 feet of suitable habitat during wet season. No take is estimated under the following conditions:</p> <p>*The wet season is defined as the first frontal rain system depositing a minimum of 0.25 inches if rain after October 15th and ends on April 15th.</p> <ol style="list-style-type: none"> 1. For Class III Watercourses, when dry, maintain a minimum 30 foot "No Harvest" buffer, and fell trees away from watercourses. 2. For Class II Watercourses and intermittent ponds/wetlands that meet the definition of suitable habitat, where water is present, 300 foot "No Harvest" buffer, where dry, 30-foot "No Harvest" buffer and no equipment within 75-feet of annual high water mark. Trees shall be felled away from any suitable habitat. 3. Class I Watercourses and permanent ponds or wetlands, that meet the definition of suitable habitat, a 300-foot "No Harvest" Equipment Exclusion Zone shall be established around the suitable habitat. <p><u>Scenario IV:</u> Suitable habitat within 2 miles of the harvest units or in units where harvest activities are planned within 300 feet of suitable habitat during dry season. No take is estimated under the following conditions:</p> <p>* The dry season is defined as April 16th and ends with the first frontal rain system which deposits a minimum of 0.25 inches of rain after October 15th.</p> <ol style="list-style-type: none"> 1. All suitable habitat must maintain a 30-foot "No Harvest" and Equipment Exclusion Zone buffer. <p>Under all above scenarios, the following operational conditions must also be included:</p> <ol style="list-style-type: none"> a. Pile burning must be outside the 300 foot "No Harvest" buffer. b. No herbicide use allowed within 300 feet of suitable habitat except for direct application to stumps. c. Roads and Landings, if constructed, must be at least 300 feet from suitable habitat,
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					<p>and construction must occur during the dry season.</p> <p>*If a California Red-legged frog is found during operations, halt all operations within 200 feet and contact CDFW for a consultation regarding protection measures.</p>
Coho Salmon	Fish	Endangered	Endangered	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.
Steelhead	Fish	Threatened	None	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.
Chinook	Fish	Threatened	None	No	Protective measures for the Chinook 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.
Pacific Fisher	Mammal	Endangered	Threatened (Only Southern Sierra Nevada ESU/DPS)	No	<p>This plan is within the current range of the Fisher. Habitat for the fisher within the plan area is low and the BAA contains only scattered small areas of potential suitable habitat.</p> <p>Protections for pacific fisher during operations of the THP:</p> <p>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.</p> <p>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 1st to May 15th) and if it is felled during the maternal denning period (May 16th thru July 31st) 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.</p> <p>During timber operations, if a den, resting area or other habitation of a fisher is discovered, CALFIRE and CDFW will be notified of the detection and 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.</p> <p>Measures that have been incorporated in this THP to avoid take include:</p>

					<p>A. leaving of all snags that aren't a risk to safety;</p> <p>B. Leaving all large hardwoods (24" or greater) up to 4 per acre.</p>
Pacific Martin	Mammal	Threatened	None	No	No known occurrences within the THP area. The plan is within the historic range of the Coastal Distinct Population Segment (DPS) of the Pacific Marten (<i>Martes caurina</i>), a Federally listed Threatened species. Pacific 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.
Gray Wolf	Mammal	Endangered	Endangered	No	No known occurrences within the THP area. Gray Wolf is listed as endangered in California and on the federal level. 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.
Behren's Silverspot Butterfly	Insect	Endangered	None	No	No known occurrences within the THP area. If a Behren's Silverspot Butterfly is observed, contact plan submitter who shall contact CDFW to develop protection measures.
Lotis Blue Butterfly	Insect	Endangered	None	No	No known occurrences within the THP area. If a Lotis Blue Butterfly is observed, contact plan submitter who shall contact CDFW to develop protection measures.
Western Bumblebee	Insect	None	Candidate Species	No	There is potential habitat for the Western Bumble Bee within the THP area. There are no known occurrences within the THP area, and none were observed during THP Layout. If a Western Bumble Bee nest is sited, stop operations around the nest and the observer shall contact the Plan Submitter who shall contact CDFW to develop protection measures. An appropriate no disturbance buffer zone (buffer distance determined through consultation with CDFW) shall be established around the nest to reduce the risk of disturbance or incidental take while the Plan Submitter and CDFW develop protection measures. This protocol is taken directly from CDFW's June 2023 <i>Survey Considerations for CESA Candidate Bumble Bees</i> .

b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any <u>PLANTS</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.

Plant Species Table				
Plant Species	FEDERAL Threatened / endangered	STATE Rare / Threatened / Endangered	CRPR (1A, 1B, 2A, 2B, 3, 4)	Protection measures

Botanical Surveys

Seasonally appropriate floristic surveys have been conducted for the plan area in 2023. A rare plant scoping list, botanical survey and report is included in Section V of the THP. Rare plants (non-listed) are discussed below.

Post-Approval Plant Discovery

In the event that additional rare or sensitive plant species is found after THP approval, the default mitigation measures of avoidance will be implemented by installing a temporary 50-foot buffer around the outer most occurrence of the plant until a species-specific mitigation measure can be developed. No timber harvesting or road construction shall occur within 50 feet of any location supporting a listed/sensitive plant unless alternative mitigation measures, developed through consultation with CDFW, are applied. The CDFW and RPF will work to develop species-specific mitigation measures to reduce impacts to sensitive plant taxa to less than significant. If the agreed upon protection measures alter operations of the plan, those measures will be made part of the plan through a minor amendment submitted to CAL FIRE.

NON-LISTED SPECIES IMPACTS	
c. <input type="checkbox"/> Yes <input checked="" 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
Cooper's Hawk	Bird	Cooper's hawks were not discovered during plan layout, but may be associated with the plan area. No known occurrences within the THP area. For the Coopers Hawk, the buffer zone around active nest 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 Coopers Hawk, designated nest trees, screening trees, perch trees, and replacement trees shall be left standing and unharmed. If a Coopers hawk is observed, contact plan submitter who shall contact CDFW and CALFIRE to develop protection measures. If a Coopers hawk is observed, contact plan submitter who shall contact CDFW to develop protection measures.
Sharp-Shinned Hawk	Bird	Sharp-shinned hawks were not observed during plan layout, however this species may be associated with the plan area. No known occurrences within the THP area. For the Sharp-shinned Hawk, the buffer zone around active nest 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 Sharp-shinned Hawk, designated nest trees, screening trees, perch trees, and replacement trees shall be left standing and unharmed. If a sharp-shinned hawk is observed, contact plan submitter who shall contact CDFW and CALFIRE to develop protection measures.
Purple Martin	Bird	Purple martins were not observed during plan layout, however this species may be associate with the plan area. No known occurrences within the THP area. If a purple martin nest is observed during operations, the nest tree(s), designated perch tree(s), screening tree(s), and replacement trees shall be left standing and unharmed and shall apply the provisions of subsections (b) and (c) of 919.2. Additionally, the plan submitter shall immediately contact CDFW and CALFIRE to develop further protection measures.
Vaux's Swift	Bird	The vaux's swift was not observed during plan layout, however this species may be associated with the plan area. No known occurrences within the THP area. If a Vaux's swift nest is observed during operations, the nest tree(s), designated perch tree(s), screening tree(s), and replacement trees shall be left standing and unharmed and shall apply the provisions of subsections (b) and (c) of 919.2. Additionally, the plan submitter shall immediately contact CDFW and CALFIRE to develop further protection measures.

Red Tree Vole	Mammal	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).
Townsend Big-Eared Bat	Mammal	Habitat elements for this species including trees with large basal hollows will be retained within the plan area. If this species is found within the plan area, halt all operations within 500 feet and contact plan submitter who shall contact CDFW and CALFIRE to develop protection measures.
Pallid Bat	Mammal	Habitat elements for this species including trees with large basal hollows will be retained within the plan area. If this species is found within the plan area, halt all operations within 500 feet and contact plan submitter who shall contact CDFW and CALFIRE to develop protection measures.
Foothill Yellow-Legged Frog	Amphibian	FYLF were not discovered during plan layout, but may be associated with the plan area. Avoidance measures to protect habitat for FYLF will be met through the standard WLPZ protection measures as well as through BMP's for watercourse crossing work.
California Giant Salamander	Amphibian	California Giant Salamanders were not discovered during plan layout but may be associated with the plan area. Avoidance measures to protect habitat for California Giant Salamander will be met through the standard WLPZ protection measures as well as through BMP's for WLPZ operations and watercourse crossing work. If Giant Salamanders are discovered during operations halt all operations within 100 feet and contact CDFW to develop a site-specific mitigation measures to amend into the THP.
Northwestern Pond Turtle	Reptile	Western Pond Turtles were not discovered during plan layout but may be associated with the plan area. Avoidance measures to protect habitat for Western Pond Turtles will be met through the standard WLPZ protection measures as well as through BMP's for WLPZ operations and watercourse crossing work. If Western Pond Turtle is discovered during operations halt all operations within 100 feet and contact CDFW to develop a site-specific mitigation measures to amend into the THP.
Southern Torrent Salamander	Amphibian	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.

Non-Listed Plant Species Table				
Plant Species	FEDERAL Threatened / endangered	STATE Rare / Threatened / Endangered	CRPR (1A, 1B, 2A, 2B, 3, 4)	Protection measures
Coast lily (<i>Lilium maritimum</i>)	None	None	1B.1 (Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California)	The population locations as depicted on the Rare Plant Location Map shall have pink with black "Native Plant Protection" flagging hung at their locations prior to operations. The RPF shall show the LTO these locations, especially those areas of higher abundance along roads and skid trails. These are not equipment exclusion zones. The LTO shall avoid excessive grading of the road shoulders in these concentrated areas, and to the extent feasible in all other areas of the plan.
Swamp harebell (<i>Eastwoodiella californica</i>)	None	None	1B.2 (Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California)	The population locations as depicted on the Rare Plant Location Map shall have pink with black "Native Plant Protection" flagging hung at their locations prior to operations. The RPF shall show the LTO these locations, especially those areas of higher abundance along roads and skid trails. These are not equipment exclusion zones. The LTO shall avoid excessive grading of the road shoulders in these concentrated areas, and to the extent feasible in all other areas of the plan. There are some occurrences of this species off of roads or skid trails within wet areas

				protected by WLPZ and within an STZ for the below-listed <i>Veratrum</i> species. These are equipment exclusion zones. Trees shall be directionally felled away from these zones.
Harlequin Lotus (<i>Hosackia gracilis</i>)	None	None	4.2 (Plants of limited distribution (watch list); moderately threatened in California)	The population locations as depicted on the Rare Plant Location Map shall have pink with black "Native Plant Protection" flagging hung at their locations prior to operations. The RPF shall show the LTO these locations which are mostly located on the main haul road. These are not equipment exclusion zones. The LTO shall avoid excessive grading of the road shoulders in these concentrated areas, and to the extent feasible in all other areas of the plan.
Fringed false-hellebore (<i>Veratrum fimbriatum</i>)	None	None	4.3 (Plants of limited distribution (watch list); the threat ranks do not designate a change of environmental protections)	There are 4 locations of this species within the THP. The northern occurrence (#1) is located in a meadow and shall be flagged in STZ and pink "Native Plant Protection" with a 50' buffer. This is an equipment exclusion zone. Trees marked within and adjacent to this zone shall be directionally felled away. Occurrence #2 is located on the southern side of the road next to the head of a Class III watercourse and RP 26. An approximately 20' buffer of STZ and pink "Native Plant Protection" shall be flagged around the population and shall be avoided to the extent feasible during road maintenance and road point work at RP 26. Trees marked within and adjacent to this flagging shall be directionally felled away. Occurrence #3 & 4 both occur within the WLPZ of wet areas. Trees marked within these wet areas shall be directionally felled away. These are, by the FPRs, equipment exclusion zones.

Rare Plants

Please see the Rare Plant Location Map in Section II and Botany Report in Section V.

THP #1-17-049 SON addresses both swamp harebell (*Eastwoodiella californica*) and coast lily (*Lilium maritimum*) occurrences and abundance specifically within the Rancho German Land Grant and current THP area. It states in Section II Item 32 and 38, respectively:

"A scoping process and survey for rare plants was conducted and is included in Section IV. Special Treatment Flagging was hung adjacent to where rare plants are already known to exist or have been discovered. These special treatment areas are not equipment exclusion zones, as agreed during the PHI. The known rare plants on this plan are being smothered by competing vegetation and should respond positively to disturbance. This area of GRT property is known to have high concentrations of rare plants because of the soil types. Many rare plant sites have been previously documented near the THP and many more were found during the survey. The two rare plants known to exist within the THP area and appurtenant roads are swamp harebell (*Campanula californica*) listed as a CNPS1 B.2 and coast lily (*Lilium maritimum*) listed as a CNPS1 B.1. Both of these plants seem to prefer the sandy soil typical of the German Rancho and are usually in openings or along the edges of roads and skid trails where the competition from other plants is reduced. The swamp harebell prefers swales where water collects but not where water stays for long periods. Neither plant appears to do well in areas with thick brush or overstory canopy. Both plants are common in the vicinity of this THP and throughout the German Rancho."

"...
Note to LTO about rare plants- There are numerous locations with rare plants in or near this THP. The LTO shall meet with the supervising forester prior to operations to be shown the areas where these plants occur. Ask the supervising forester for a georeferenced map with the plant locations so that you can find the plant STA flagging using Avenza's PDF Maps App. The road segments as shown on the road points work order are areas where rare plants are especially concentrated. These areas are not equipment exclusion zones."

THP 1-09-041SON also discussed this issue regarding the positive response swamp harebell and coast lily has to open canopy and lack of competition from other shade tolerant brush species, and its presence in the road ways.

For the Steam Donkey THP, the protection measures listed in the table above for these two species, as well as *Hosackia gracilis*, shall apply and are based off the previously approved THP in this area from 2017. Due to the current abundance after the last harvest, site conditions, and previous THP's discussion of the effect of disturbance, no equipment exclusion zones shall apply. *Hosackia*

gracilis is also occurring on or adjacent to existing mainline and seasonal roads where there is reduced canopy and constant road maintenance, therefore the same treatment shall apply.

The THP potentially also has the rare species fringed false-hellebore (*Veratrum fimbriatum*), however during the surveys, the species was not yet blooming. Therefore, it is currently unknown whether it is the rare species, or the common false-hellebore (*Veratrum californicum*). In the case that the species is not the rare species, the results will be amended into the THP and protection measures shall not apply. In the meantime, the THP will include the protection measures stated in the table above assuming it is the rare species.

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 939.1(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 wolfy 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. Should a listed species (plant and/or animal) be found within or adjacent to the THP area, the RPF will complete and submit a Native Species Occurrence form to the CNDDDB to document any positive detection of rare, threatened, or endangered species.

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any snags which must be felled for fire protection or safety reasons?	
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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Permanent road(s) <input checked="" 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?	
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:	

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> <p>Please also see additional information in Section III.</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:</p> <p>Telephone: LNU, Sonoma-Lake Napa Unit = (707) 576-2344</p> <p>Mail: Address: 135 Ridgway Ave. Santa Rosa, CA 95401, or</p> <p>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).</p> <p>When notifying, have the THP number available and earliest start date.</p>
Flagging	<p><u>Solid Pink "Timber Harvest Boundary"</u> - THP Boundary</p> <p><u>Solid Blue</u> - Centerline of Class III watercourses</p> <p><u>Blue and white stripe with "Watercourse and Lake Protection" with solid Orange-Glo</u> - Class II-L/Class II-S watercourse, Class II watercourse and wet area WLPZ flagging</p> <p><u>Solid Lime-Glo and black "Silviculture Boundary" with Solid Orange -Glo</u> - Silviculture boundary</p> <p><u>Solid Yellow with Black "Skid Trail" flagging</u> – Exception Skid Trails- three hung together means stop.</p> <p><u>Solid White and Solid Orange Glo-</u> Road Point</p> <p><u>Orange with Black "Truck Road"</u>- Truck road, three hung together means end of road.</p> <p><u>Solid Pink "Do Not Cut"</u>- No harvest area, includes No-Harvest Unstable areas if outside of WLPZ, and Variable Retention Aggregates.</p> <p><u>White and Orange striped "Special Treatment Zone" and pink highlighter</u>-STA (Coastal Commission Zone)</p> <p><u>White and Orange striped "Special Treatment Zone" and Yellow highlighter</u>- Archaeological Sites</p> <p><u>White and Orange striped "Special Treatment Zone" and pink with black "Native Plant Protection"</u> – Botany equipment exclusion zone</p> <p><u>Pink with Black "Native Plant Protection"</u>- Indicates the location or presence of rare plants, but is not an EEZ if hung alone</p>

Note to LTO Regarding Tractor Operations	In order to ensure minimal ground disturbance from ground-based yarding, tractors may not drive with their blade lowered, except as needed to move debris.
Unstable Areas	There are multiple Unstable Areas identified by the RPF within and adjacent to the THP. These are all flagged to be out of the timber harvest boundary, or are flagged within the WLPZ of a Class II watercourse or wet area, and are no-harvest areas and equipment exclusion zones within the THP. Unstable areas located within the WLPZ are not marked for harvest. Some unstable areas that are larger than the WLPZ have been incorporated into the WLPZ by flagging above their scarp by 25'.
Note to LTO Regarding Falling Operations	Consistent with safety, trees should be felled in whatever direction best preserves the canopy of the residual stand. Trees felled near Class III watercourses may be felled across the watercourse in an attempt to reduce stand damage, if necessary, but all limbs and material shall be cleared out of the watercourse prior to the winter period, and any damage to the channel banks shall be repaired to the extent feasible. If channel bank repair is needed, the LTO shall consult with the RPF prior to conducting this work. Near and within WLPZ's, trees shall be felled directionally away from the watercourse or wet area, and if a tree will cause significant stand damage to be felled away in this manner, then it should be left and not attempted to be felled across or towards the watercourse. If a tree is felled across a Class II watercourse, the tree shall be left for LWD.
Note to LTO Regarding Beneficial Uses of Water	At a minimum, the LTO shall not do either of the following during timber operations: <ol style="list-style-type: none"> 1. Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water; 2. Remove water, trees or large woody debris from a watercourse or lake, riparian areas, or the floodplain in quantities deleterious to fish, wildlife, and beneficial functions of riparian zones, or the quality and beneficial uses of water.
Note to LTO and supervising RPF Regarding Wet Area Protections	During the pre-operations meeting with the LTO, the RPF will explain the characteristics of wet areas, the location of mapped wet areas and the importance of protecting them. The RPF will also explain the importance of not operating heavy equipment on saturated soils.
Note to the LTO Regarding Servicing Equipment	1) No servicing of equipment within 150' of a Class I watercourse or 100' of a Class II watercourse or wet area. Maps showing these watercourses is included at the end of Section II. 2) All state and federal regulations pertaining to the handling and storage of fuel must be adhered to during logging operations.
Note to LTO Regarding Slash Treatment	Slash created through logging shall be treated by lop & scatter, crushing or mastication within 100' of the property line, within 300' of a public road within the Coastal Commission Zone STAs, within 100' of CA SR 1, and within 50' of Deer Trail at a minimum. If a residential home is within 100' of the property line, slash created shall be completely removed. The general silvicultural prescription along this property line is Single-Tree Selection. The LTO shall treat all logging related/produced slash within 100 feet of the entire property line by reducing slash height to less than 30" using the above stated methods (as well as the additional listed buffers which mostly fall into this 100' property buffer). Where there is a WLPZ portion, lop and scatter only shall be used (no heavy equipment). See the Required Slash Treatment Map at the end of Section II and the directions to the LTO in Item 30. Please also see the letter of support for fuel reduction within the THP by former/retired CAL FIRE Northern Region Chief Scott Upton located in Section V.
Note to LTO regarding Rare Plant Locations	Please refer to the maps provided in Section II- Rare Plant Location Maps as well as the protection measures listed in Section II Item 32. The RPF of record shall meet onsite with the LTO prior to operations to discuss the rare plant locations and applicable mitigations. Rare plant locations without EEZ's will have pink flagging with "Native Plant Protection" hung at the roadside to indicate their presence. Rare plants that do have EEZs are located within WLPZs or STZ flagging hung with the pink botanical flagging mentioned above, buffering the species. The roadside, landing, road point, and skid trail occurrences shall be identified in the field with the pink flagging to help the LTO find the mapped locations, but shall not receive an EEZ. This applies to the swamp hairbell (<i>Eastwoodiella californica</i>) the coast lily (<i>Lilium maritimum</i>) and the harlequin lotus (<i>Hosackia gracilis</i>). In areas of high concentration, excessive grading shall be avoided and excessive grading or movement of dirt shall be

	<p>avoided to the extent feasible throughout the plan area. The unconfirmed rare fringed false-hellebore (<i>Veratrum fimbriatum</i>) is located within WLPZs or within STZ and the pink botanical flagging buffering the species within the harvest units (not crossing roads). When this species can be confirmed as the common or rare species, these measures will be reassessed, and the LTO will be informed about whether these conditions still apply.</p>
<p>Note to LTO regarding Noise</p>	<p>The RPF has disclosed that impacts due to noise are possible given the close proximity of the proposed timber operations to the community of Sea Ranch. Specific mitigations have been proposed by the RPF and described in Section IV of the THP. Mitigations for noise impacts include:</p> <ul style="list-style-type: none"> - the limitation of log truck traffic and log hauling to the hours of 7AM – 4:30PM - Work on roads and landings within 200 feet of the property line shall also adhere to the hours of 7AM 4:30 PM - Log trucks shall not use jake brakes within 200 feet of the property line and beyond (off-property). <p>With the implementation of these mitigation measures (which are above and beyond the CA FPRs) no significant cumulative impacts related to noise are expected to occur as a result of the proposed project.</p>

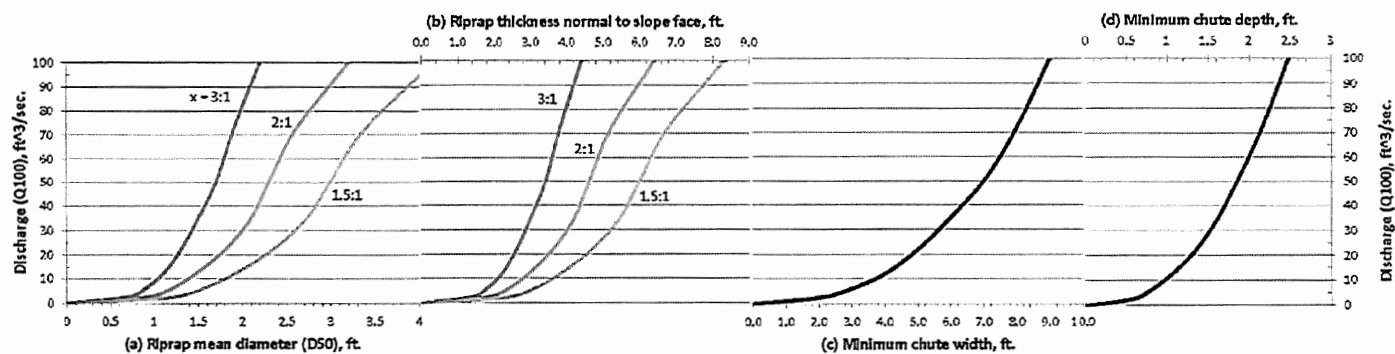
DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: _____
(Signature) (Date)

(Printed Name) (Title)

Simplified design of rock-armored crossings



Note: Slopes armored at a 1.5:1 slope inclination shall be less than 15 feet in height, and be constructed by placing rock in a running bond with at least 3 points of contact and with the long axis of the rock placed horizontal and facing into the slope.

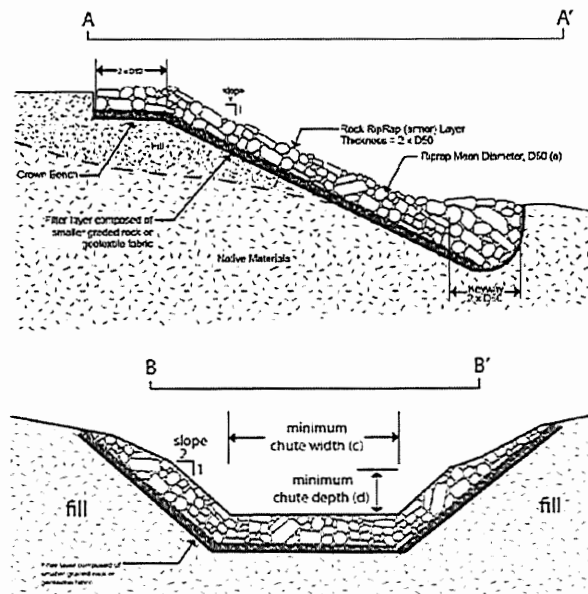
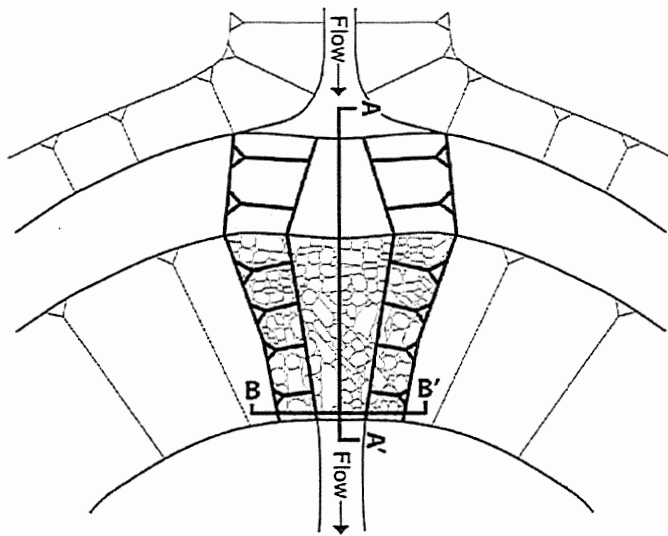
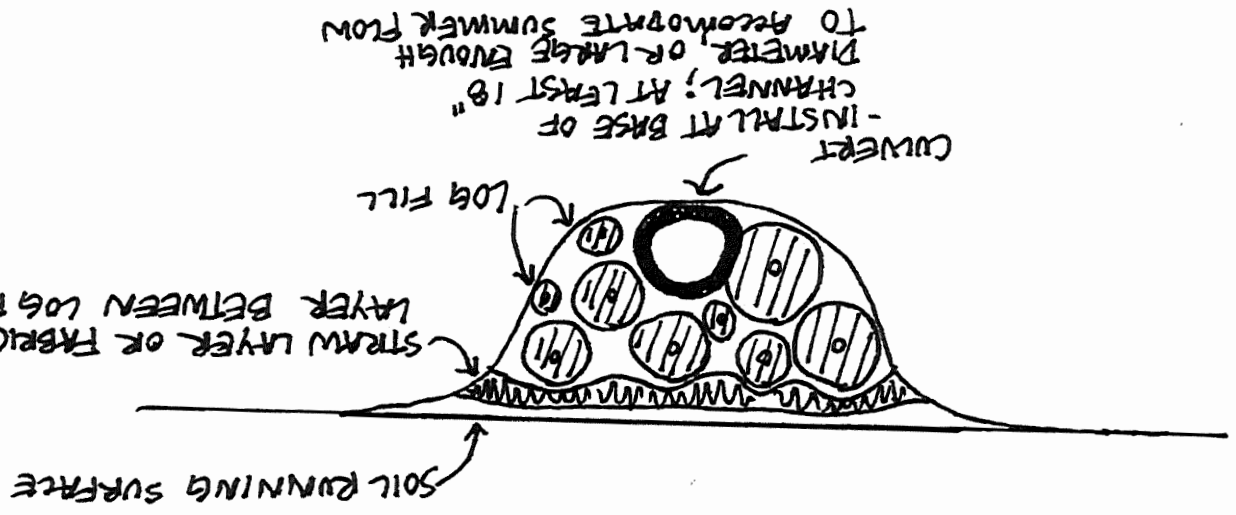


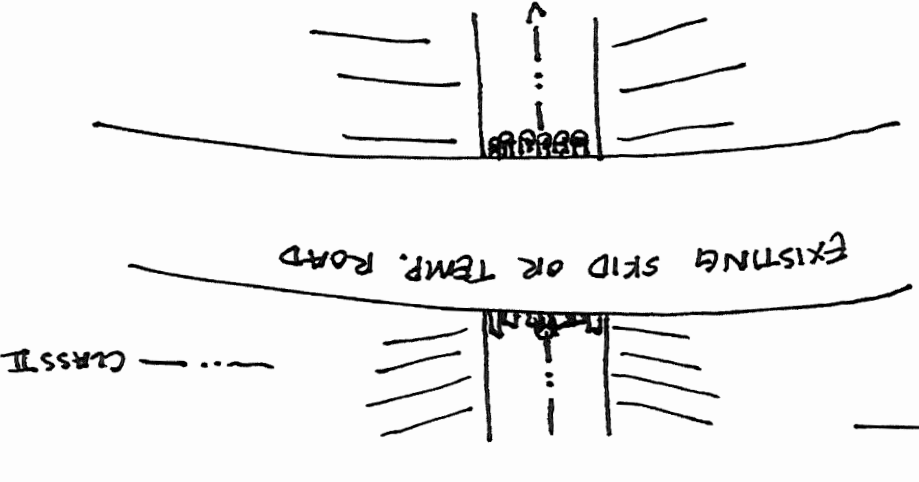
Figure 23. Simplified design nomograph (may be printed in an expanded 11 x 17 inch format).

STEAM DONKEY THP: TEMPORARY SPLITTER CROSSING DESIGN

CROSS-SECTIONAL VIEW



CURVEIT - INSTALL AT BASE OF CHANNEL; AT LEAST 18" DIAMETER, OR LARGE ENOUGH TO ACCOMMODATE SUMMER FLOW



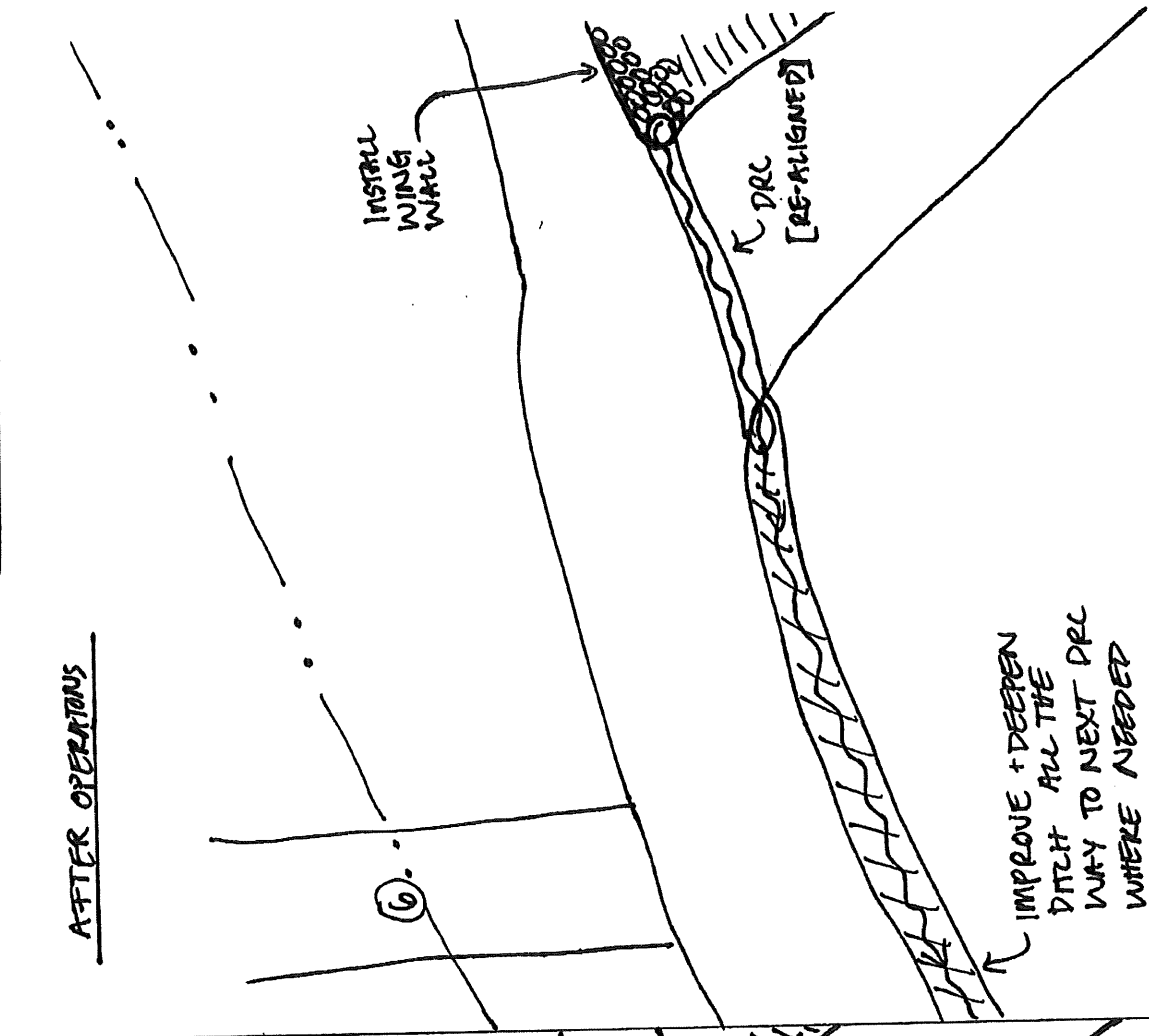
BIRD'S EYE VIEW

- REMOVE CROSSING
- AFTER OPERATIONS & PRIOR TO WINTER PERIOD OF FIRST YEAR OF USE
- EXCAVATE CROSSING TO WATERCOURSE GRADE
- LAYBACK THE BANKS 1.5 H: 1 V
- TREAT EXPOSED SOIL AS PER ITEM 18 SOIL STABILIZATION MEASURES

DIAGRAM # 2

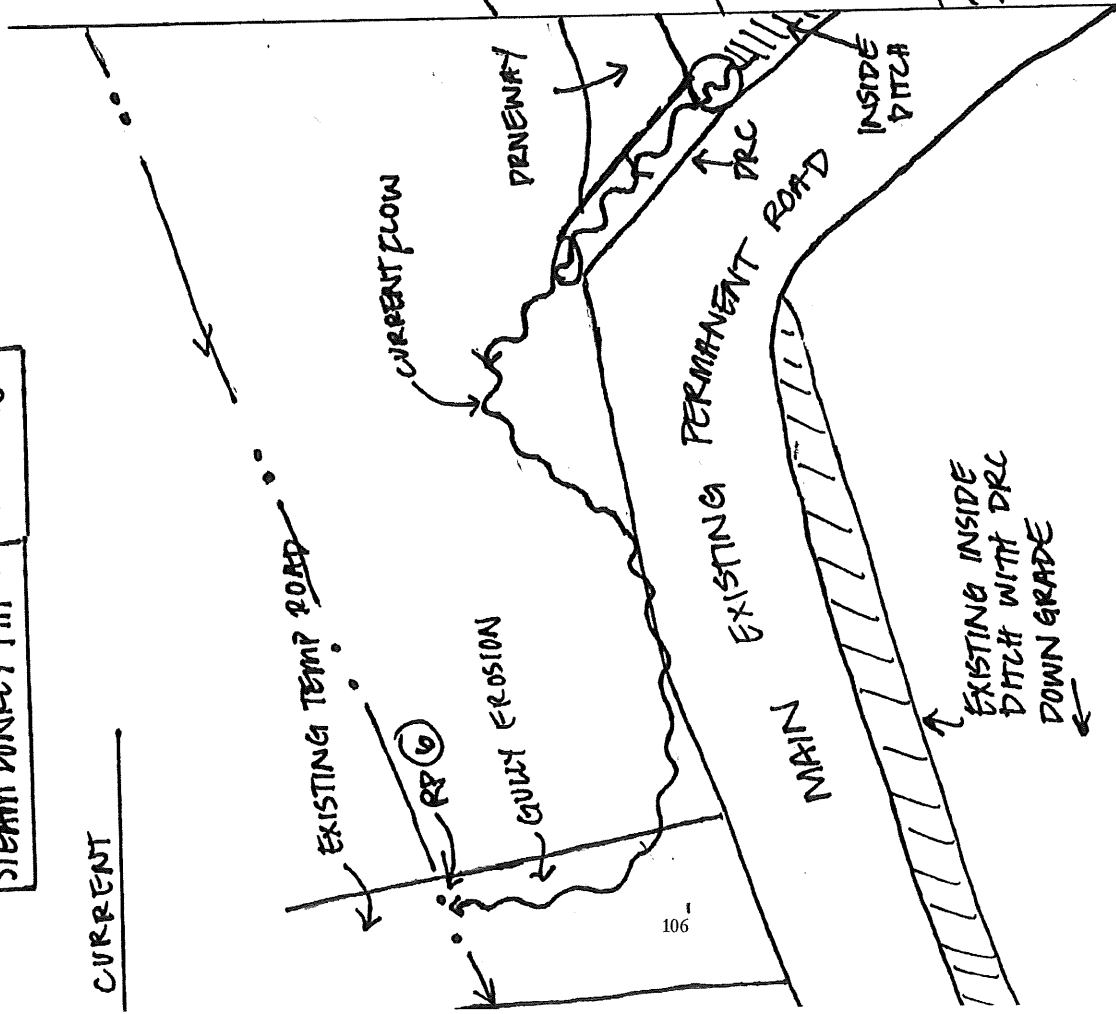
DIAGRAM # 3

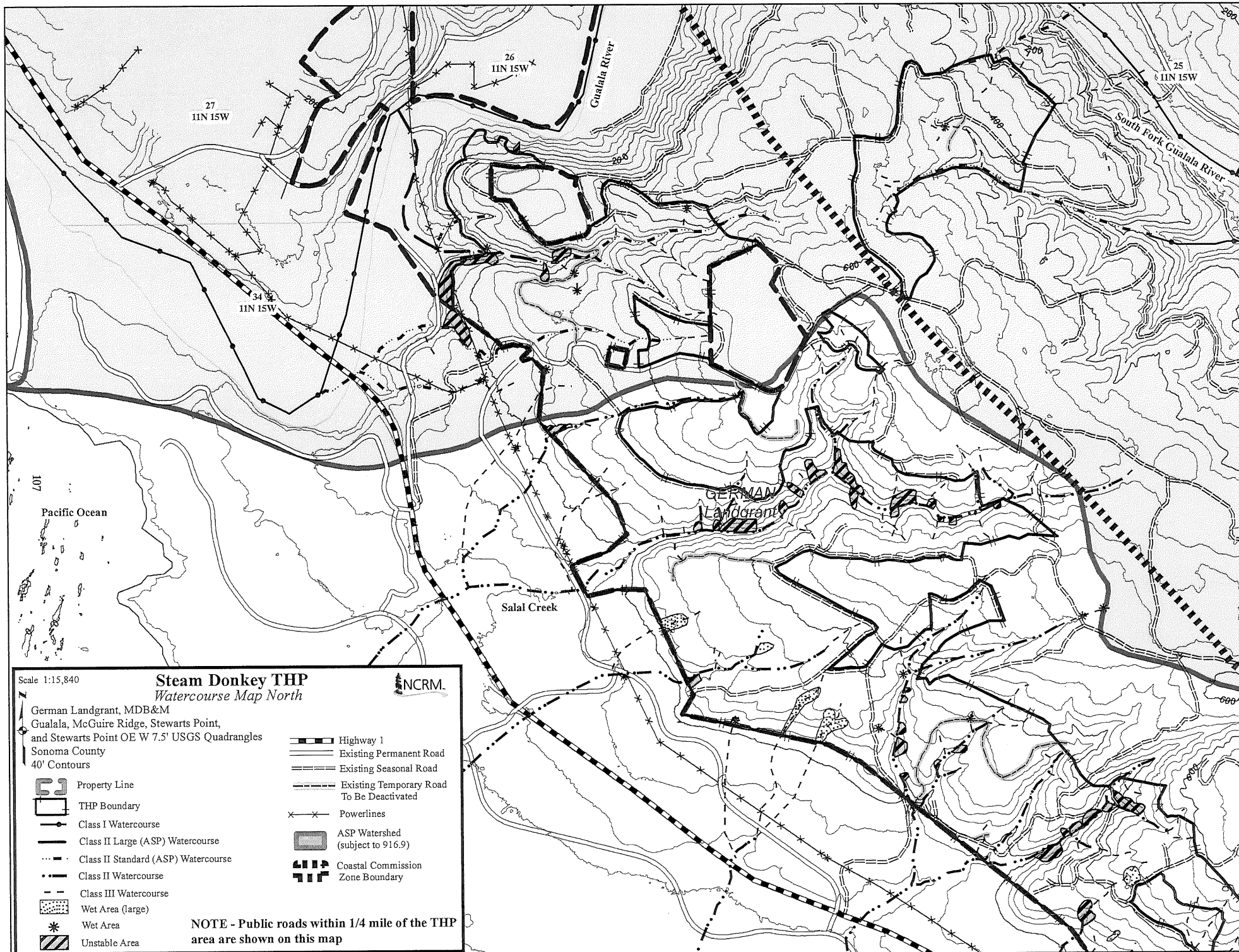
AFTER OPERATIONS

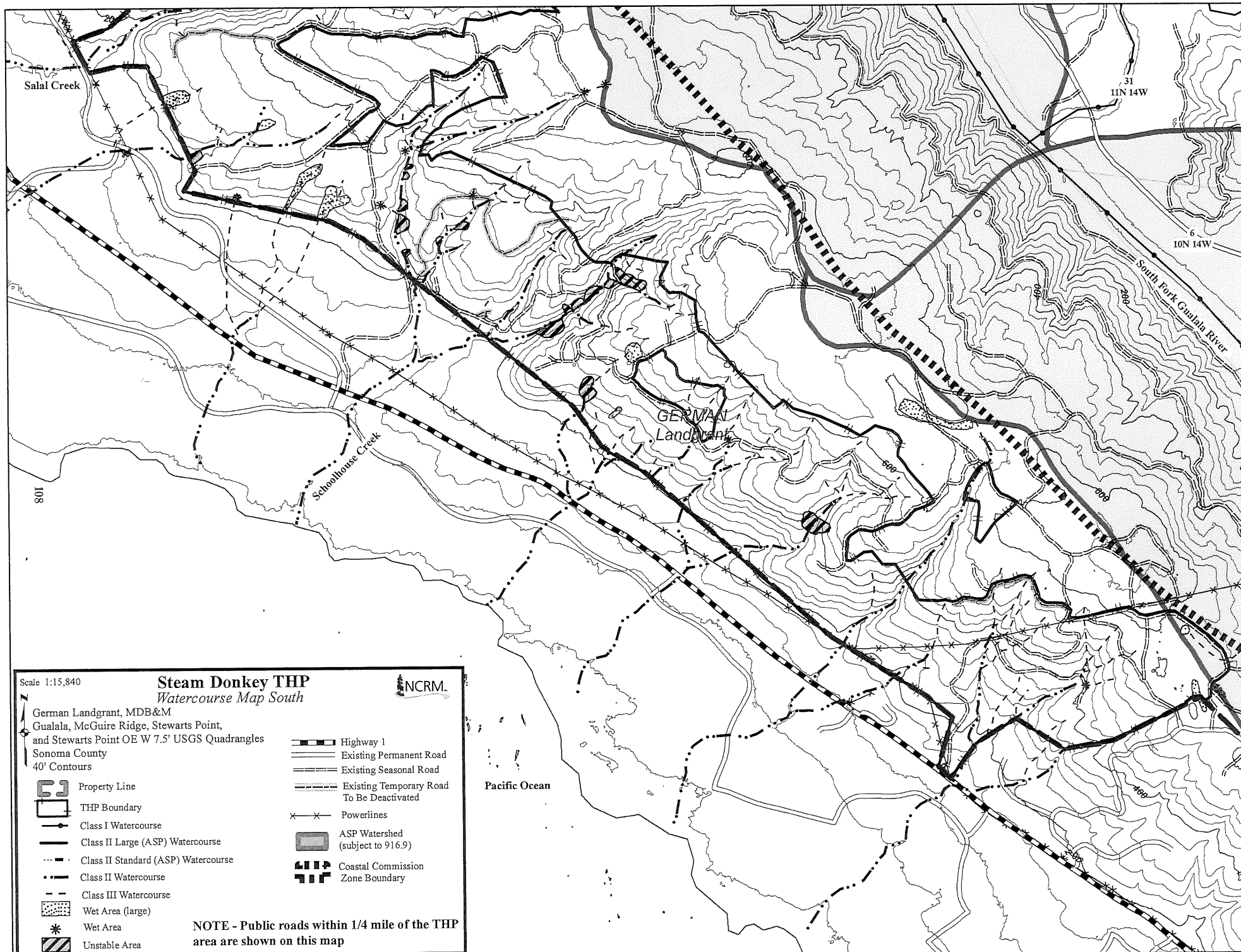


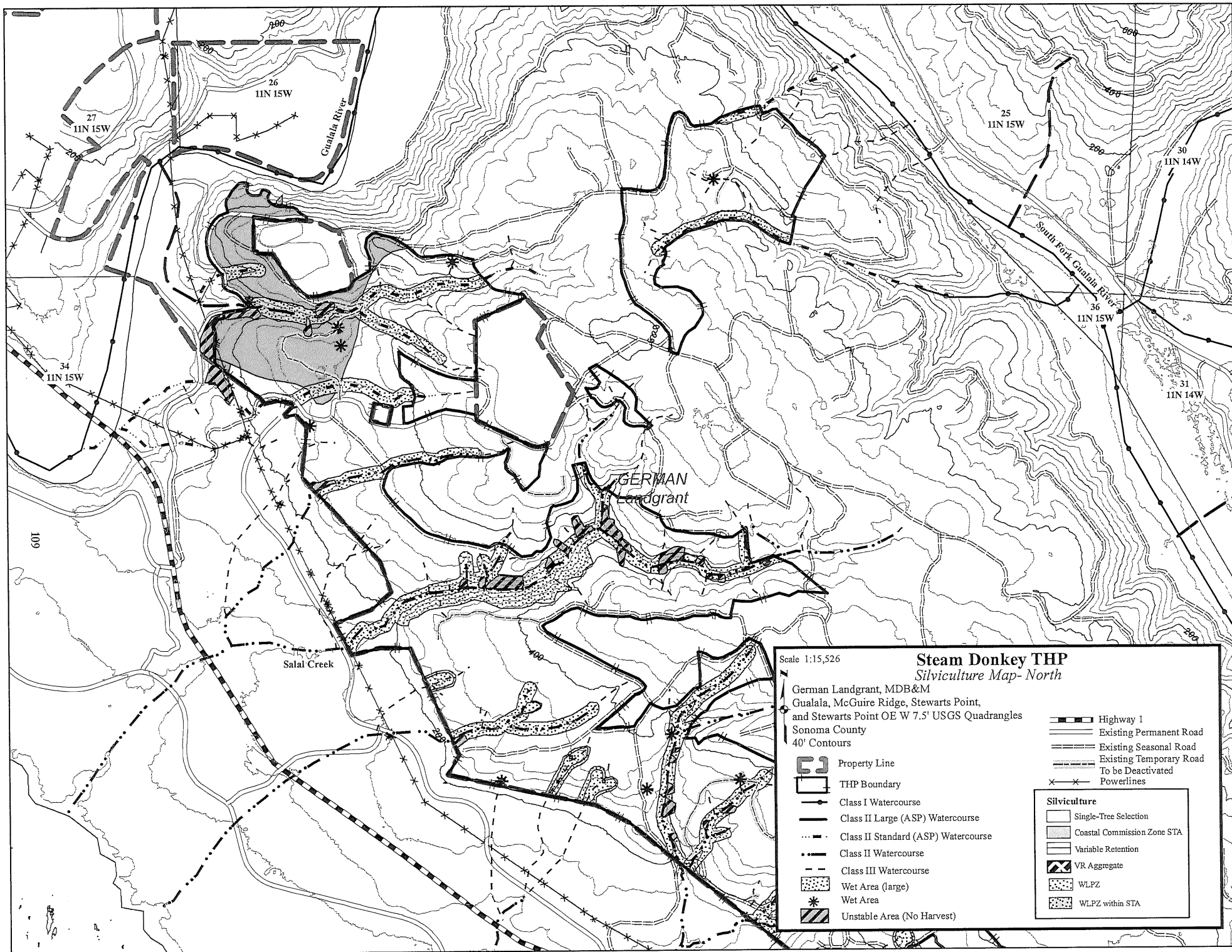
STEAM DONKEY THP: RP # 10

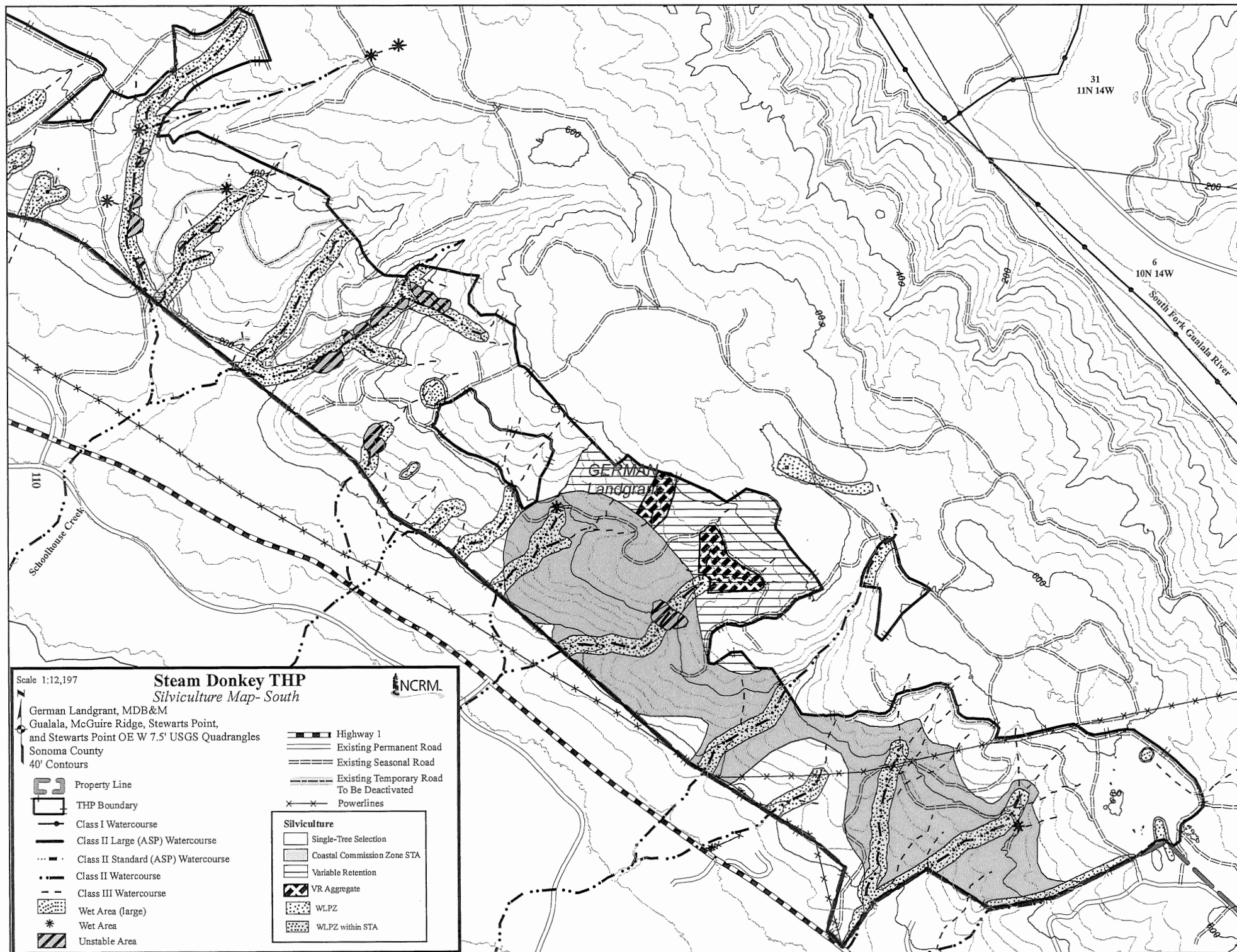
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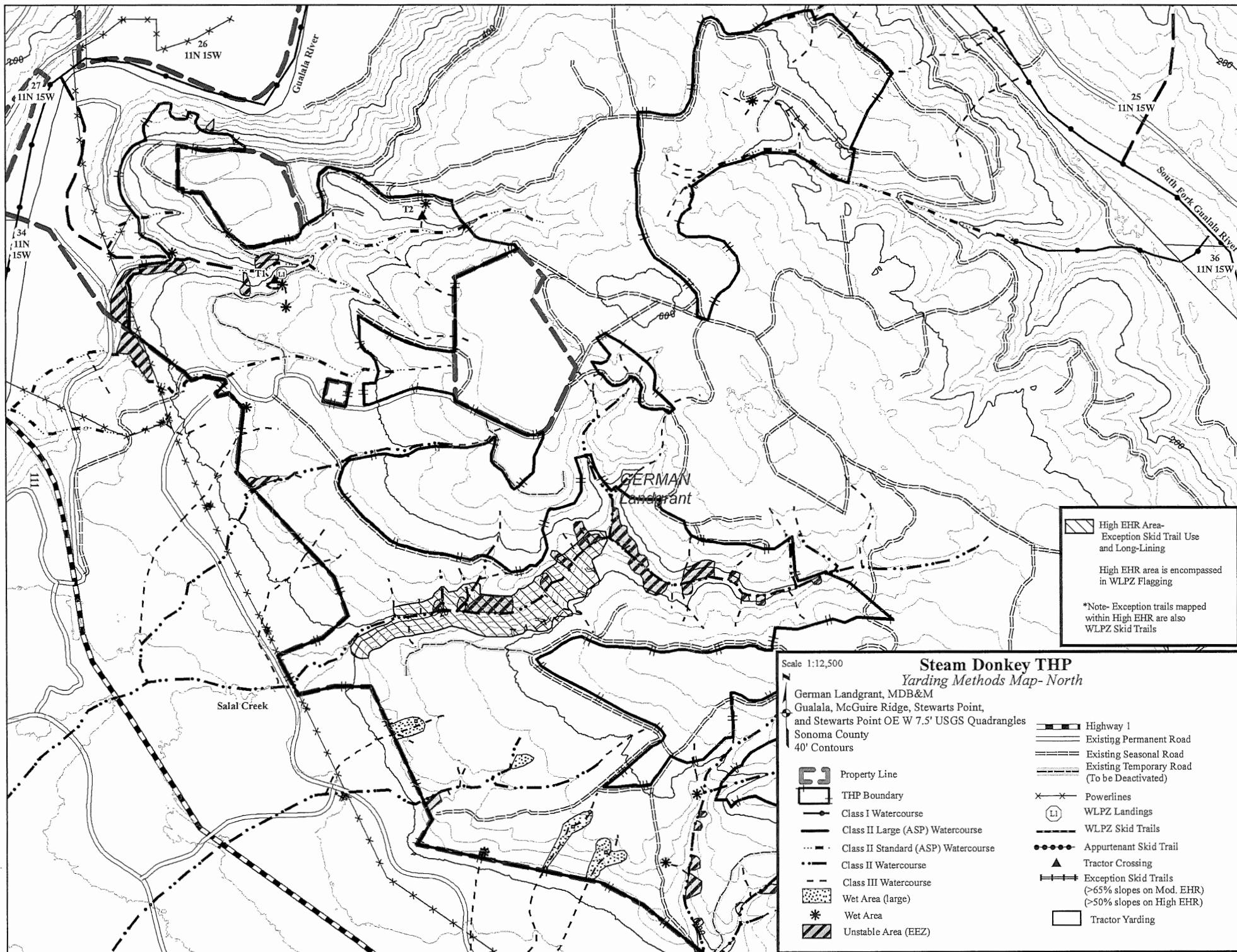


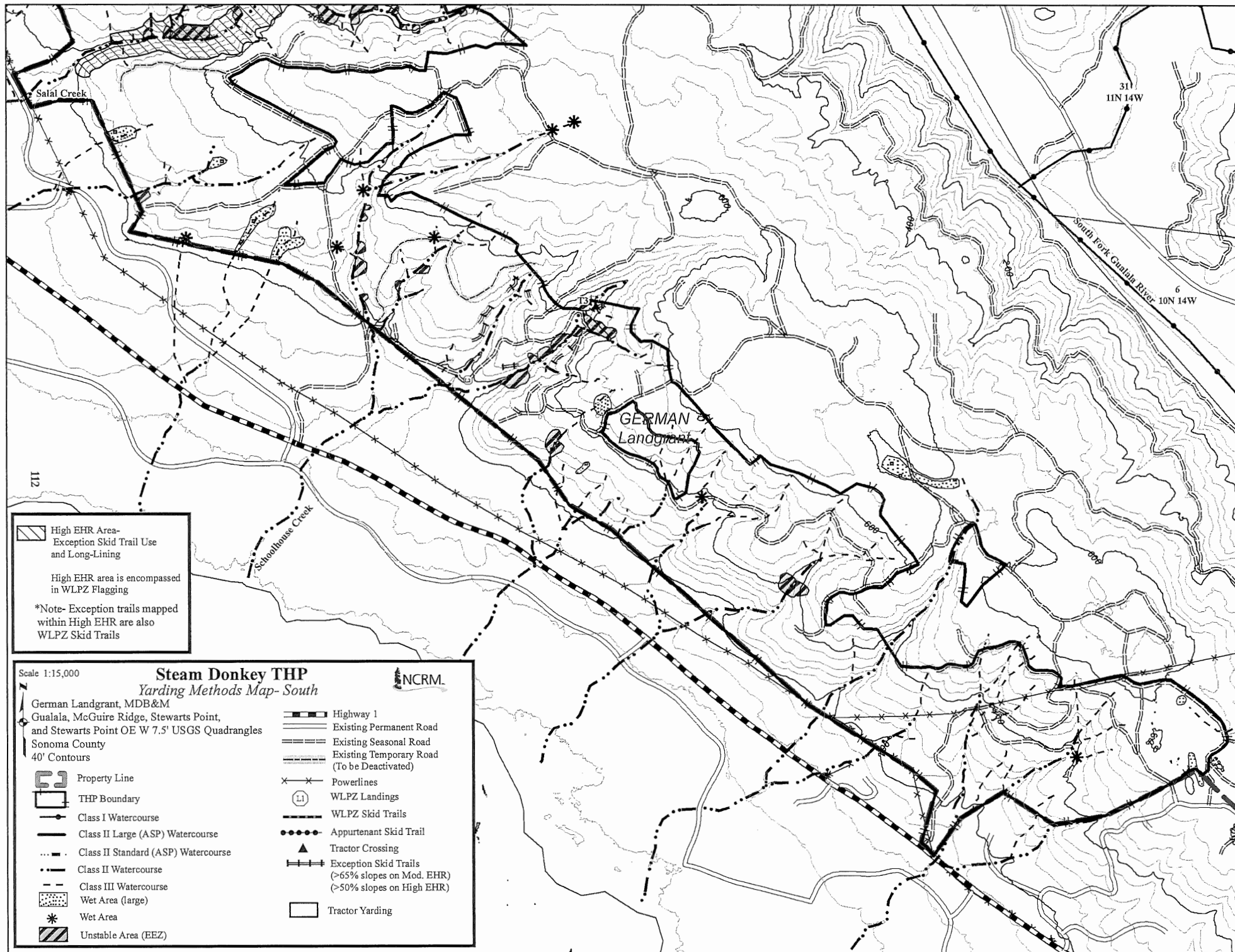


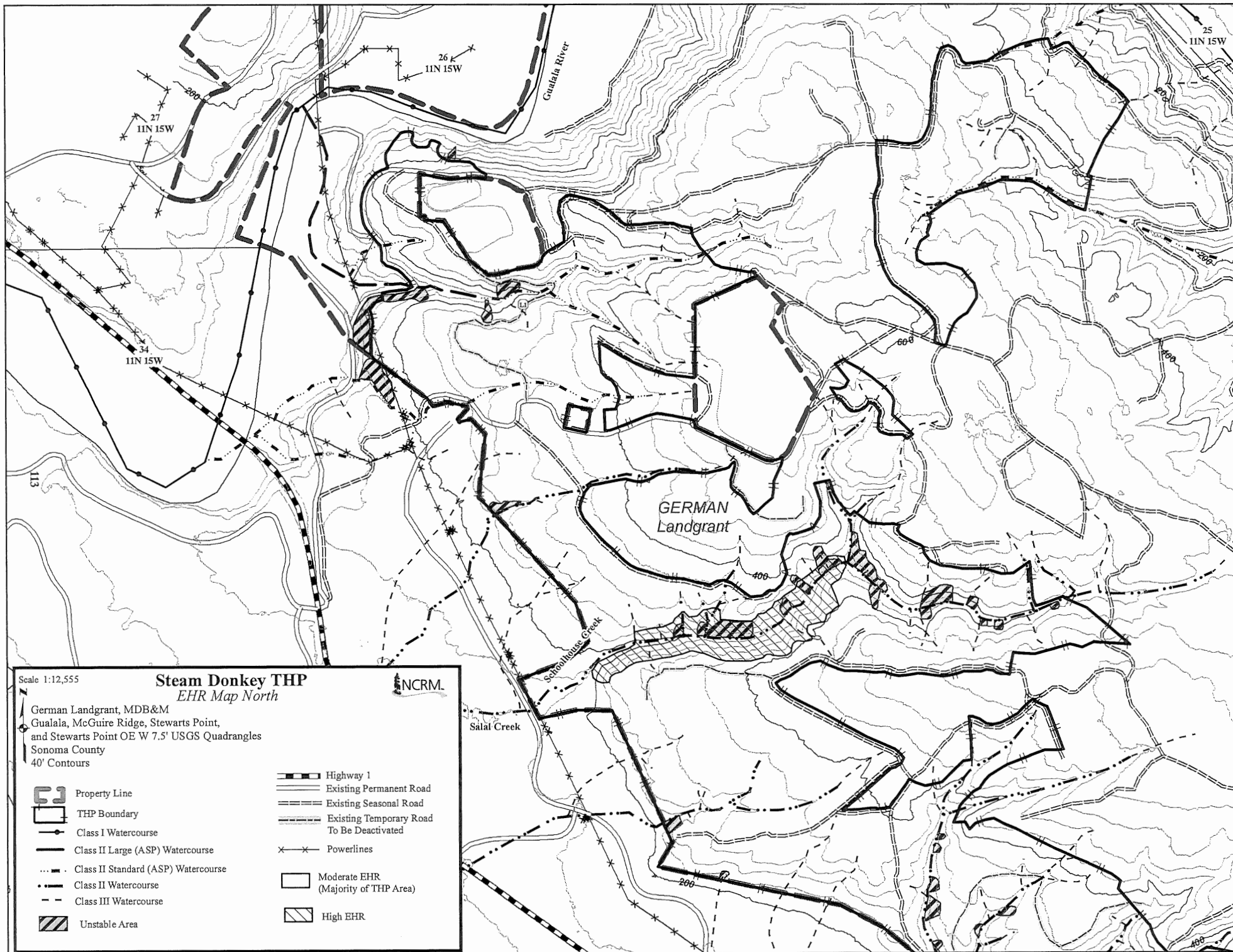


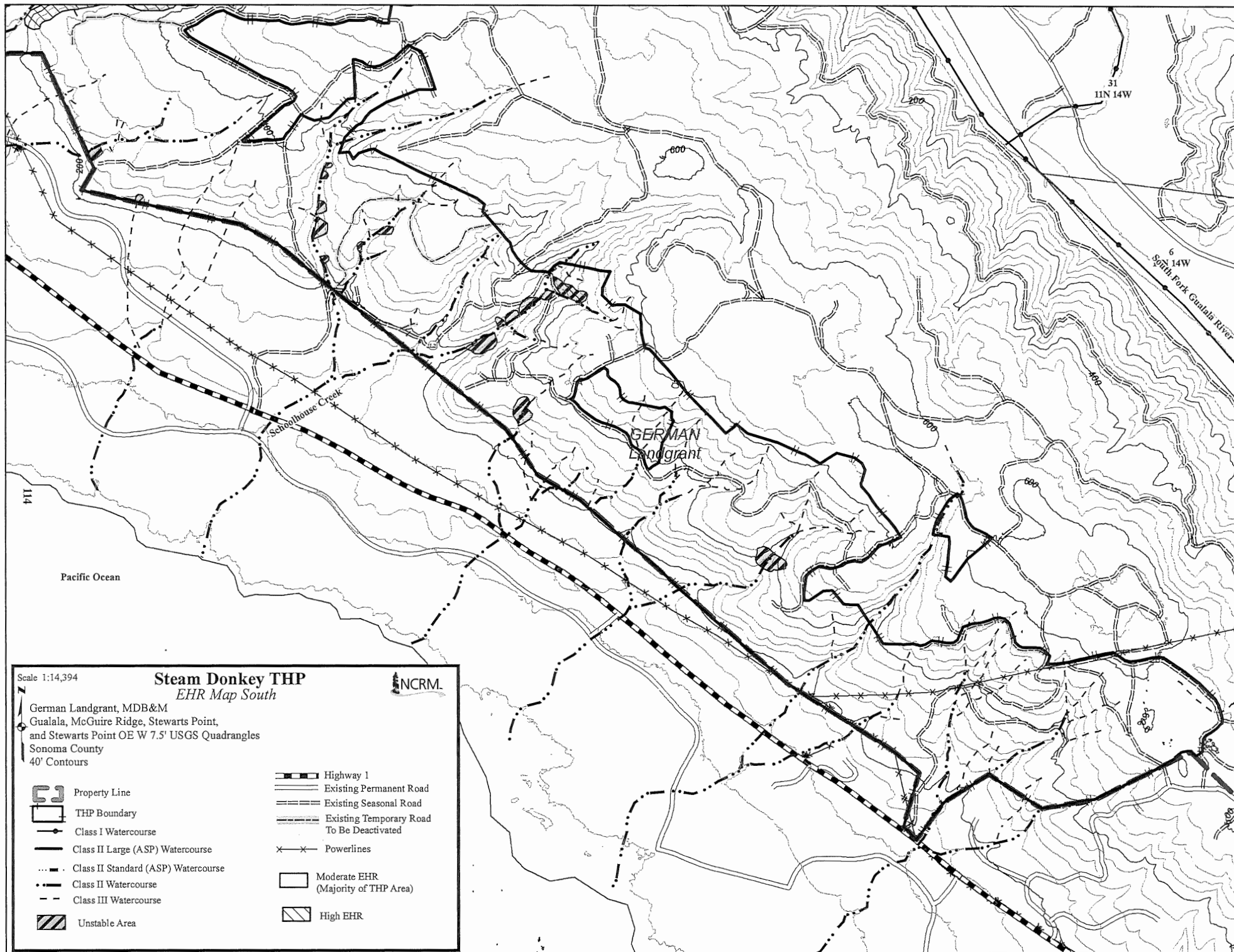


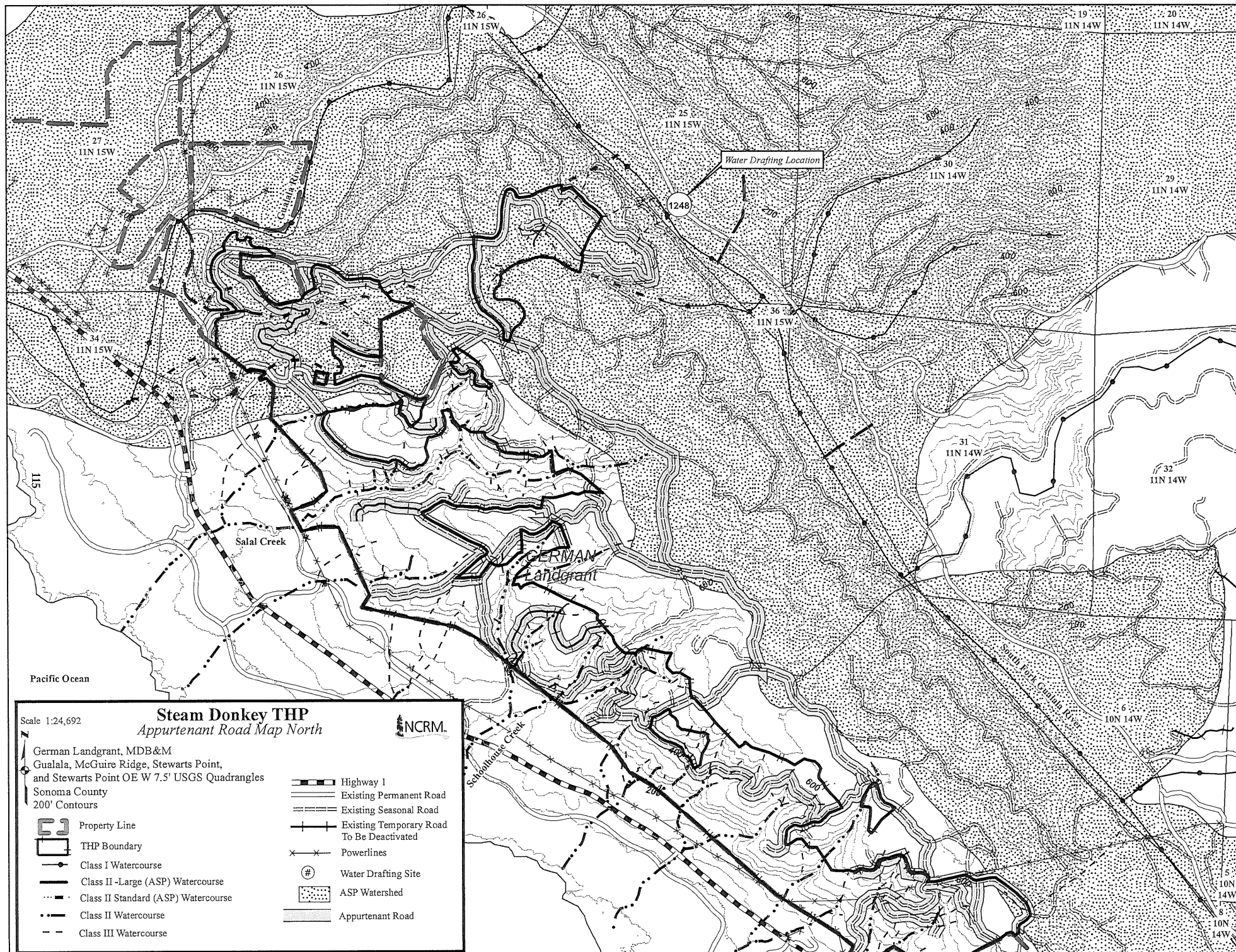


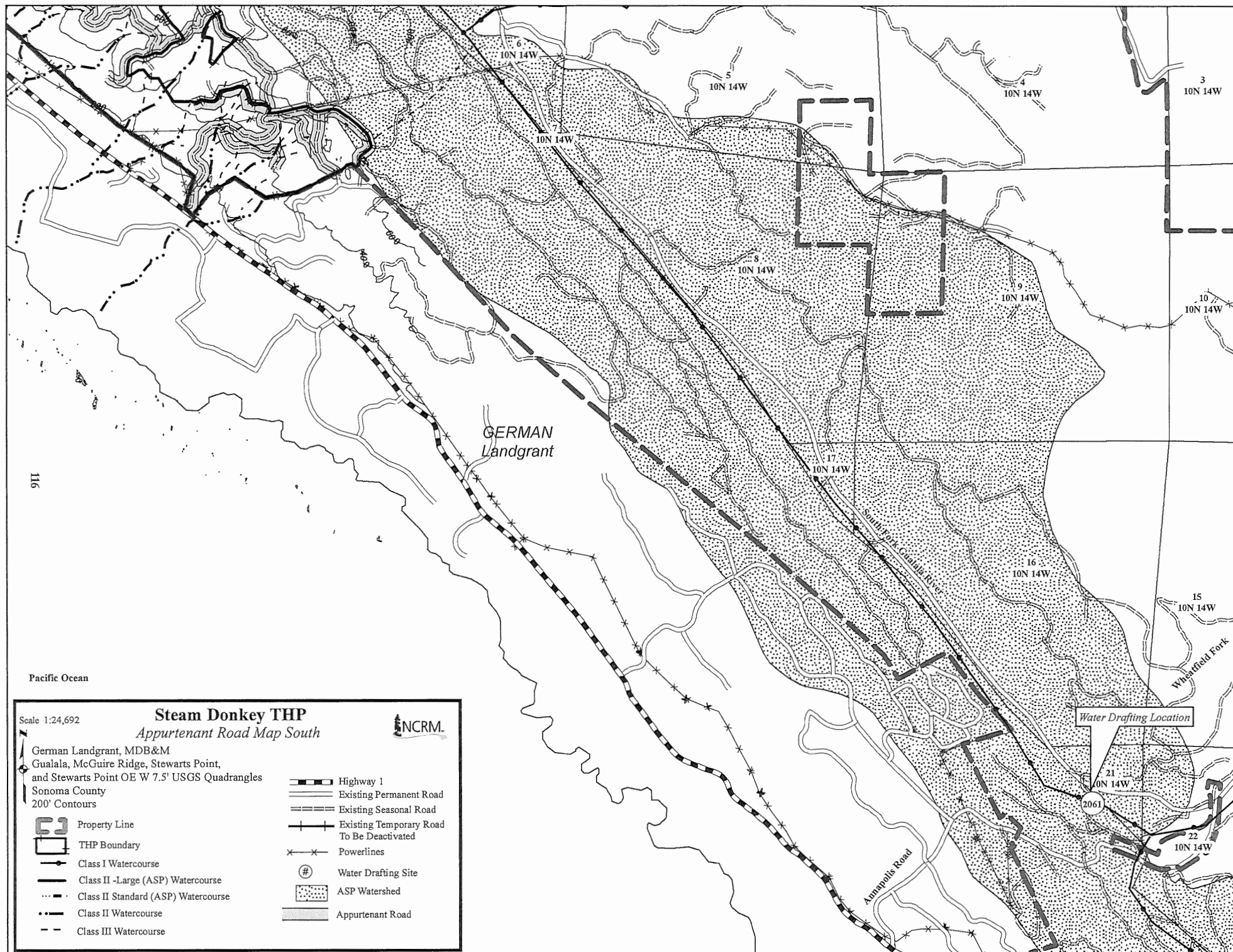


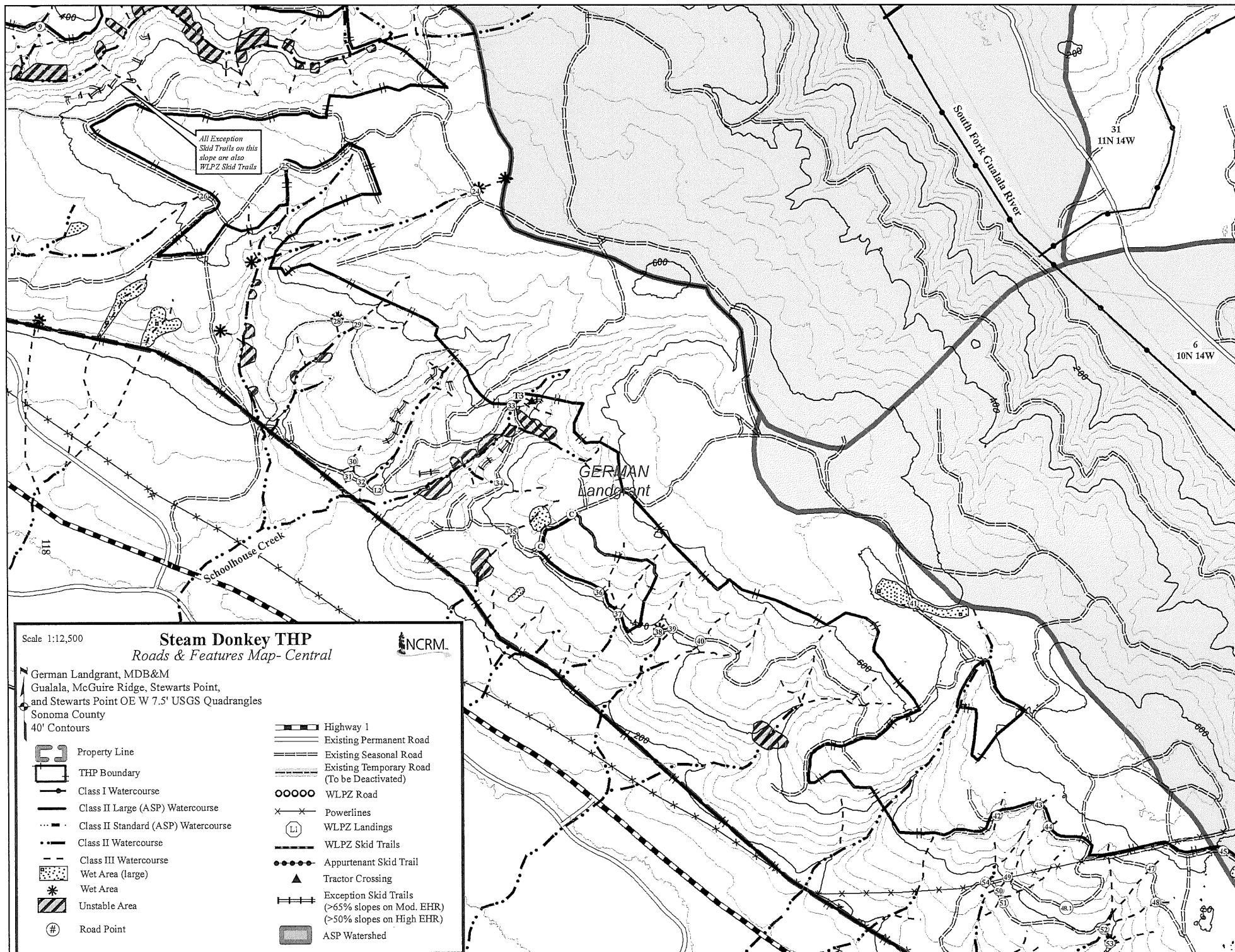


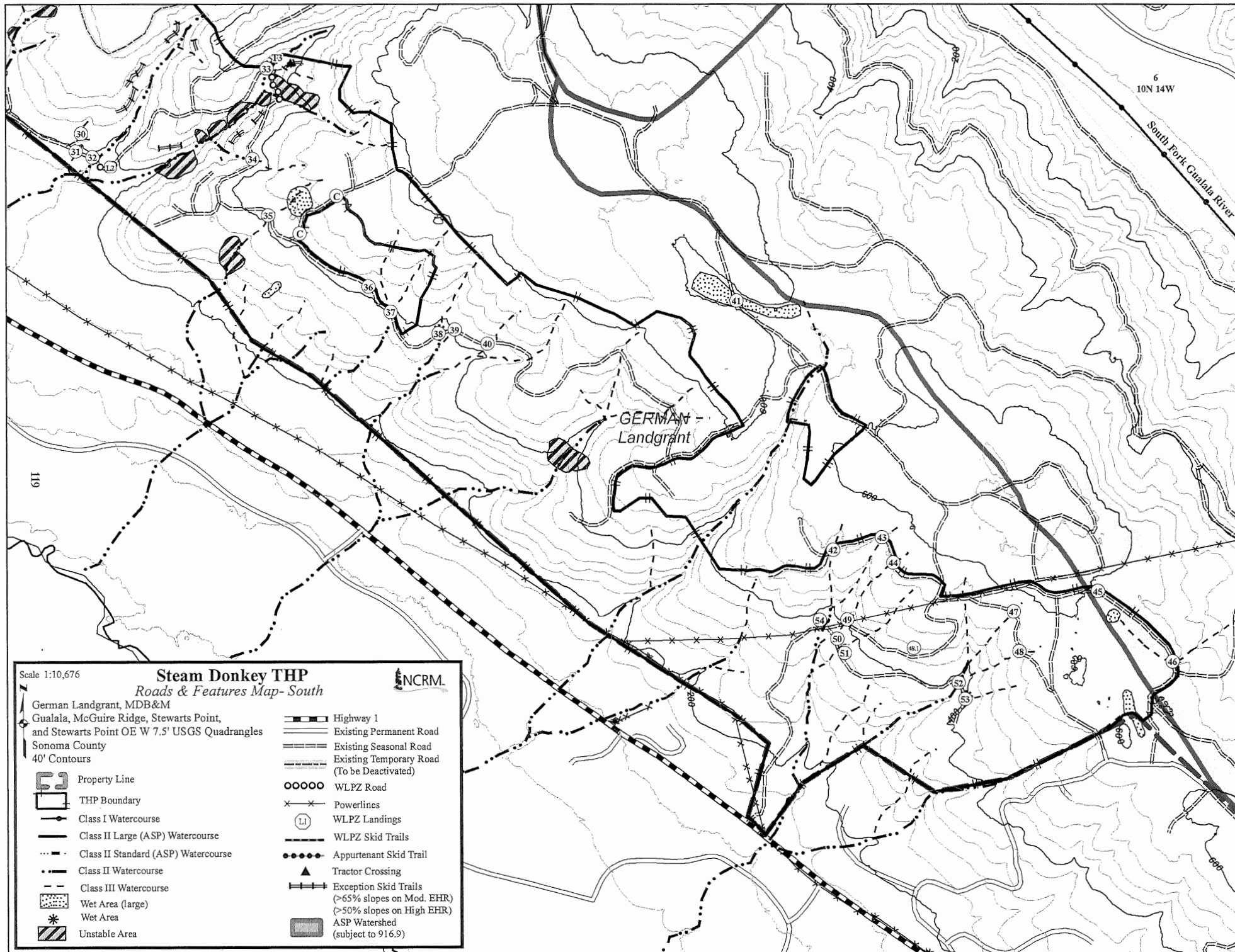


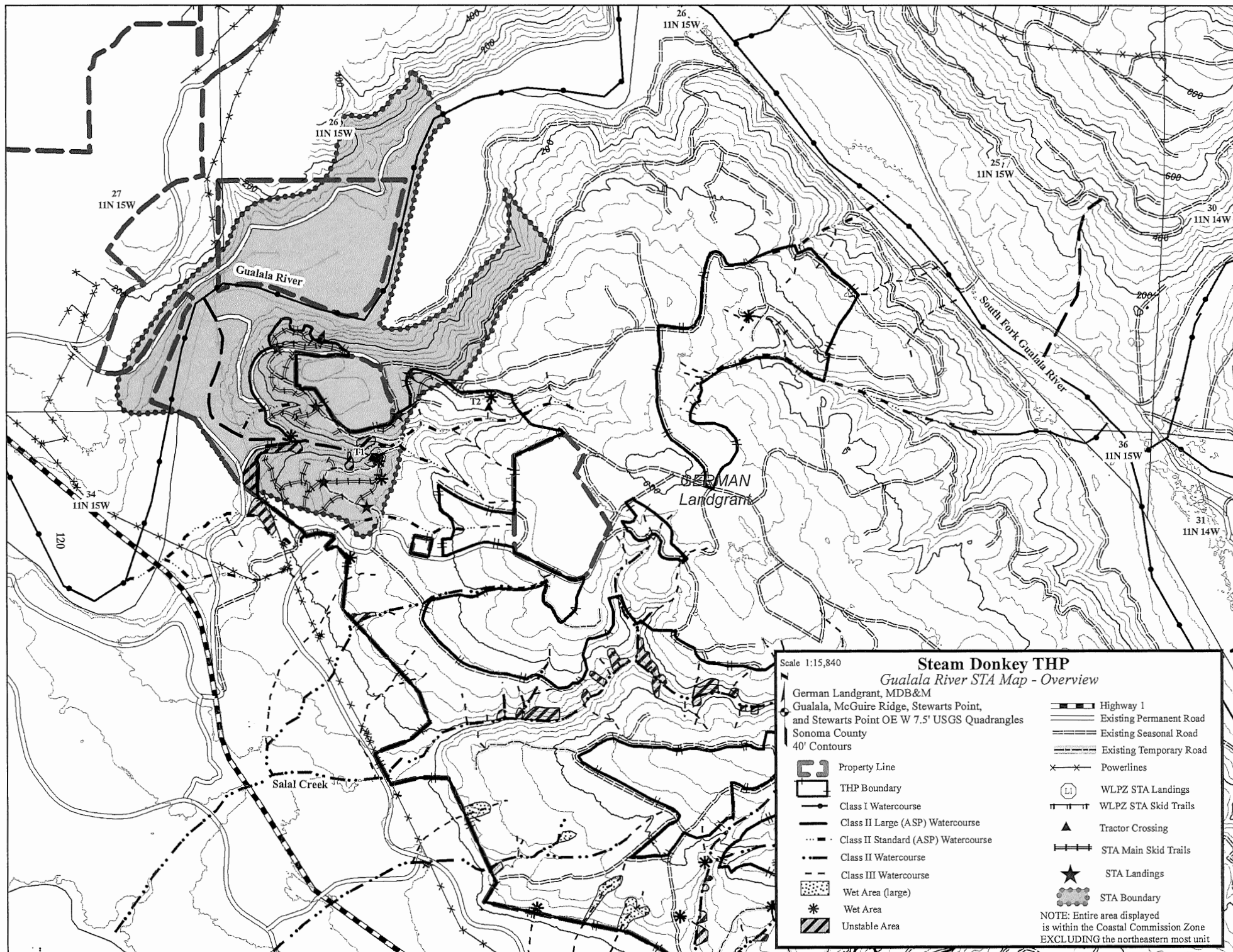


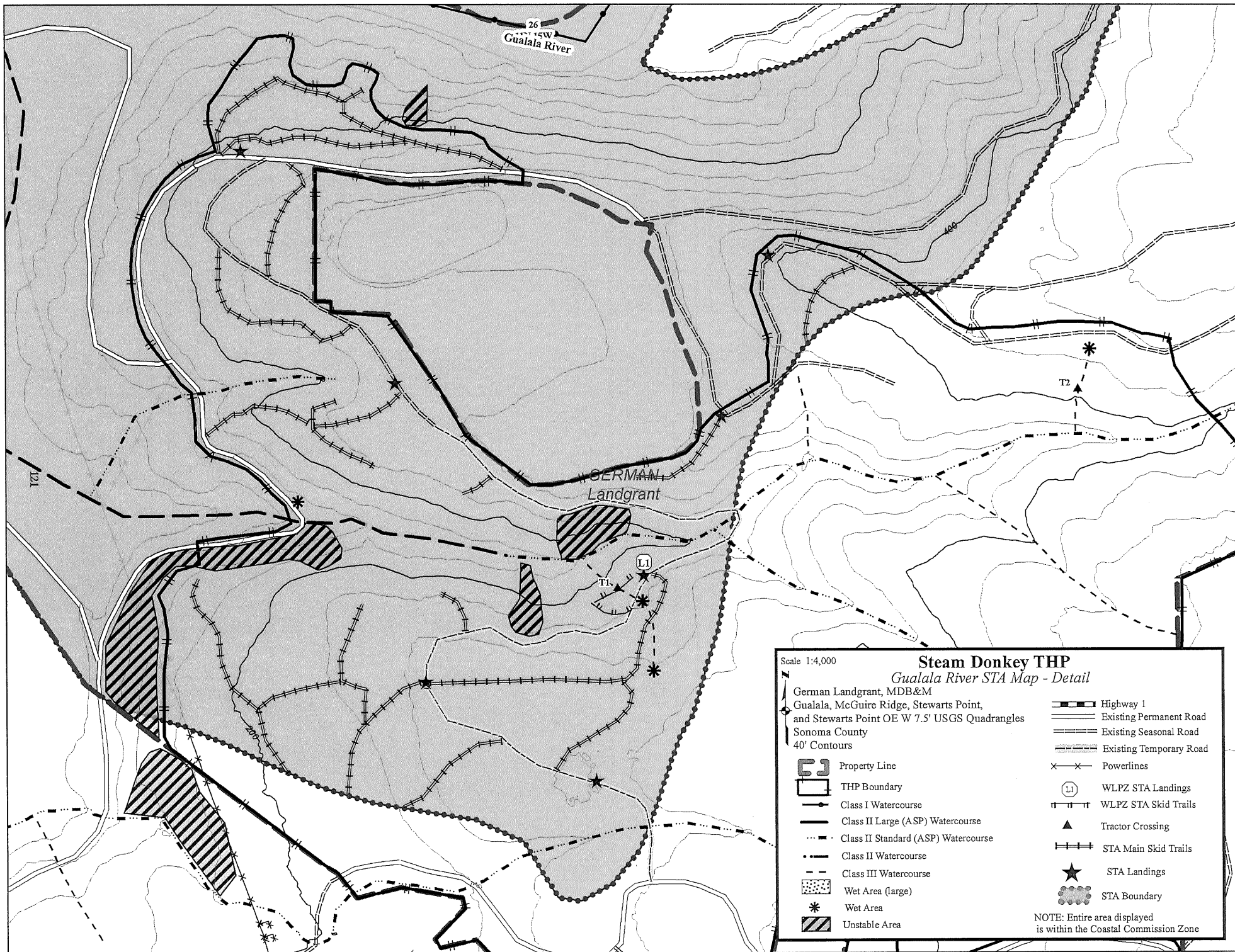


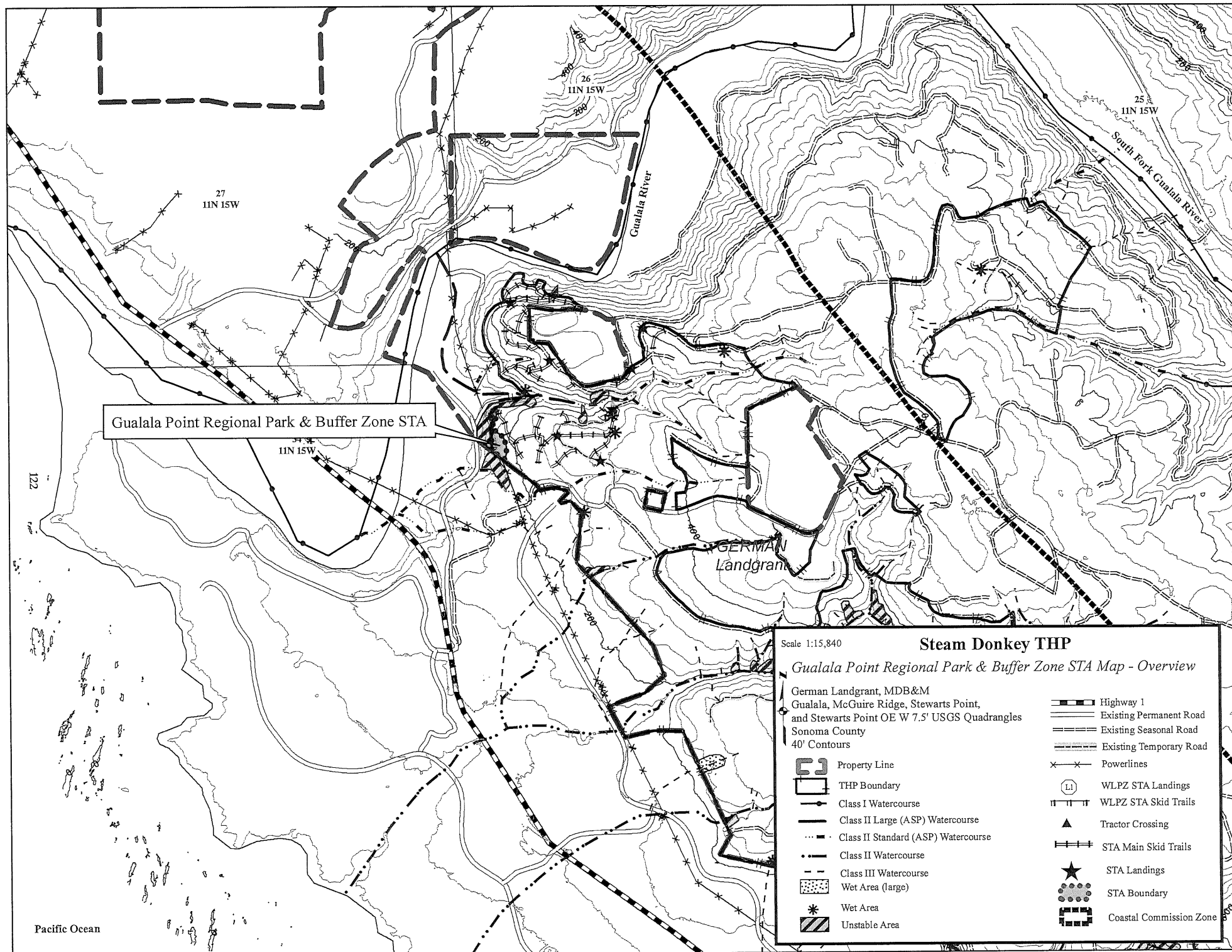












Scale 1:15,840

Steam Donkey THP

Gualala Point Regional Park & Buffer Zone STA Map - Overview

German Landgrant, MDB&M
Gualala, McGuire Ridge, Stewarts Point,
and Stewarts Point OE W 7.5' USGS Quadrangles
Sonoma County
40' Contours



Property Line



THP Boundary



Class I Watercourse



Class II Large (ASP) Watercourse



Class II Standard (ASP) Watercourse



Class II Watercourse



Class III Watercourse

Wet Area (large)



Wet Area



Unstable Area

Highway 1

Existing Permanent Road

Existing Seasonal Road

Existing Temporary Road

Powerlines

WLPZ STA Landings

WLPZ STA Skid Trails

Tractor Crossing

STA Main Skid Trails

STA Landings

STA Boundary

Coastal Commission Zone

Gualala Point Regional Park & Buffer Zone STA
 Note - The majority of this STA is overlapped by the
 Gualala River STA as shown on other maps























GERMAN
 Landgrant

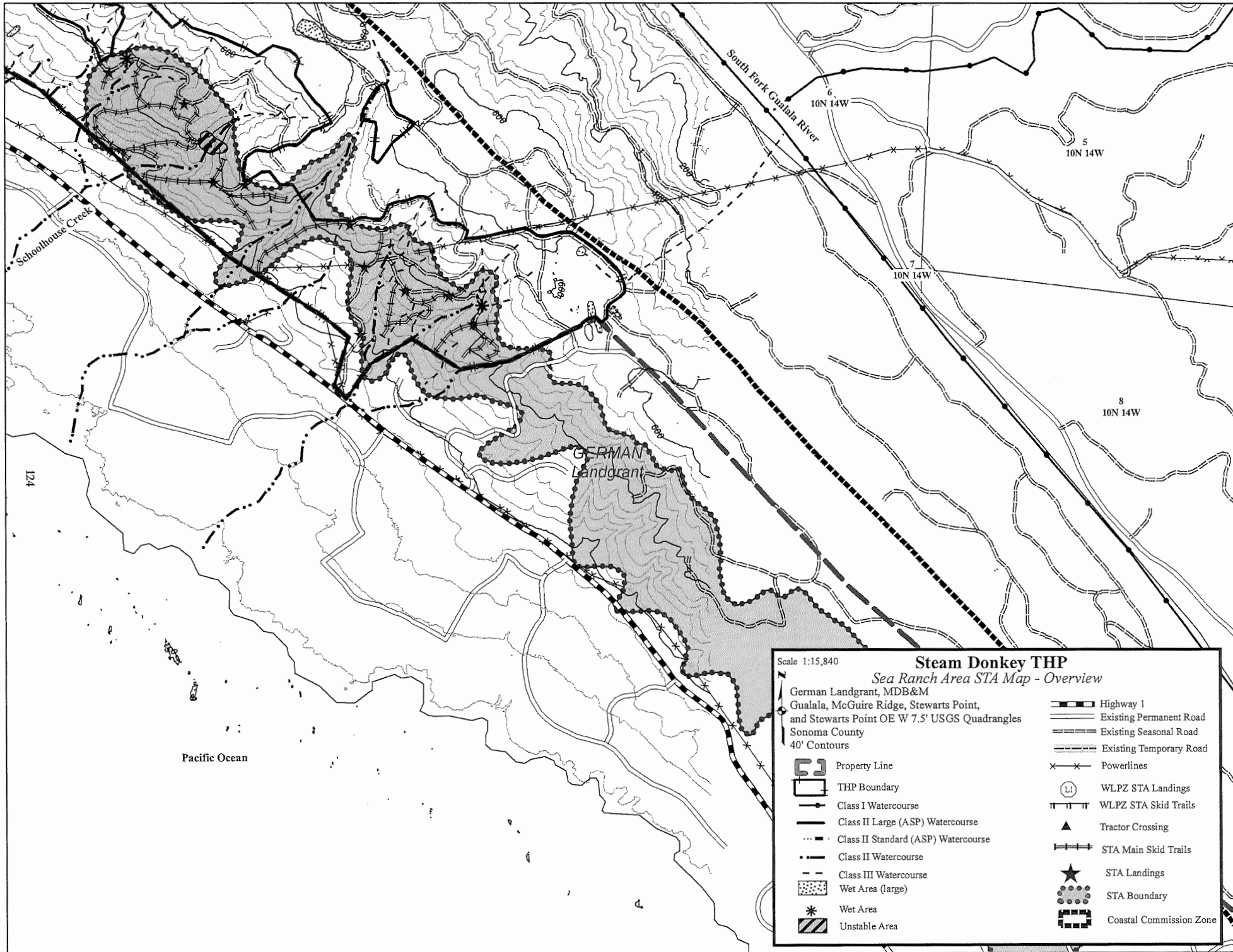
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Steam Donkey THP

Gualala Point Regional Park & Buffer Zone STA Map - Detail

German Landgrant, MDB&M
 Gualala, McGuire Ridge, Stewarts Point,
 and Stewarts Point OE W 7.5' USGS Quadrangles
 Sonoma County
 40' Contours

- | | |
|---|---|
|  Property Line |  Highway 1 |
|  THP Boundary |  Existing Permanent Road |
|  Class I Watercourse |  Existing Seasonal Road |
|  Class II Large (ASP) Watercourse |  Existing Temporary Road |
|  Class II Standard (ASP) Watercourse |  Powerlines |
|  Class II Watercourse |  WLPZ STA Landings |
|  Class III Watercourse |  WLPZ STA Skid Trails |
|  Wet Area (large) |  Tractor Crossing |
|  Wet Area |  STA Main Skid Trails |
|  Unstable Area |  STA Landings |
| |  STA Boundary |
| |  Coastal Commission Zone |



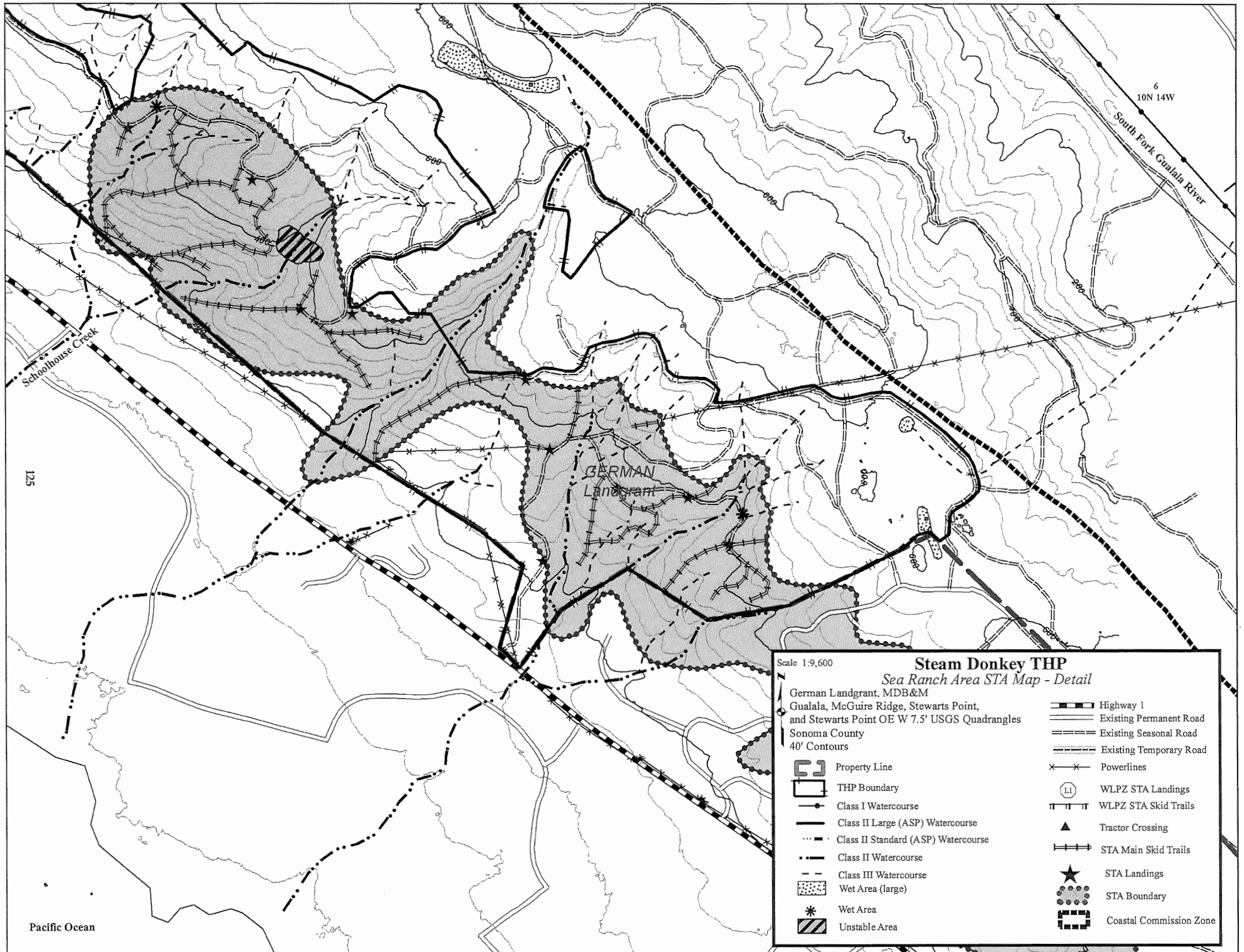
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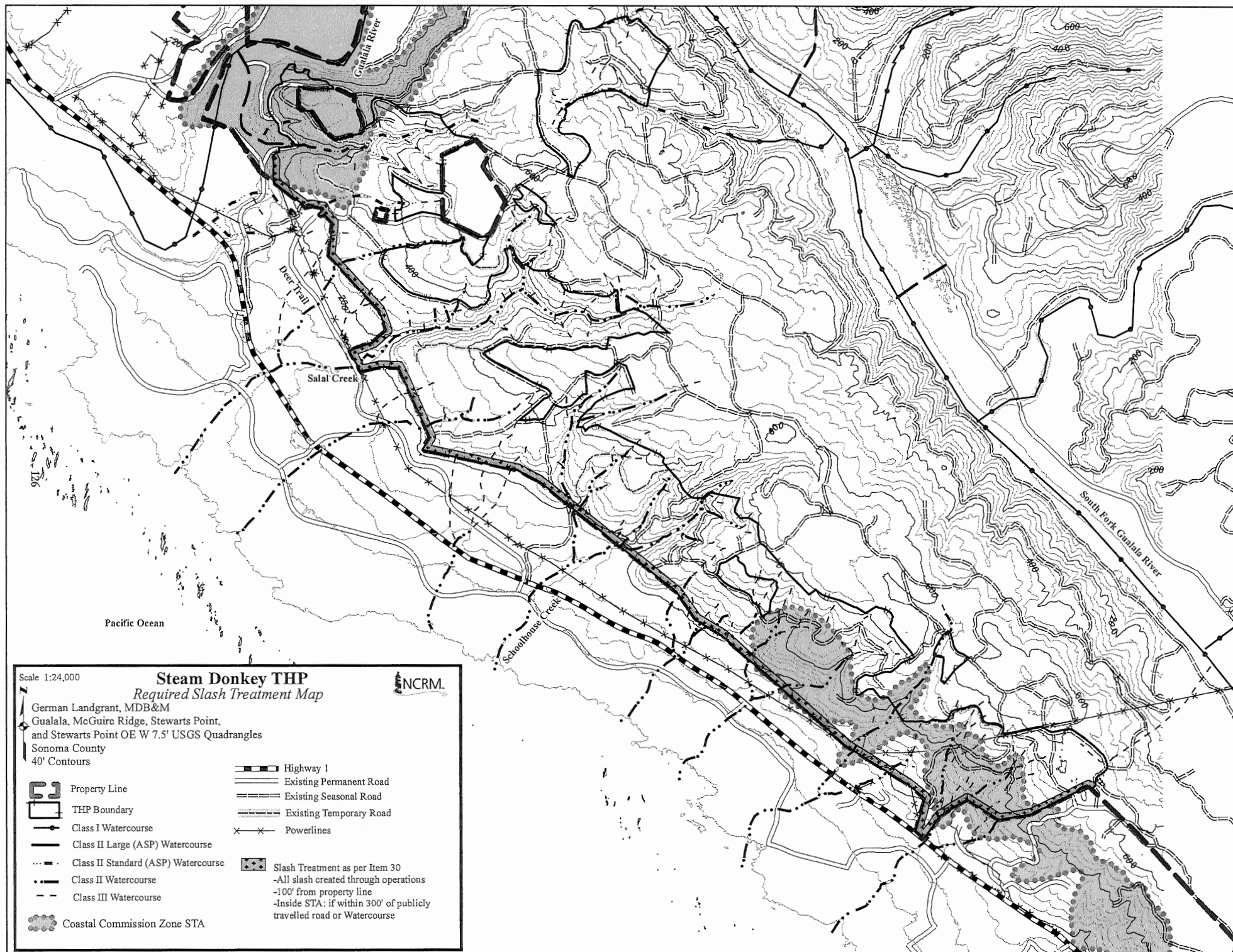
Steam Donkey THP

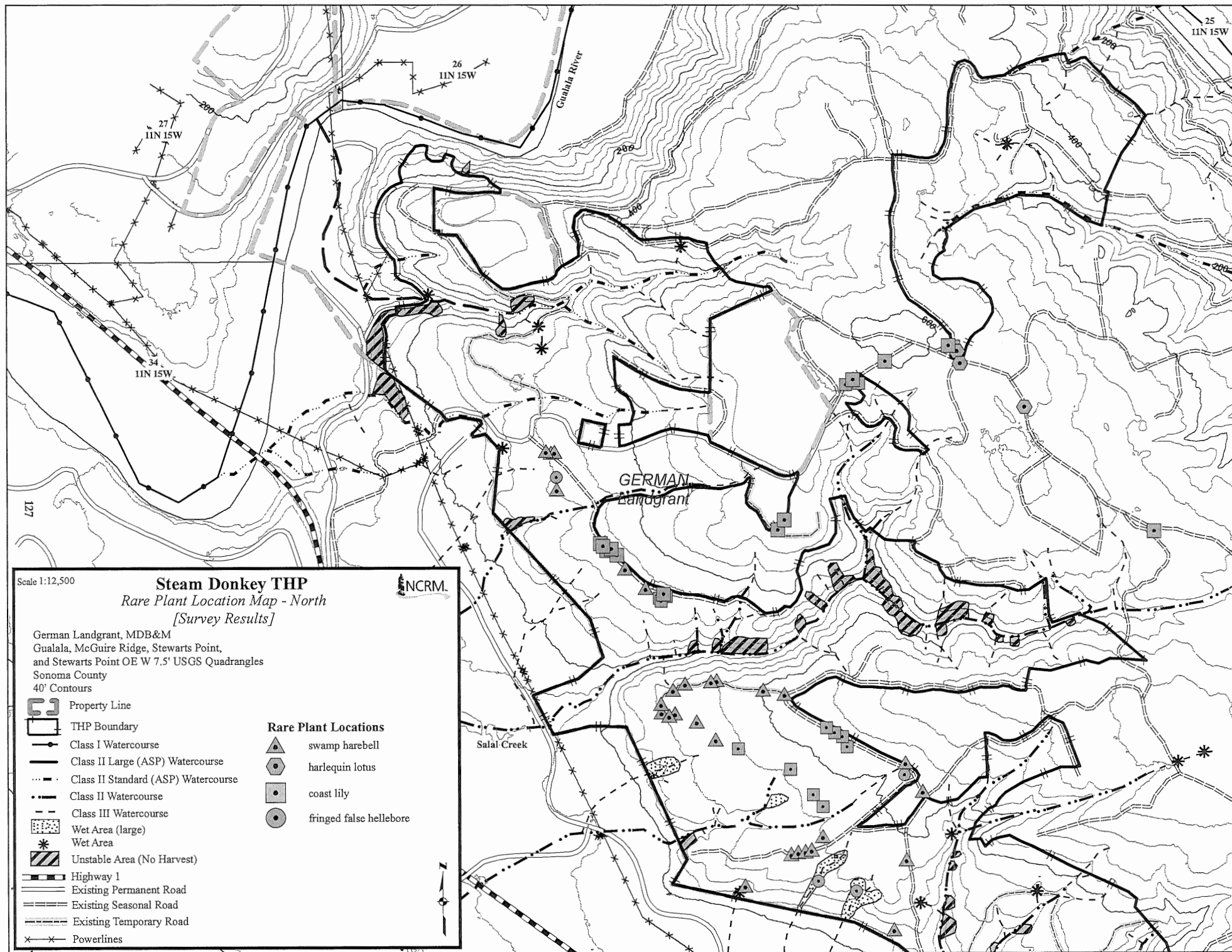
Sea Ranch Area STA Map - Overview

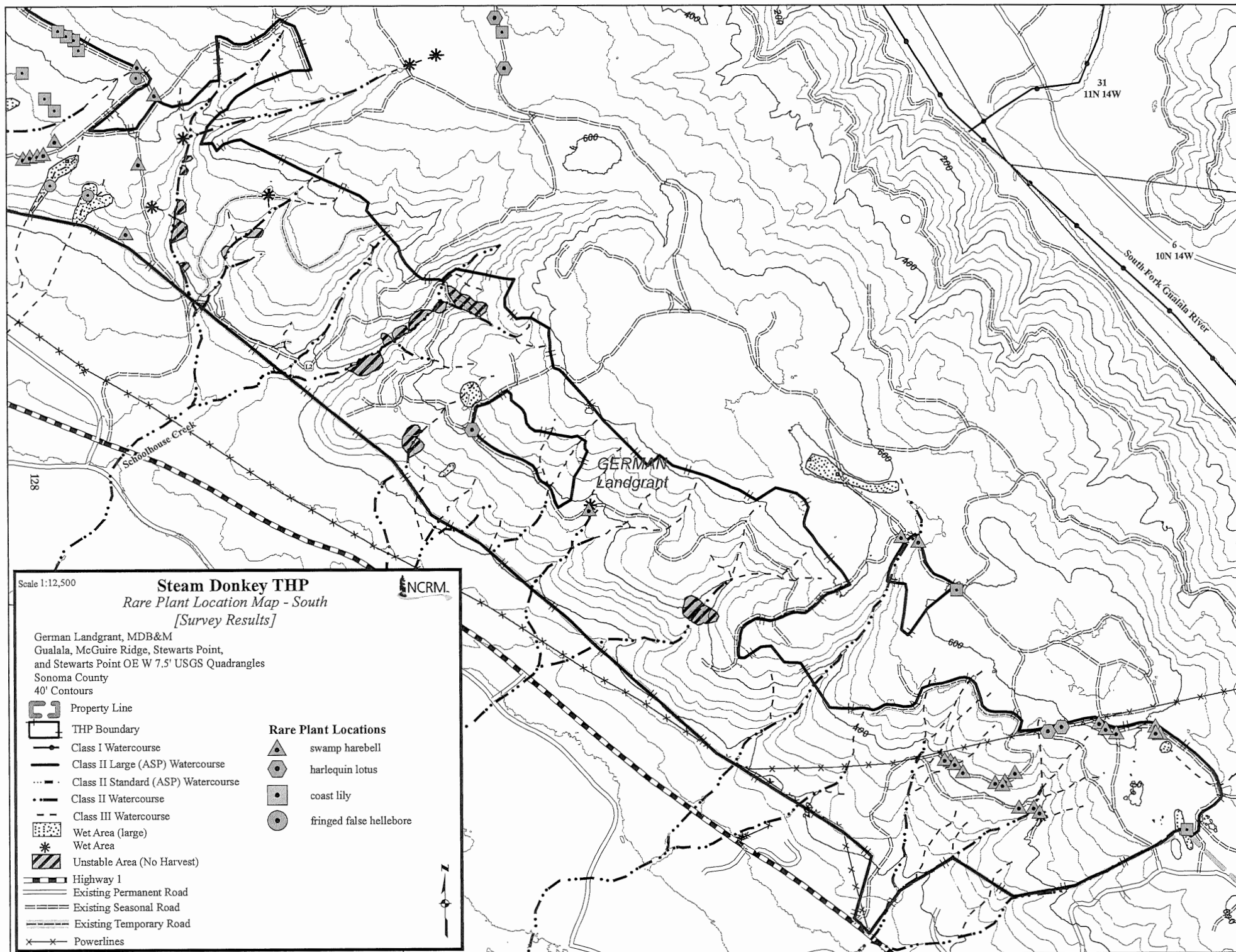
German Landgrant, MDB&M
Gualala, McGuire Ridge, Stewarts Point,
and Stewarts Point OE W 7.5' USGS Quadrangles
Sonoma County
40' Contours

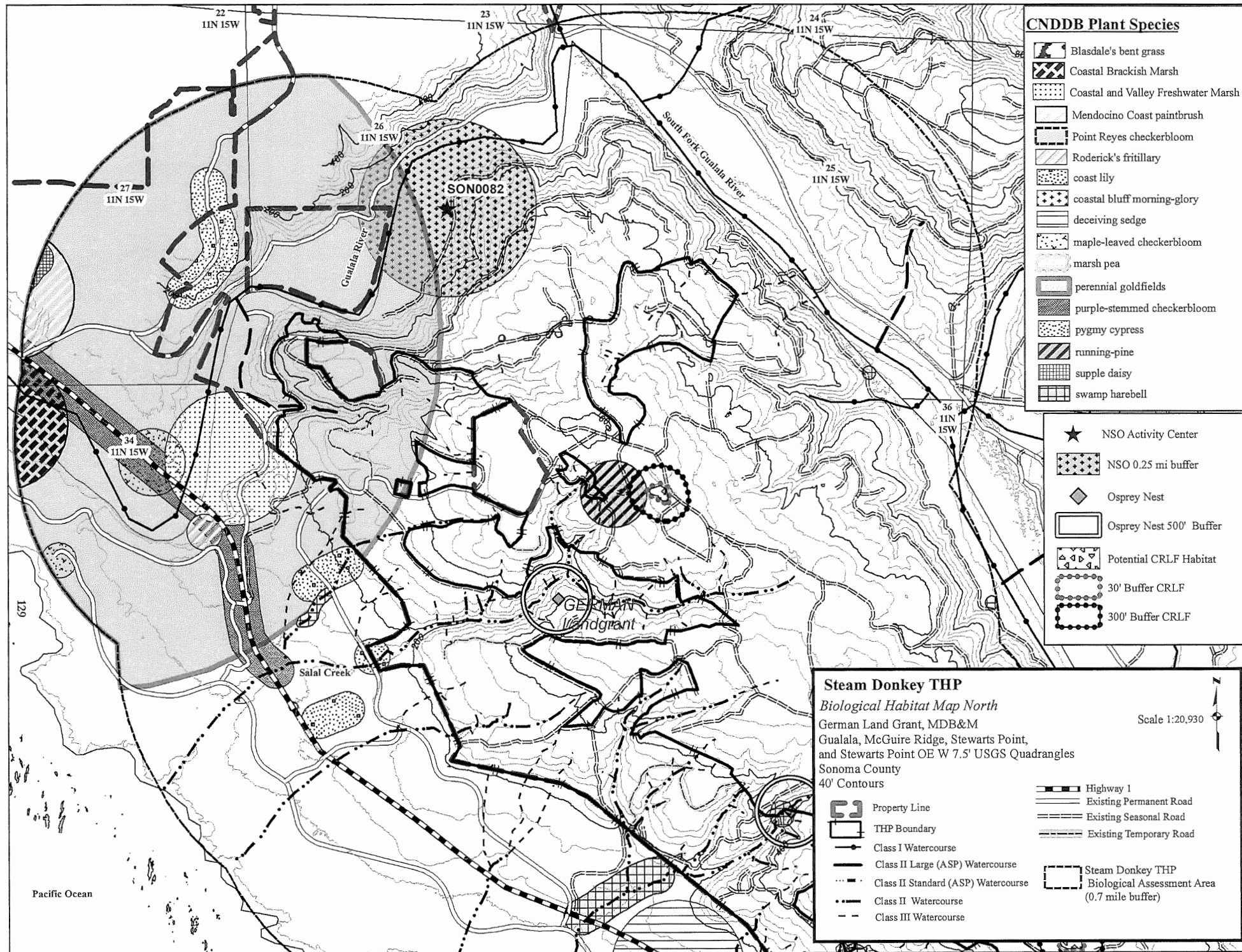
Property Line	Highway 1
THP Boundary	Existing Permanent Road
Class I Watercourse	Existing Seasonal Road
Class II Large (ASP) Watercourse	Existing Temporary Road
Class II Standard (ASP) Watercourse	Powerlines
Class II Watercourse	WLPZ STA Landings
Class III Watercourse	WLPZ STA Skid Trails
Wet Area (large)	Tractor Crossing
Wet Area	STA Main Skid Trails
Unstable Area	STA Landings
	STA Boundary
	Coastal Commission Zone

































CNDDB Plant Species

-  Blasdale's bent grass
-  Coastal Brackish Marsh
-  Coastal and Valley Freshwater Marsh
-  Mendocino Coast paintbrush
-  Point Reyes checkerbloom
-  Roderick's fritillary
-  coast lily
-  coastal bluff morning-glory
-  deceiving sedge
-  maple-leaved checkerbloom
-  marsh pea
-  perennial goldfields
-  purple-stemmed checkerbloom
-  pygmy cypress
-  running-pine
-  supple daisy
-  swamp harebell

-  Osprey Nest
-  Osprey Nest 500' Buffer
-  Potential CRLF Habitat
-  30' Buffer CRLF
-  300' Buffer CRLF













Steam Donkey THP

Biological Habitat Map South

German Land Grant, MDB&M
Gualala, McGuire Ridge, Stewarts Point,
and Stewarts Point OE W 7.5' USGS Quadrangles
Sonoma County
40' Contours



Scale 1:20,000

-  Property Line
-  THP Boundary
-  Class I Watercourse
-  Class II Large (ASP) Watercourse
-  Class II Standard (ASP) Watercourse
-  Class II Watercourse
-  Class III Watercourse
-  Highway 1
-  Existing Permanent Road
-  Existing Seasonal Road
-  Existing Temporary Road
-  Steam Donkey THP
Biological Assessment Area
(0.7 mile buffer)

Pacific Ocean

