SECTION II - PLAN OF TIMBER OPERATIONS

NOTE: If a provision of this THP is proposed that is different than the standard rule, the explanation and justification should normally be included in Section III unless it is clearer and better understood as part of Section II.

14. a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 913.11 (933.11, 953.11). If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

[☐] Clearcutting	ac.	[☐] Shelterwood Prep. Step	ac.	[☐] Seed Tree Seed Step	ac.
		[☐] Shelterwood Seed Step	ac.	[☐] Seed Tree Removal Step	ac.
		[☐] Shelterwood Removal Step	ac.		
[X] Selection	**199** ac.	[☐] Group Selection	ac.	[☐] Transition	ac.
[☐] Commercial Thinning	ac.	[☐] Sanitation Salvage	ac.	[ ] Special Treatment Area (wild and scenic rivers area)	ac.
[☐] Rehabilitation	ac.	[☐] Fuelbreak	ac.	[☐] Variable Retention	ac.
[☐] Aspen Restoration	ac.	[☐] Alternative Prescription	ac.	[☐] Road Right of Way	ac.
[☐] Conversion	ac.	[X] No Harvest Area	**46** ac.		
[X] Non-timber Area	**6** ac.				

Total acreage: **251** ac. Explain if total is different from that in 8. **MSP option**: (a) [☐] (b) [☐] (c) [X]

There are 46 acres of no harvest (includes channel zones and core zones) and 6 acres of non-timber type (areas of alder within the units) in the THP .

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

Silvicultural summary Little THP

Zone Designation	Zone width (ft.)	Overstory Canopy Cover	Large Tree Retention	Silviculture Requirements
Channel Zone	variable	No harvest		
Core Zone	30'	No harvest		
Inner Zone A	30 to min. 100' max. 150'	80% overstory conifer canopy *	Leave 13 largest trees per acre	Selection (Site Class I 125 SFBA) (Site Class II or III 75 SFBA)
Inner Zone B	150' to edge of F.P.A.	50% overstory canopy *	Leave 13 largest trees per acre	Selection (Site Class I 125 SFBA) (Site Class II or III 75 SFBA)
Outer Zone	Not applicable to this plan			
Areas of this plan outside of the flood prone area	varies	Not applicable	none	**Selection (Site Class I 150 SFBA) (Site Class II or III 75 SFBA)

***- (when conifers are present)**
****Areas on alluvial flat but outside of Flood Prone Area.**
SFBA = square feet of basal area per acre of conifers.
F.P.A.= Flood prone area
The residual stand shall contain sufficient trees to meet at least the basal area, size and phenotypic quality of tree requirement specified under the seed tree method (per 913.1(c)(1)(A)- fifteen square feet of basal area per acre of seed trees which are 18 inches DBH or greater shall be retained).

c.

[☐]Yes [X] No Will evenage regeneration step units be larger than those specified in the rules (20 acres tractor, 30 acres cable)? If yes, substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 913.1 (933.1, 953.1)(a)(2) should be provided in Section III of the THP. Operational instructions to the LTO, necessary to meet (A) - (E), should be provided below if not found elsewhere in the THP. These units should be designated on a map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All selection area harvest trees will be marked with a blue slash at breast height and a dot or slash below stump height on two sides.

Wildlife trees- Trees have been marked with a 'W' to indicate a wildlife no-cut tree.

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[☐]Yes [X] No Is a waiver of required marking by the RPF, requested? If yes, how will LTO determine which trees will be harvested or retained? If yes, and more than one silvicultural method (or Group Selection) is to be used, how will the LTO determine boundaries of different methods or groups?

e. Forest products to be harvested: **sawlogs, chiplogs, fuelwood, firewood, split products and burl.**

f. [☐]Yes [**X**] No Are group B species proposed for management?
[☐]Yes [**X**] No Are group B or non-indigenous A species to be used to meet stocking standards?
[☐]Yes [**X**] No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment are to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All snags will be left standing except where they pose a threat to safety or a fire hazard.

Consistent with safety, trees should be felled in whatever direction best preserves the canopy as long as no part of any tree falls into a class I or II watercourse.

h. [☐]Yes [**X**] No Will artificial regeneration be required to meet stocking standards?

i. [☐]Yes [**X**] No Will site preparation be used within the logging area? If yes, provide the information required. 915.4[935.4, 955.4].

j. If the rehabilitation or variable retention method is chosen, provide a regeneration plan. 913.4[933.4, 953.4](b) or (d), respectively.

PESTS

15. a. [**X**]Yes [☐] No Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection, pursuant to PRC §§ 4712 - 4718? 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).

Pine Pitch Canker: There are no known pine trees within the boundaries of this THP however this THP is within the broader zone of infestation of the Coastal Pine Pitch Canker. Pine Pitch Canker has been found in southern Mendocino County in bishop pine and Monterey pine. Other primary hosts include knob cone pine. To date there has been only one reported case in Douglas fir, a planted ornamental, and infections to sugar pine only in laboratory conditions. The harvest trees planned for removal are redwood and Douglas fir. If any species susceptible to Pine Pitch Canker are inadvertently cut the following measures will be taken: 1) Pitch Canker infected pines or beetle infested pines will not be shipped outside of the Zone of Infestation, 2) If pine logs are not infected with Pine Pitch Canker, they shall be shipped outside the Zone of Infestation within four days if during the period of February 1 through June 30, 3) If pine logs are not infected with Pine Pitch Canker during the period of July 1 through January 31, they shall be shipped outside the Zone of Infestation within seven days.

Zone of infestation for Pine Pitch Canker- All of the area within the counties of Alameda, Contra Costa, Los Angeles, Marin, Monterey, Mendocino, Napa, Orange, San Benito, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, and Ventura; and the portion of San Bernardino, Riverside and San Diego Counties which is westerly of the line beginning at the San Bernardino / Los Angeles County line and proceeding easterly along State Route (SR) 138 to Interstate Highway (I) 15; thence southerly along I-15 to I-215; thence southerly along I-215 to I-15; thence southerly along I-15 to SR-79; then southerly along SR-79 to I-8; thence easterly along I-8 to the San Diego / Imperial County line; thence southerly along the San Diego / Imperial County line to the U.S. / Mexico border.

Sudden Oak Death

This timber harvesting plan is located within the declared Zone of Infestation for Sudden Oak Death. Recently, on this property and adjacent to this THP area, occurrences of this disease are suspected. These occurrences have not been confirmed by lab tests.

Identification/Background:
Sudden Oak Death is a forest disease caused by the fungus-like pathogen Phytophthora ramorum. This pathogen has caused widespread dieback of tanoak and several oak species in the central and northern coastal counties of California, and has to date been associated with more than 26 different plant species. While some of these species - coast live oak, black oak, Shreve oak and tanoak - sustain lethal trunk infections, other plants get more benign foliar and twig infections. Many of these species with foliar infections play a key role in spread of P.

ramorum by acting as a reservoir of innoculum, which may then be spread aerially via wind blown rain. Sporangia and chlamydospores, the most likely propagules of dispersion, are commonly generated on foliage, whereas they have not as yet been found on infested oak bark. The two plants determined to be the greatest sinks for innoculum are California bay laurel/Oregon myrtle and Rhododendron spp. Mortality is most common where oaks and these foliar hosts are found growing together.

Depending on the plant species, infection may occur on the trunk, branches, and/or leaves. Infections on woody portions of the tree are referred to as cankers. Cankers on the trunk of oak trees are the most damaging. Tree death appears to occur when cankers expand in the trunk (girdling) and disrupt physiological function. Diseased oaks are often attacked by other pest organisms -- fungi that decay sapwood (Hypoxylon thourasianum) and bark beetles. In the shrub species the symptoms can range from leaf spot to twig girdling, and do not necessarily result in death of the plant.

To date, P. ramorum has not been found to infect the main trunk of Douglas-fir or coast redwood. Coast redwood symptoms include discoloration of needles and development of cankers on small branches throughout the crown of small saplings. The fungus can also cause mortality of basal shoots on mature redwood trees. Only a few occurrences (i.e. less than 10 sites) on redwood have been confirmed.

Cankers on small branches of Douglas-fir saplings cause wilting of new shoots, needle loss, and branch die-back; while in smaller saplings, death of the leader and top branch whorls can occur. SOD in Douglas-fir has been confirmed at only one site in Sonoma County having high levels of innoculum from the infected bay leaves in the overstory above.

List of Regulated Counties-The declared zone of infestation includes: Alameda, Contra Costa, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, San Francisco, Santa Cruz, Solano, Trinity and Sonoma counties.

Regulated *Phytophthora ramorum* Hosts of Concern when Filing Timber Harvest Documents

Plants on the federal *P. ramorum*-Regulated Host list should be addressed by Registered Professional Foresters (RFPs) in harvest documents. These plants are: naturally infected by *P. ramorum;* found in California's forests; and have had Koch's postulates completed, documented, reviewed, and accepted. Further details on regulated plants and plant parts can be found at https://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/usdaprlist.pdf. Plants on the federal *P. ramorum* Associated Host list are regulated in nurseries only and not in wildland settings; therefore, they do not have to be addressed by RPFs.

Note: As new hosts are found, they will be added to the host or associated host list. As Koch's postulates are successfully completed on associated hosts, they will be reclassified as hosts. As neither list is static, it is important to check for updates frequently.

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APHIS List[1] of Regulated Hosts and Plants Proven or Associated with *Phytophthora ramorum*

July 2020

Plants Proven to be Hosts of *Phytophthora ramorum*

Scientific Name	Common Name(s)	Notes
*Acer macrophyllum**	Bigleaf maple	
Acer pseudoplatanus	Planetree maple	
*Adiantum aleuticum**	Western maidenhair fern	
*Adiantum jordanii**	California maidenhair fern	
*Aesculus californica**	California buckeye	
Aesculus hippocastanum	Horse chestnut	
*Arbutus menziesii**	Madrone	
*Arctostaphylos manzanita**	Manzanita	
*Calluna vulgaris**	Scotch heather	
Camellia spp.*	Camellia - all species, hybrids and cultivars	
*Castanea sativa**	Sweet chestnut	
*Cinnamomum camphora**	Camphor tree	
Fagus sylvatica	European beech	
*Frangula californica (≡Rhamnus californica)**	California coffeeberry	
*Frangula purshiana (≡Rhamnus purshiana)**	Cascara	
Fraxinus excelsior	European ash	
*Gaultheria procumbens**	Eastern teaberry	
*Griselinia littoralis**	Griselinia	
*Hamamelis virginiana**	Witch hazel	
*Heteromeles arbutifolia**	Toyon	
Kalmia spp.*	Mountain laurel - all species, hybrids and cultivars	
*Laurus nobilis**	Bay laurel	
Lithocarpus densiflorus (Notholithocarpus densiflorus[2])	Tanoak	
*Lonicera hispidula**	California honeysuckle	
*Maianthemum racemosum (=Smilacina racemosa)**	False Solomon's seal	

Scientific Name	Common Name(s)	Notes
*Michelia doltsopa** *(Magnolia doltsopa[2])*	Michelia	
*Parrotia persica**	Persian ironwood	
*Photinia fraseri**	Red tip photinia	
Pieris spp.*	Andromeda, Pieris - all species, hybrids and cultivars	
Pseudotsuga menziesii var. *Menziesii**	Douglas fir	Also includes all other varieties and cultivars of nursery grown *P. menziesii*
Quercus agrifolia	Coast live oak	
Quercus cerris	European turkey oak	
Quercus chrysolepis	Canyon live oak	
Quercus falcata	Southern red oak	
*Quercus ilex**	Holm oak	
Quercus kelloggii	California black oak	
Quercus parvula var. *shrevei*	Shreve's oak	Also includes all other varieties and cultivars of nursery grown *Q. parvula*
Rhododendron spp.*	Rhododendron (including azalea) – all species, hybrids and cultivars	
*Rosa gymnocarpa**	Wood rose	
*Salix caprea**	Goat willow	
*Sequoia sempervirens**	Coast redwood	
*Syringa vulgaris**	Lilac	
*Taxus baccata**	European yew	
*Trientalis latifolia**	Western starflower	
*Umbellularia californica**	California bay laurel, pepperwood, Oregon myrtle	
*Vaccinium ovatum**	Evergreen huckleberry	
Viburnum spp.*	Viburnum – all species, hybrids and cultivars	

*Unprocessed wood and wood products, including firewood, logs, lumber, and bark chips or mulch of species listed above and marked with an asterisk (*) are not regulated.

Plants Associated with *Phytophthora ramorum*

(These are regulated only as nursery stock)

Scientific Name	Common Name, Date & Source of Report	Notes
Abies concolor	White fir – Oct 05 (1)	
Abies grandis	Grand fir – June 03 (1)	
Abies magnifica	Red fir – Jan 06 (7)	
Acer circinatum	Vine maple – Feb 06 (5)	
Acer davidii	Striped bark maple – Jan 06 (9)	
Acer laevigatum	Evergreen Maple – Aug 05 (3)	
Arbutus unedo	Strawberry tree – Dec 02 (7)	
Arctostaphylos columbiana	Manzanita – Feb 06 (5)	
Arctostaphylos uva-ursi	Kinnikinnick, bearberry – Jan 07 (10)	
Ardisia japonica	Ardisia – Jan 06 (9)	
Calycanthus occidentalis	Spicebush – May 05 (5)	
Castanopsis orthacantha	Castanopsis - Aug 06 (3)	
Ceanothus thyrsiflorus	Blueblossom – April 06 (5)	
Clintonia andrewsiana	Andrew's clintonia bead lily – May 04 (5)	
Cornus kousa x Cornus capitata	Cornus Norman Haddon – Aug 06 (3)	
Corylus cornuta	California hazelnut – Dec 02 (5)	
Distylium myricoides	Myrtle-leafed Distylium – Jul 06 (9)	
Drimys winteri	Winter's bark – July 04 (3)	
Dryopteris arguta	California wood fern – May 04 (5)	
Eucalyptus haemastoma	Scribbly gum – Aug 06 (3)	
Euonymus kiautschovicus	Spreading euonymus–Jan 06 (9)	
Fraxinus latifolia	Oregon ash – Aug 05 (5)	
Gaultheria shallon	Salal, Oregon wintergreen – Jan 06 (9)	
Hamamelis x intermedia (H. mollis & H. japonica)	Hybrid witchhazel – Jan 06 (9)	
Hamamelis mollis	Chinese witchhazel – Jan 05 (3)	
Ilex cornuta	Buford holly, Chinese holly – April, 09 (11)	
Ilex purpurea	Oriental holly – Jul 06 (9)	
Illicium parviflorum	Yellow anise (13)	
Larix kaempferi	Japanese larch- Aug 2009 (3) July 2010 (12)	

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Leucothoe axillaris	Fetterbush, dog hobble – Jan 06 (9)	
Leucothoe fontanesiana	Drooping leucothoe - Oct 03 (3)	
Loropetalum chinense	Loropetalum – Jul 06 (9)	
Magnolia denudata	Lily tree- Dec 2010 (3)	
Magnolia grandiflora	Southern magnolia – Jan 06 (9)	
Magnolia x loebneri	Loebner magnolia – Jan 05 (3)	
Magnolia x soulangeana	Saucer magnolia – Jan 05 (3)	
Magnolia stellata	Star magnolia – Jan 05 (3)	
Mahonia nervosa (Berberis nervosa[2])	Creeping Oregon grape - May 2010 (10)	
Manglietia insignis (Magnolia insignis[2])	Red lotus tree – Aug 06 (9)	
Michelia maudiae (Magnolia maudiae [2])	Michelia	
Michelia wilsonii (Magnolia ernestii[2])	Michelia	
Molinadendron sinaloense	August 2011 (1)	
Nerium oleander	Oleander – June 06 (1)	
Nothofagus obliqua	Roble beech – Dec 04 (3)	
Osmanthus decorus (≡Phillyrea decora; ≡P. vilmoriniana)	Osmanthus – Jan 06 (9)	
Osmanthus delavayi	Delavay Osmanthus, Delavay tea olive – Jan 07 (10)	
Osmanthus fragrans	Sweet olive – June 06 (1)	
Osmanthus heterophyllus	Holly olive – June 06 (1)	
Osmorhiza berteroi	Sweet Cicely – Aug 05 (5)	
Parakmeria lotungensis (Magnolia lotungensis[2])	Eastern joy lotus tree – Jul 06 (9)	
Pittosporum undulatum	Victorian box – Dec 02 (6)	
Prunus laurocerasus	English laurel, cherry laurel – Jan 07 (10)	
Prunus lusitanica	Portuguese laurel cherry – Jan 06 (9)	
Pyracantha koidzumii	Formosa firethorn – Apr 04 (9)	
Quercus acuta	Japanese evergreen oak – May 06 (3)	
Quercus petraea	Sessile oak – Aug 05 (3)	
Quercus rubra	Northern red oak – Nov 03 (8)	
Rosa (specific cultivars) Royal Bonica (tagged: "MEImodac") Pink Meidiland (tagged:	Hybrid roses – Jan 06 (9)	

"MEIpoque") Pink Sevillana (tagged: "MEIgeroka")		
Rosa rugosa	Rugosa rose – Jan 06 (9)	
Rubus spectabilis	Salmonberry – Dec 02 (4)	
Schima wallichii	Chinese guger tree, needlewood – Nov 06 (3)	
Taxus brevifolia	Pacific yew – May 03 (5)	
Taxus x media	Yew – June 05 (8)	
Torreya californica	California nutmeg – Aug 05 (5)	
Toxicodendron diversilobum	Poison oak – Dec 02 (4)	
Trachelospermum jasminoides	Star jasmine, Confederate jasmine- May (2); June (1), 2010	
Vancouveria planipetala	Redwood ivy – Aug05 (5)	
Veronica spicata (=Pseudolysimachion spicatum)	Spiked speedwell-June 2010 (1)	

[1] This list is based on 7 CFR §301.92-2 - Restricted, regulated, and associated articles; lists of proven hosts and associated plant taxa for Phytophthora ramorum.
[2] Plants that have new nomenclature names, but to keep this list consistent with 7 CFR §301.92-2, we temporarily place the new names in parenthesis until changes are made in the CFR.

(From parentheses numbers above) – Sources of reports of detections and identifications

[1] California Department of Food and Agriculture, Sacramento, CA
[2] Oregon Department of Agriculture. Salem, OR
[3] Department for Environment, Food and Rural Affairs, UK; (February, 2010) Food and Environment Research Agency (FERA)
[4] Everett Hanson, Oregon State University, Corvallis, OR
[5] David Rizzo, University of California, Davis, CA
[6] Matteo Garbelotto, University of California, Berkeley, CA
[7] Gary Chastagner, Washington State University, Puyallup, WA
[8] Plant Protection Service, Wageningen, Netherlands
[9] Canadian Food Inspection Agency, Ottawa, Ontario, Canada
[10] Washington State Department of Agriculture, Olympia, WA
[11] Molecular Diagnostics Laboratory, Beltsville, MD
[12] Department of Agriculture, Fisheries and Food, Ireland
[13] Alabama Department of Agriculture and Plant Industry

Rationale for Lists:

Host Plants Regulated for *Phytophthora ramorum:*
Naturally infected associated plants are deemed host plants regulated for *P. ramorum* upon completion, documentation, review, and acceptance of traditional Koch's postulates.

Plants Associated with *Phytophthora ramorum*:
Plants associated with *P. ramorum* are naturally infected plants from which *P. ramorum* has been cultured and/or detected using PCR (Polymerase Chain Reaction). Traditional Koch's postulates have not yet been completed nor documented and reviewed for each of these associated plants. These reports must be documented and reviewed by PPQ before they will be listed.

Regulation at the genus level:
Plants included in either of the above lists may be regulated at the genus level. This will ensure appropriate and effective inspection in quarantine areas, regulated establishments (e.g. nurseries), and regulated articles to mitigate the spread of *P. ramorum*. Examples of this include when the number of individual species, hybrids, or cultivars listed or to be listed are determined to hinder appropriate and effective inspection or regulation; or when sufficient numbers of member species of a genus are known susceptible to the disease causing organism, all members of that genus have a demonstrable risk of spreading that disease. Thus, to prevent the spread of disease, all members of that genus will be treated the same.

Agency Contact:
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National Operations Manager
919-855-7544

Movement of Host Material outside the Regulated Area

Movement of host material outside of the Regulated Area is not anticipated. Host material shall not be moved outside of the existing zone of infestation. If host material is to be moved outside of the regulated area, appropriate State and Federal permits must be obtained and amended to the timber harvesting plan.

Movement of Host Material inside the Regulated Area

It is anticipated that coast redwood and Douglas-fir saw logs 5" in diameter and greater will be removed from the harvest area and delivered to sawmills. (Douglas-fir and redwood saw logs greater than 4 inches in diameter that are free of limbs, sprouts, and burls are not host material.)
A small amount of firewood and redwood burl may be removed. This material will not leave the regulated area.

Notification of LTO

The LTO, who is required to have a copy of this plan, is responsible for compliance with the restrictions on the removal of host materials from the timber harvesting plan area. The list of regulated counties, and host species may change. It is the LTO's responsibility to inform himself and his employees about these procedures, and if necessary to seek assistance from the landowner's representative or the CALFIRE (formerly known as California Department of Forestry and Fire Protection).

Operational Mitigation

Leaves, needles, twigs, limbs, burls, basal sprouts, and portions of stems less than 4 inches in diameter from host material species shall not be removed from the timber harvesting plan area. The LTO shall inspect all vehicles and loads to make sure this material is not being removed from the area. (Removal of leaves, needles, twigs, limbs, burls, basal sprouts, and portions of stems less than 4 inches in diameter from host material species requires shipment in closed containers.) Redwood and Douglas-fir logs can be shipped to any destination as long as all portions of the stem are greater than 4 inches in diameter and the logs are free of basal trunk/burl sprouts, small branches (less than one inch in diameter), and leaves (needles).

The RPF responsible for the THP shall be responsible for amending or extending the restrictions and for informing the LTO of the operational requirements.

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Hardwood logs maybe removed and shipped within the regulated area as long as the logs are from live healthy trees, greater than 4 inches in diameter, and all leaves and branches have been removed. Any evidence or suspicion of sudden oak death within the timber harvesting area should be reported to the landowner's forester.

Material Destinations

Redwood and Douglas-fir saw logs from this timber harvesting plan area are likely to be shipped to the following locations: Redwood Empire Sawmills in Cloverdale and Asti; Mendocino Forest Products in Ukiah and Fort Bragg; Willits Redwood in Willits; Conrad Forest Products in Ukiah; Berry's Sawmill in Duncans Mills; HRC in Scotia; Schmidbauer Lumber in Eureka, MDI Forest Products, Port of Oakland.

Compliance Agreement

Use of this THP for a compliance agreement is valid for one year. After one year, an amendment will be necessary for operations that require a compliance agreement. This amendment will include current information and mitigation requirements.

b. [☐]Yes [**X**] No If outside a declared zone, are there any insect, disease or pest problems of significance in the THP area? If yes, describe the proposed measures to improve the health, vigor, and productivity of the stand(s).

HARVESTING PRACTICES AND EROSION CONTROL

16. Indicate type of yarding system and equipment to be used:

TRACTOR, SKIDDER, FORWARDER (Ground Based)*		CABLE		ANIMAL, BALOON, HELICOPTER, OTHER (Special)	
a. [**X**]	Tractor, including end/long lining	**d.** [☐]	Cable, ground lead	**g.** [☐]	Animal
b. [**X**]	Rubber tired skidder, Forwarder	**e.** [☐]	Cable, high lead	**h.** [☐]	Helicopter
c. [**X**]	Feller buncher	**f.** [☐]	Cable, skyline	**i.** [☐]	Other
j. [☐]	Shovel yarding				

* All tractor operations restrictions apply to ground based equipment.

17. Indicate Erosion Hazard Ratings present on THP.

[ ] Low [**X**] Moderate [**X**] High [☐] Extreme

If the information above does not match the EHR worksheets, clarify why, below. If more than one rating is checked, areas must be delineated on map down to 20 acres in size (10 acres for high and Extreme EHRs in the Coast District).

18. **Soil Stabilization**: Describe, as required, soil stabilization measures or additional erosion control measures to be implemented (including the location of application).

ALL WATERSHEDS Logging roads and Landings	DESCRIPTION OF TREATMENTS, PROTECTION MEASURES, and TIMING or not applicable
923.5[943.5, 963.5](i)— treatments to prevent significant discharge where features cannot be hydrologically disconnected.	**See road database and road points map at end of section II**
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.	**Treatments for Logging Roads and Landings (as per 14 CCR 923.5 (l))** **Bare soil on logging road or landing cuts, fills, transported spoils, or sidecast that is created or exposed by timber operations shall be stabilized to the extent necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge. Sites to be stabilized include, but are not limited to:** **(1) Sidecast or fill exceeding 20 feet in slope distance from the outside edge of a logging road or a landing that has access to a watercourse or lake.** **(2) Cut and fills associated with approaches to logging road watercourse crossings of Class I or II waters or Class III waters where an ELZ, EEZ, or a WLPZ is required.** **Soil stabilization measures** **Treatment shall consist of seeding the exposed area with grass seed applied at a rate of 25 pounds per acre, and mulching with straw to a depth of 2 inches. Do not use annual rye grass. Straw mulching should utilize clean straw (such as rice, barley, wheat, or weed-free straw). Slash may be substituted for straw, if the material is lopped and arranged to make adequate contact and coverage of the soil, to prevent or control erosion. Slash may not be used on the traveled surfaces of roads and landings unless the road or landing is designated for abandonment. Furthermore, slash shall not be used anywhere that will impede drainage, such as the edge of outsloped roads, above culvert inlets, in ditches, and in the channel zone portion of temporary tractor crossings.** **(m) Soil stabilization measures shall be described in the plan pursuant to 14 CCR § 923.5(l) and may include, but are not limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical stabilizers.**
923.5[943.5,963.5](n)—where	**(n) Where the natural ability of ground cover within a**

natural ability of ground cover in WLPZ is inadequate to protect.	**WLPZ is inadequate to protect the beneficial uses of water by minimizing soil erosion or by filtering sediments, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.** **No areas within this plan are known to exist where the natural ability of ground cover within a WLPZ are inadequate to protect the beneficial uses of water**
923.5[943.5,963.5](o) Exceptions to soil stabilization treatment timing.	**Not applicable.**

Watercourse crossings on logging roads	DESCRIPTION OF TREATMENTS/PROTECTION MEASURES or not applicable
923.9[943.9,963.9] (t)(1)-(3) bare soil on fills, sidecast, timing of treatment.	**See road database and road points map at end of section II**

Non ASP and exempt ASP watersheds WLPZ, & protected ELZ & EEZ	DESCRIPTION OF: TREATMENTS, PROTECTION MEASURES, and TIMING or not applicable
916.7[936.7,956.7]— Stabilization measures for WLPZ of CI & C II.	Not applicable

ASP Watersheds &/or Immediately upstream WLPZ, & protected ELZ & EEZ—	DESCRIPTION OF: TREATMENTS, PROTECTION MEASURES, and TIMING or not applicable
916.9[936.9,956.9](n)(1)-(7), WLPZ, & protected ELZ & EEZs. **923.5[943.5,963.5](q)(3)** as it pertains to roads, landings, etc. **923.9[943.9,963.9](t)(4)** as it pertains to watercourse crossings.	**(n) Treatments to stabilize soils –** **Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge shall be described in the plan as follows.** **(1) Soil stabilization is required for the following areas:** **(A) Areas exceeding 100 contiguous square feet where timber operations have exposed bare soil.** **(B) Approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing.** **(C) Any other area of disturbed soil that threatens to discharge sediment into waters in amounts that would result in a significant sediment discharge.** **(2) Soil stabilization treatment measures may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices**

	to manufacturer's specifications, or chemical soil stabilizers. **(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.** **(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.** **(5) For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water.** **(6) For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.** **(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.** **<u>Treatments to stabilize soils within WLPZ Facilities-(as per 14 CCR 923.5(q)(3))</u>** **<u>Within the WLPZ, and within any ELZ or EEZ</u> 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:** **(A) In addition to the requirements of subsections 923.5 (l)-(o) soil stabilization is required for the following areas:** **1. Areas exceeding 100 continuous square feet where timber operations have exposed bare soil, and** **2. Disturbed logging road and landing cut banks and fills, and**

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PART OF PLAN

RECEIVED Section II

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COAST AREA RESOURCE MANAGEMENT

3. Any other area of disturbed soil that threatens to cause significant sediment discharge.

(B) Where straw 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.

(C) Where slash mulch is applied, a minimum of 75% of the area shall be covered by slash in contact with the ground.

(D) For areas disturbed outside of the extended wet weather period, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could result in significant sediment discharge.

(E) For areas disturbed during the extended wet weather period, 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 of disturbance, whichever is earlier.

(F) 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.

As per 923.5 (o)

Soil stabilization treatments shall be in place upon completion of operations for the year of use or prior to the extended wet weather period, whichever comes first. An exception is that bare areas created during the extended wet weather period shall be treated prior to the start of rain that generates overland flow, or within 10 days of the creation of the bare area(s), whichever is sooner.

Watercourse crossing removal (As per 923.9 (p))

All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated roads, shall be removed as described in the plan and shall apply the following standards:

(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. **(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.** **(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.** **(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>Stabilization Standards for Watercourse Crossings as per 923.9 (t)(4)</u>** **(4) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge within the WLPZ and within any ELZ or EEZ designated for watercourse or lake protection shall be described in the plan as follows:** **(A) In addition to the requirements of 14 CCR § 923.9(p)(1)-(3), soil stabilization is required for the following:** **1. Areas exceeding 100 continuous square feet where timber operations have exposed bare soil.** **2. Disturbed logging road watercourse crossing cut banks and fills.** **3. Any other area of disturbed soil that threatens to cause significant sediment discharge.** **(B) Where straw 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.**

	(C) Where slash mulch is applied, slash coverage in contact with the ground surface shall be a minimum of 75 percent. **(D) For areas disturbed outside the extended wet weather period, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could result in significant sediment discharge.** **(E) For areas disturbed during the extended wet weather period, 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 of disturbance, whichever is earlier.**

19. [☐]Yes [X] No Are tractor or skidder constructed layouts to be used? If yes, specify the location and extent of use.

20. [☐]Yes [X] No Will ground based equipment be used within the area(s) designated for cable yarding? If yes, specify the location and for what purpose the equipment will be used.

21. Within the THP area will ground based equipment be used on:

a. [☐]Yes [X] No Unstable areas? Only allowed if unavoidable.

b. [☐]Yes [X] No Slopes over 65%?

c. [☐]Yes [X] No Slopes over 50% with high or extreme EHR?

d. [☐]Yes [X] No Slopes between 50% and 65% with moderate EHR where heavy equipment use will not be restricted to the limits described in 914.2 [934.2, 954.2] (f) (2) (i) or (ii)?

e. [☐]Yes [X] No Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake?

Note: If any of the above are answered "yes": any required site specific measures should be provided in Section II; and the required explanation and justification should be provided in Section III. See 914.2[934.2,954.2](d) and (f) for specific information. In addition, all exceptions must be located on a map. 1034(x)(15). If "b", "c", "d" or "e" is answered "yes": tractor road locations must be flagged on the ground prior to the PHI or start of operations if a PHI is not required.

No harvesting will occur on active unstable areas (these are the areas shown on page 73 as "slides recently added by RPF"). Unstable areas that fall outside the WLPZs will be flagged with EEZ flagging and No Cut flagging prior to operations. If skid trails or roads run through these areas and are stable then they will be flagged with yellow skid trail flagging or orange road flagging for use by the LTO.

Note to LTO regarding skidding operations-All skid trails in this plan have been flagged with yellow flagging except for the upslope (non-flat) areas. Do not leave the mapped roads onto these flat areas unless you are on a landing or see yellow flagging for skid trails or orange flagging for a road. In order to ensure minimal ground disturbance from ground based yarding, tractors may not drive in flood prone areas with their blade lowered, except as needed to move debris. No excavation shall occur on flood prone areas except at watercourse crossings described in section II or as needed to improve drainage or resolve access problems resulting from previous logging operations.

22. [☐]Yes [X] No Are any alternative practices to the standard harvesting or erosion control rules proposed? If yes, the information as required by 914.9 [934.9, 954.9] should be provided in Section III. Provide instructions to the LTO below.

revised 8/6/19

WINTER OPERATIONS

23. **NOTE:** "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at 925.1, 926.18, 927.1, and 965.5. "Extended wet weather period" means the period from October 15 to May 1.
(a) Tractor roads (except as otherwise provided in the rules): (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations. (2) 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. 914.6[934.6, 954.6](a).
(b) 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).
(c) When the term **"WPOP"** (Winter Period Operating Plan) is used below, all the requirements pursuant to 914.7[934.7, 954.7] **(b)** must be addressed.

a. [☐]Yes [**X**] No Will timber operations occur during the winter period? If yes, address "b" – "n", as applicable.

No operations are proposed in this THP during the period between November 15th and April 1st. The planning watershed in this plan meets the definition of a "watershed with listed anadromous salmonids"(14CCR 895.1). To comply with 14CCR 916.9(l) (1), a complete winter period operating plan is being prepared pursuant to 14CCR 914.7(b) for operations during the extended wet weather period from October 15 to November 15 and from April 1st to May 1st.

b. [☐]Yes [**X**] No Will mechanical site preparation be conducted during the winter period? If yes, provide a WPOP.

c. [☐] I choose the in-lieu option as allowed in 914.7[934.7,954.7](c). Specify below the procedures listed subsections (1) and (2), and list the site specific measures for operations in the WLPZ and unstable areas as required by subsection (3), if there will be no winter operations in these areas, so state.

d. [**X**] I choose to prepare a WPOP. 914.7[934.7,954.7](b).

e. [☐]Yes [**X**] No Will tractor watercourse crossings be used during the winter period? If yes, provide operational instructions and stabilization measures in the winter period operating plan. If an exception is proposed an explanation and justification should be provided in Section III. 914.8 [934.8,954.8](d).

f. [☐]Yes [**X**] No Will roads or landings be constructed during the winter period? If yes, provide a complete winter period operating plan pursuant to 14 CCR 914.7 [934.7, 954.7] that specifically addresses such logging road or landing construction or reconstruction. 923.4[943.4, 963.4](l). Note: if located in an ASP watershed or immediately upstream from ASP, see "m" below.

g. [☐]Yes [**X**] No Will roads or landings be used for log hauling and heavy equipment use during the winter period and not be restricted to roads with a stable operating surface, or surfaced with rock to a depth and quantity sufficient to maintain such a surface? If yes, the required explanation and justification should be provided in Section III. 923.6 [943.6, 963.6](g). See also 914.7[934.7,954.7].

h. [☐]Yes [**X**] No Will roads or landings 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? If yes, the required explanation and justification should be provided in Section III. 923.6 [943.6, 963.6](g). See also 914.7[934.7,954.7].

i. [☐]Yes [X] No Will temporary logging roads and landings be used during the winter period; or will logging roads to be abandoned or deactivated, be open (not be blocked) during the winter period? If yes, provide specific measures to be taken during operations in a WPOP. 923.6 [943.6, 963.6](f), 923.8 [943.8, 963.8] and (d).

j. [☐]Yes [X] No Will any logging road watercourse crossing proposed for removal not be removed and stabilized prior to the winter period? If yes, provide the specifics of the applicable CDFW 1600 agreement, or otherwise specify in the plan. 923.9 [943.9, 963.9] (p)(4).

k. [☐]Yes [X] No Will any temporary logging road watercourse crossing not be removed and stabilized prior to the winter period? If yes, provide specific measures to be taken during operations in a WPOP. 923.9 [943.9, 963.9](r).

ADDRESS THE FOLLOWING AS IT APPLIES TO ASP WATERSHEDS

l. [X]Yes [☐] No Are timber operations proposed during the Extended Wet Weather Period - October 15 to May 1? If yes, provide a WPOP. 916.9 [936.9, 956.9] (l) and(l)(1).

ADDRESS THE FOLLOWING AS IT APPLIES TO ASP WATERSHEDS OR IMMEDIATELY UPSTREAM:

m. [X]Yes [☐] No Will logging road or landing use occur, or will proposed logging road or landing construction or reconstruction occur during the extended wet weather period? If yes, provide specific measures to be taken during operations in a WPOP. 923.6 [943.6, 963.6](h)(6) and 923.4 [943.4, 963.4](s)(2).

n. [X] Yes [ ] No Will any watercourse crossing drainage structures be constructed or reconstructed during the extended wet weather period? If yes, provide specific measures to be taken during operations in a WPOP. 923.9 [943.9, 963.9](s).

1) EROSION HAZARD RATING: Moderate and High

2) MECHANICAL SITE PREPARATION METHODS: No mechanical site preparation proposed.

3) YARDING SYSTEM: Tractor - See 5 below for timing on skid trail erosion control structures. Dry class III crossings will be pulled as soon as practical following yarding and prior to the start of any rain which causes surface flow within the watercourse or prior to November 15th. Class I and II crossings will be pulled prior to Oct 15 and bridges will not be installed prior to June 1 in order to be consistent with the 1600 agreement unless otherwise agreed.

4) OPERATING PERIOD: ±Winter period≤means the period between November 15 and April 1, except as otherwise provided in the rules. During the periods from October 15 to November 15 and April 1 to May 1, there shall be no limitations on yarding during extended dry periods. (Extended Dry Periods means those periods during the winter period when saturated soil conditions do not exist.)

For consistency with CDFW 1600 Agreement all temporary crossings shall be removed prior to October 15 and all temporary Class I bridge installations shall not occur until on or after June 1.

5)EROSION CONTROL FACILITIES TIMING: Erosion control structures shall be installed on all constructed skid trails and tractor roads (not in a WLPZ , ELZ or EEZ designated for watercourse or lake protection)(1) as soon as practical following yarding and prior to the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or (2) prior to the end of the day if the U.S. Weather Service forecast is a ±chance≤≡PMB ≈or more) of rain before the next day, prior to any shutdown periods.

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For areas in a WLPZ , ELZ or EEZ designated for watercourse or lake protection treatment to any disturbed areas 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.

6) CONSIDERATION OF FORM OF PRECIPITATION: The most common form of precipitation in this area is rain and fog. Snow would be rare.

7) GROUND CONDITIONS: Loading, hauling, and maintenance activities will be restricted to "dry, rainless periods where soils are not saturated" from Oct. 15th to Nov. 15th and April 1st to May 1st , and shall further be guided by diligence and prudence in achieving the goals of 14CCR 914.

8) SILVICULTURAL SYSTEM - GROUND COVER: The silvicultural system is selection. The anticipated ground cover remaining after operations is at least 80%.

9) OPERATION WITHIN THE WLPZ: No operations will occur within the WLPZs of this plan from November 15 to April 1st.

10) EQUIPMENT USE LIMITATIONS: No equipment operations during the period from November 15 to April 1. From Oct. 15th to Nov. 15th and April 1st to May 1st operations of trucks and heavy equipment on roads and landings shall be limited to those with a stable operating surface during extended dry periods with low antecedent soil wetness. Logging roads, landings and tractor roads shall not be used when sediment from the logging road, landing or tractor road surface may be transported to a watercourse or a drainage facility in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements.

11) KNOWN UNSTABLE AREAS: Tractor operations are excluded from unstable areas. If an unstable area is found during operations an Equipment Exclusion Zone will be implemented around the unstable area, or if operations within the unstable area are necessary, an amendment to the THP will be sent to CALFIRE. No falling on active unstable areas.

12) LOGGING ROADS AND LANDINGS: No road or landing construction from Nov. 15th to April 1st. During the periods from October 15 to November 15 and April 1 to May 1, there shall be no limitations on road and landing construction during extended dry periods with low antecedent soil wetness.

13) No timber harvest activities will take place during measurable rain events (defined as greater than ¼" in a 24 hour period). This measure does not apply to maintenance of existing roads and watercourse crossings or to fuels treatment such as hand piling and burning, hand fire line construction, or other activities which do not involve heavy equipment or timber hauling.

<u>ROADS AND LANDINGS</u>

24. Will any roads be constructed? [ ]Yes [X] No, or reconstructed? [**X**]Yes [ ] No If yes, check items "a." – "e" & "g."

Will any landings be constructed? [**X**]Yes [ ] No, or reconstructed? [☐]Yes [**X**] No If yes, check items "h." -- "j."

PROVIDE: The classification and approximate length of each of the following logging road segment categories: constructed, reconstructed, and abandoned. 1034(o).

Approximately 100 feet of private seasonal road will be reconstructed at map point #32. At this point the road has been disrupted by debris from the bank upslope and it will require some minor reconstruction. Material can be incorporated into the road surface at the site. The road width will be approximately 15 feet.

a. [☐]Yes [**X**] No Will new or reconstructed roads be wider than single lane with turnouts? If yes, address pursuant to 923 [943, 963](c). 923.2 [943.2, 963.2](d)(1).

b. [☐]Yes [**X**] No Will any logging road cross an unstable area or connected headwall swale? If yes, address pursuant to 923.1 [943.1, 963.1](d). Also see 895.1 "Connected Headwall Swale"

c. [☐]Yes [**X**] No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? If yes, address pursuant to 923.2 [943.2, 963.2] (d)(2). See 923 [943, 963](c). Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet. 1034(x)(5)(A).

d1. [ ]Yes [**X**] No Will any logging roads or landings be constructed within: 150' of a Class I WLTL; 100 feet of a Class II WLTL on slopes > 30%; Class I, II, III, or IV watercourses or lakes; a WLPZ; or in marshes, wet meadows, and other wet areas except as described under 923.1 [943.1, 963.1](b)(1) – (3)? If yes, address the exception. 923 (943, 963](c).

d2. [ ]Yes [**X**] No Will any logging roads or landings be reconstructed within: a Class I, II, III, or IV watercourse or lake; a WLPZ; or in marshes, wet meadows and other wet areas except as described under 923.1 [943.1, 963.1] (c)(1) – (3)? If yes, address the exception. 923 (943, 963](c).

e. [☐]Yes [**X**] No Will any constructed or reconstructed road be located across more than 100 feet of lineal distance on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ that drain toward the zoned watercourse or lake? If yes, address pursuant to 923.2[943.2, 963.2] (a)(7) and 923.4 [943.4, 963.4](n).

f. [ ]Yes [**X**] No Will any roads or watercourse crossings be deactivated or abandoned? If yes, address pursuant to 923.8 [943.8, 963.8] et seq. Also see 923.9[943.9, 963.9](e) and (p).

g. [☐]Yes [**X**] No Is there any exception to flagging or otherwise identifying the location of any road to be constructed or reconstructed? If yes, address pursuant to 923.3 [943.3, 963.3](c).

h. [☐]Yes [**X**] No Will any landings exceed one half acre in size? If yes, address pursuant to 923 [943, 963](c). 923.2[943.2, 963.2](e)(2) If any landing exceeds one quarter acre in size or requires substantial excavation, the location must be shown on the map. 1034(x)(5)(D).

i. [☐]Yes [**X**] No Will any landing be located on an unstable area or connected headwall swale? If yes, address pursuant tc 923.1[943.1, 963.1](d). Also see 895.1 "Connected Headwall Swale"

j. [☐]Yes [**X**] No Will any constructed or reconstructed landing be located on more than 100 feet of lineal distance on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ and drain toward the zoned watercourse or lake? If yes, address pursuant to 923.2[943.2, 963.2] (a)(7) and 923.4 [943.4, 963.4](n).

k. [☐]Yes [**X**] No Will any landing be deactivated or abandoned? If yes, address pursuant to 923.8[943.8, 963.8] et seq.

l. [**X**]Yes [ ] No **Significant Erosion Sites**: Are there any significant existing or potential erosion sites associated with logging roads, landings and watercourse crossings in the logging area? (923.1 [943.1, 963.1](e)(1) – (5). Also see 923.9 [943.9, 963.9](a)) If yes, for each significant existing or potential erosion site, provide the following (consider providing in a Map Point Table):

- Locate and map significant existing and potential erosion sites.
- In addition, for each site:
  - 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.
- Describe a logical order of treatment for those which have feasible treatments.

See road work order and erosion control plan for specifics.

m. [X]Yes [☐] No **ASP WATERSHED**: 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 not, address the exception pursuant to 923.6 [943.6,963.6] (h)(3).

Landings on the appurtenant road system may be used as appurtenant landings. Logs may be loaded off of the road system as long as reconstruction is not necessary.

All roads including the appurtenant roads have been evaluated for connectivity and road points added to maps and the roads database. Much of this road is on flat ground and has a flat vegetative layer to trap sediment.

25. Note: if any "item is answered "yes" (or "no" for "Item 24m"): specific LTO **operational information**, in accordance with the respective rule requirement(s), should be provided **in Section II**. Any required **explanation and justification** should normally be included **in Section III**. Additional notes relative to the Road Rules effective 1/1/15:

For ALL WATERSHEDS, as applicable:

- Where abandonment or deactivation is required or proposed, describe specific measures to prevent significant sediment discharge. 923.8 [943.8, 963.8].
- If the logging road is to be abandoned provide the blockage design. 923.8 [943.8, 963.8](d).

ADDRESS THE FOLLOWING AS IT APPLIES TO ASP WATERSHEDS OR IMMEDIATELY UPSTREAM:

- Where logging road or landing construction or reconstruction is proposed, identify: (1) How the proposed operations will fit into the systematic layout pattern; (2) What, if any, offsetting mitigation measures, including but not limited to, abandonment of logging roads and landings, are needed to minimize potential adverse impacts to watersheds from the road system. 923.1 [943.1,963.1](g).
- On slopes greater than 50 % with access to a watercourse or lake: (A) Provide specific provisions for the protection of salmonid habitat for all logging road construction. 923.4 [943.4, 963.4](s)(1).
- For all permanent and seasonal roads with a grade of 15 % or greater that extend 500 feet or more, provide specific erosion control measures. 923.5 [943.5, 963.5](q)(2).

WATERCOURSE AND LAKE PROTECTION ZONE (WLPZ) AND DOMESTIC WATER SUPPLY PROTECTION MEASURES

Note: if any "item is answered "yes" provide the required information pursuant to the associated rule. Specific LTO **operational information** should be provided **in Section II. Explanation and justification** should normally be included **in Section III.**

26. a. [X]Yes [☐] No Are there any watercourses or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, as applicable, provide: the class, associated WLPZ or ELZ width, and protective measures; determined from 916.5 [936.5, 956.5] Table I, 916.4 (936.4, 956.4)(c), and/or 916.9 [936.9, 956.9] et seq. Specify if Class III or IV watercourses have a WLPZ or ELZ.

b. [X]Yes [☐] No Are there any tractor road watercourse crossings that require mapping per 1034 (x)(7)?

c. [☐]Yes [**X**] No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert. 914.8[934.8, 954.8](e).

Although the tractor crossings are expected to be dry at time of operations, if any water is present a 4"X 20' minimum size pipe will be installed and removed prior to October 15th.

d. [**X**]Yes [☐] No Is this THP Review Process to be used to meet Department of Fish and Wildlife CEQA review requirements? If yes, you should attach the required 1611 Addendum below, or at the end of Section II; and you should provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures, as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1611 Agreements and THP Documentation".

e. [☐]Yes [**X**] No Are any exceptions provided under F & G code 1600 et seq., and made an enforceable part of plan? If yes, identify the exceptions. 923 [943,963](d).

f. [**X**]Yes [☐] No Will new drainage structures and facilities on watercourses that support fish or listed aquatic species be constructed? If yes, structures and facilities shall be fully described and allow unrestricted passage and natural movement of bedload. 914.8[934.8, 954.8](c) and 923.9 [943.9, 963.9](c).

The appurtenant road system does have permanent class I bridge crossings at seven points and one bridge on a class II. No further modifications are necessary. These crossings allow for the passage of fish at all life stages in both directions. These crossings have always been disconnected from the road system to the extent feasible either through cross drains by road mounding or raised road beds.

There will be two temporary bridge crossings; one on the Little North Fork (a class I) and one on an unnamed class II. These bridges will be installed under 1600 agreements.

Details of Bridge Installation – The temporary bridges will all be installed in the same manner as shown on the diagrams in Section II maps. Monschke blocks (concrete blocks) will be placed outside of the wetted channel at road point #14. At road point #24 the bridge may be placed on native soil. Native dirt will be used for the ramps when a bridge ends are outside the channel zone. Ramps will be watered and compacted during use and then removed and reincorporated into the road bed. Approaches will then be seeded and mulched to item 18 standards. Refer to the 1600 agreement for these and other conditions before starting operations.

g. [**X**]Yes [☐] No Are there any new permanent constructed, reconstructed, and temporary logging road watercourse crossings, including those to be abandoned or deactivated that require mapping per 1034 (x)(6)? If structure is a permanent culvert, specify the minimum diameter and the method(s) used to determine the culvert diameter. 923.9 [943.9, 963.9](e).

See road point work order in section II maps for culvert sizes. Size

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was determined by GRTs GIS system which calculates culvert sizes for the entire property as well as by the RPF's calculations using the magnitude and frequency and the rational methods.

h. [☐]Yes [**X**] No Is there any exception to flagging or otherwise identifying the location of any constructed or reconstructed road watercourse crossing prior to the pre harvest inspection? If yes, provide an explanation and justification pursuant to 923.9 [943.9, 963.9](e)(1).

i. [☐]Yes [**X**] No Will methods other than critical dips be utilized in the construction or reconstruction of logging road watercourse crossings which utilize culverts? If yes, provide the methods that will be used to address diversion of overflow. 923.9 [943.9, 963.9](j).

j. [**X**]Yes [☐] No Are there any watercourse crossings that are existing or proposed for construction that are located on logging roads within the logging area? If yes, identify the crossing and provide the methods to mitigate or address the diversion of stream overflow at the crossing. 923.9 [943.9, 963.9](k).

See map point maps and work order at end of Section II.

k. [**X**]Yes [ ] No Will rock be used to stabilize crossing outlets? If yes, describe the range of required rock dimensions. 923.9 [943.9, 963.9](l).

See map point maps and work order at end of Section II.

l. [☐]Yes [**X**] No Is there a significant volume of sediment stored upstream from any crossing proposed to be reconstructed or removed? If yes, describe how the stored sediment shall be removed or stabilized, to the extent feasible, and in conformance with CDFW 1600 agreements, where applicable. 923.9 [943.9, 963.9](n).

m. [☐]Yes [**X**] No Are crossing fills over culverts large, or do logging road watercourse crossing drainage structures and erosion control features historically have a high failure rate? If yes, such 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 plan. 923.9 [943.9, 963.9](o).

n. [ ]Yes [**X**] No Will any logging road watercourse crossing be removed? If yes, describe the removal in the plan pursuant to the standards of 923.9 [943.9, 963.9](p)(1) – (4).

ANSWER THE FOLLOWING FOR PLANS LOCATED IN ASP WATERSHEDS

o. [**X**]Yes [☐] No Will timber operations occur within a Class I WLPZ or in a WLPZ adjacent to a restorable Class I watercourse? If yes, address 916.9[936.9, 956.9](f)(1)(A) – (E).

The watercourses on or adjacent to the plan area are shown on the THP maps attached.

The Doty Creek watershed does meet the definition of "Watersheds with listed anadromous salmonids" and are subject to the Anadromous Salmonid Protection Rules 2009 section 916.9.

Some of this plan includes a flood prone area adjacent to the Little North Fork of the Gualala.

The protection measures that will be applied to any class I protection zones are outlined below in Table for Class I watercourses.

Table for Class I Watercourses
Procedure for Determining WLPZ Widths and Protective Measures
Class I WLPZs – with flood prone areas or channel migration zones
Pursuant to 14 CCR 916.9 (f)(3)

Zone Designation	Zone width (ft.)	Overstory Canopy Cover		Large Tree Retention	Silviculture Requirements	Operational Requirements
Channel Zone or Channel Migration Zone per 916.9 (f)(3)(A)	Variable	Retain all trees except per 916.9 (e) (1)A-F or 916.9 (v)		Retain all trees except per 916.9 (e) (1)A-F or 916.9 (v)	Retain all trees except per 916.9 (e) (1) A-F or 916.9 (v)	No timber operations except per 916.9 (e)(1) A-F or 916.9 (v);
Core Zone per 916.9 (f)(3)(B)	30 ft.	Retain all trees except per 916.9 (e) (1)A-F or 916.9 (v)		Retain all trees except per 916.9 (e) (1)A-F or 916.9 (v)	Retain all trees except per 916.9 (e) (1) A-F or 916.9 (v); no sanitation salvage except 916.9 (s)(t)and (u).	No timber operations except per 916.9 (e) (1)A-F or 916.9 (v);
Inner Zone A per 916.9 (f)(3)(C)	Minimum 70 ft. Maximum 120 ft.	80% Coast and Southern Forest District of Coastal Anadromy Zone per 916.9 (f)(3)(C)3.	70% in all other watersheds per 916.9 (f)(3)(C)3.	13 largest trees /ac. per 916.9 (f)(3)(C)4.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 (f)(3)(E)
Inner Zone B per 916.9 (f)(3)(D)	Variable: distance from Inner Zone A to end of FPA.	50%		13 largest trees /ac. per 916.9 (f)(3)(D)1.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 (f)(3)(E)
Outer Zone per 916.9 (f)(3)(F)	50 ft.	50%		NA	Commercial thinning or single tree selection only; Retain wind firm trees.	Preferred Management Practices in 916.9 (f)(3)(E)

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The following applies to all watercourse designations-

As per 916.9 (e)- Channel zone requirements –

(1) **There shall be no timber operations within the channel zone with the following exceptions:**

(B) **Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.**

(C) **Actions necessary for the protection of public health, and safety and general welfare. This includes actions necessary to protect infrastructure facilities including, but not limited to, roads, bridges, powerlines, utilities, water drafting structures, homes, and other legally permitted structures.**

(2) **In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the preharvest inspection.**

The following are the minimum requirements for WLPZ delineation and timber operations near Class I watercourses with flood prone areas or channel migration zones.

Channel Migration Zone: When a CMZ is present, no timber operations are permitted in this zone except for those listed in § 916.9 , subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 , subsection (v).

Core Zone: The minimum width of the Core Zone shall be 30 feet measured from the watercourse transition line or lake transition line. No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9, subsection (e)(1) (A)-(F), or those approved pursuant to 14 CCR § 916.9, subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9, subsections (s), (t), and (u).

Inner Zone A:

1. The Inner Zone A generally encompasses the portion of the flood prone area from 30 feet beyond the WTL (Core Zone perimeter) up to 150 feet from the WTL.

2. The minimum width of the Inner Zone A shall be the greater of the distance from the landward edge of the Core Zone to the landward edge of the Inner Zone A or 70 feet. The maximum width is 120 feet.

3. Single tree selection will occur in this zone.

4. Postharvest stand shall have a minimum 80% overstory conifer canopy cover when conifers are present.

5. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

6. Large trees retained that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (e.g. trees that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

Inner Zone B:

1. The Inner Zone B is applicable when there are very wide flood prone areas. The Inner Zone B encompasses the portion of the flood prone area from the landward edge of the Inner Zone A to the landward edge of the flood prone area.

2. Single tree selection will occur in this zone.

3. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

4. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

Outer Zone: -There is no Outer zone on this plan.

Preferred Management Practices in the Inner Zone A and B of flood prone areas.

1. Implement actions to improve salmonid habitat conditions: GRT as an ongoing program of installing instream salmonid habitat structures and has already placed 560,000 board feet of LWD in the creeks on their ownership. They also have an upslope program of road stormproofing to control sediment inputs and have upgraded or stormproofed over 50% of their total road network. See cumulative impacts analysis in section IV. In this watershed GRT has been especially active at road improvement and has disconnected 81.6% of the roads in their ownership.

2. Minimize Yarding and Skidding: All skid trails in the flood prone area of this plan have been evaluated and preflagged. All trees will be reached from the existing road or from these flagged skid trails. Skid trails have been limited to the greatest extent feasible.

3. Minimize Soil Erosion and Prevent Discharge: The running surface of skid trails on slopes less than 10% and the running surface of roads (except at crossings as outlined elsewhere) will not be treated with straw or slash. See section III item 27j for explanation. Operations shall be conducted only in dry soil conditions. Avoid disturbance of vegetation not intended for harvest that could increase the likelihood of erosion or damages the reinforcing root network on the channel banks, including any secondary overflow channel. Roads will be watered concurrent with operations in order to keep dust production to a minimum.

4. Avoid Slash concentration and Site Preparation: Logging slash shall not be disposed of or concentrated in side channels. When slash is treated within the flood prone areas, scatter slash and avoid piling or other concentrations that may obstruct flows in side channels. When feasible, concentrate/mulch slash in tractor roads. No mechanical site preparation, broadcast burning or pile burning.

5. Delineate Zone on the Ground: Inner Zone B has been delineated with WLPZ flagging where it meets the edge of the Flood Prone Areas (the standard selection areas). Inner Zone A has not been delineated because additional flagging would create confusion and because the LTO is required in this plan to use only flagged skid trails while in the flood prone areas. The transition between Inner Zone A, Inner Zone B, or regular selection (no zone) has been mapped and these zones are depicted on the silviculture map.

6. Avoid Use of Water Drafting Sites (in the flood prone areas): It is not feasible to avoid flood prone areas for drafting.

7. Avoid Disturbance to Critical Flood Prone Area Habitat: No abandoned meanders, oxbox lakes, or other features that provide off-channel habitat for fish during flood flows will be affected by this THP since they have been given protection zones and all skid trails have been flagged. No activities that could increase potential for diversion or avulsion of stream flow out of existing channel, including breaching or lowering the elevation of natural levees will occur. Experience in these zones that affect hydraulic roughness have shown that generally hydraulic roughness is increased by operations. No large woody debris in the flood prone area will be harvested but some may be taken from the flats and used to enhance LWD in the channels with agency agreement.

Class II watercourse Section-

Documentation of Class II delineations-

Most of the class II watercourses on this plan fall within the class I protection zones therefore the higher standard of protection already will apply adjacent to them.

There are three class IIL watercourses in this plan. See maps in section II.

Determination-

These watercourses drain an area larger than 100 acres or have an average width of five feet for the first two hundred feet after their confluence with a class I.

Table for class II watercourses

Watercourse Class	percent slope	Core zone	Inner zone
Class II-L	0%-30%	30	70
Class II-L	30-50%	30	70
Class II-L	>50%	30	70
Class II-S*	0%-30%	15	35
Class II-S*	30-50%	15	60
Class II-S*	>50%	15	85

*Includes class IIS wet areas

<u>Protective measures for Class II-L watercourses in the coastal anadromy zone:</u>

Any Class II-L watercourses shall receive protection in conformance with 14 CCR §§ 916 through 916.7 in addition to the requirements listed under 14 CCR §§ 916.9 (g)(2)(A) and (B).

(i) Silviculture will be selection except in the core zone which is a no-cut zone.

(ii) Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9, subsections (s), (t) and (u).

(iii) Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast Forest Districts of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

(iv) Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

(v) Large trees retained to meet 14 CCR § 916.9 , subsections (g)(2)(B)2.(i) and (iii) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (e.g. trees that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

Also applicable to the class II L -

"B" - WLPZ shall be clearly identified on the ground by an RPF or supervised designee with blue and white striped "WATERCOURSE and LAKE PROTECTION ZONE" flagging prior to the start of timber operations. In watersheds with listed anadromous salmonids, on the ground identification of the WLPZ must be completed prior to the preharvest inspection. In this THP the flagging will be completed prior to the preharvest inspection.

"E" - To insure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 916.4(b), a base mark shall be placed below the cutline of the harvest trees within the zone and shall be done in advance of timber felling operations by an RPF or supervised designee. In watersheds with listed salmonids tree marking must be completed prior to the preharvest inspection.

As per 916.4(b)(6)- Within the WLPZs, at least 75 percent surface cover and undisturbed area shall be retained to act as a filter strip for raindrop energy dissipation, and for wildlife habitat.

Protective measures for Class II-S watercourses and class IIS wet areas in the coastal anadromy zone

Class II-S watercourses: Any Class II-S watercourses shall receive protection in conformance with 14 CCR §§ 916 through 916.7 in addition to the requirements listed under 14 CCR §§ 916.9 (g)(2)(A) and (B).

Wet areas: Designated wet areas on maps (pages 67 and 68) are no-cut areas.

"B" - WLPZ shall be clearly identified on the ground by an RPF or supervised designee with blue and white striped "WATERCOURSE and LAKE PROTECTION ZONE" flagging prior to the start of timber operations. In watersheds with listed anadromous salmonids, on the ground identification of the WLPZ must be completed prior to the preharvest inspection. In this THP the flagging will be completed prior to the preharvest inspection.

"E" - To insure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 916.4(b), a base mark shall be placed below the cutline of the harvest trees within the zone and shall be done in advance of timber felling operations by an RPF or supervised designee. In watersheds with listed salmonids tree marking must be completed prior to the preharvest inspection.

"I" - To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% 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 residual overstory canopy shall be composed of at least 25% of the existing conifers.

As per 916.3(g)- Recruitment of large woody debris for instream habitat shall be provided by retaining at least two living conifers per acre at least 16 inches diameter breast high and 50 ft. tall within 50 ft. of all Class II watercourses.

As per 916.9(u)-No salvage logging will occur within the WLPZs .

As per 916.4(b)(6)- Within the WLPZs, at least 75 percent surface cover and undisturbed area shall be retained to act as a filter strip for raindrop energy dissipation, and for wildlife habitat

Class III watercourse section-

Table for class III watercourses

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Watercourse Class	percent slope	Zone width	type	Protective Measure
Class III	<30%	30′	ELZ	916.9 (h) (1,2,3,4,5,6,7 and 8) And 916.5(e)
Class III	30% and up	50′	ELZ	
Springs without aquatic animals-	all	25′	ELZ	

For Class III watercourses the protective measures are:

Class III watercourses will have ELZs as outlined in the table above.

As per 916.5(e) – "H"- At least 50% of the understory present before timber operations adjacent to Class III watercourses shall be left living and well distributed to maintain soil stability upon completion of operations.

As per 916.9(h) – For Class III protection measures all Class III centerlines are flagged with blue flagging within the tractor yarding areas. Class III watercourse crossings will be kept to a minimum.

(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 sideslopes are >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.

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

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

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

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

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

As per 14 CCR 916.4(c)(3)-Soil deposited during timber operations in a Class III watercourse other than at a temporary crossing shall be removed and debris deposited during timber operations shall be removed or stabilized before the conclusion of timber operations, or before October 15. Temporary crossings shall be removed before the winter period.

As per 916.3(b)-Accidental depositions of soil or other debris in lakes or below the watercourse or lake transition line in waters classed I, II, and IV shall be removed immediately after the deposition.

As per 14 CCR 916 (b)-At a minimum, the LTO shall not remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood prone areas in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

Springs- If springs are discovered during operations that are not specifically addressed as road points, a spring drain will be installed at the location if a crossing is needed. The spring drain can be installed anytime other ground operations are allowed and will use a 4" plastic pipe (larger pipes and metal pipes are acceptable). Pipe can be removed at close of operations and the road or skid trail will be dipped out to keep water from running down the road or skid trail. Optionally the pipe can be left in if it is functioning properly. Otherwise no equipment will operate within 25 feet of springs, seeps, or any wet areas except on flagged skid trails or at designated crossings. Timber fallers will be instructed to fall timber away from springs and seeps unless it is unsafe to do so.

p. [☐]Yes [X] No Except for those operations listed in 916.9 [936.9, 956.9](e)(1)(A) – (E), or as described in 923.1 [943.1, 963.1] (h), will there be any timber operations within the channel zone of any watercourse, or will there be any logging roads or landings constructed or reconstructed in the CMZ or Core Zone of a Class I? If yes, address as required relative to the respective rule.

q. [X]Yes [☐] No Are there existing permanent Class I crossings, where fish are always or seasonally present or where passage is restorable? If yes, describe each crossing; and where the current crossing conditions may be adversely affecting fish passage, disclose such conditions in the plan and propose measures, if feasible, to address conditions. 923.9 [943.9, 963.9] (d).

The appurtenant road system has seven permanent class I crossings (see maps in section II) but no further modifications are necessary. These crossings all allow for the passage of fish at all life stages in both directions. These crossings have always been disconnected from the road system to the extent feasible either thru cross drains by road mounding or raised road beds.

r. [X]Yes [☐] No **Will water drafting occur in association with timber operations? If yes, address 923.7 [943.7, 963.7] (l).**

Water Drafting -

Water may be purchased from a private source for road watering on this plan.

Water may be drafted from three existing holes that have been dug for this purpose which are not near a watercourse, and the standard water drafting forest practice rules do not apply to these holes.

Water may be drafted from gravel bar holes that are not directly connected to surface water. 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 instructions will be similar to the 1600 agreement (1600-2011-0423R3) that covered these sites and was approved as part of THP #1-10-081-SON. The background information and analysis required by the ASP rules are included in Section III (see item 26).

The likely drafting requirements in the 1600 being prepared for this THP will include;

(A) 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.

(B) 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.

(C) Each of the drafting sites shall have a downstream pool designated within the wetted channel that is easily observable from the drafting site but as far away as possible. This pool shall be used to determine any flow changes from drafting activities. A water level gauge with at least 0.05 foot increments shall be installed in this pool. An additional riffle crest monitoring station shall be placed downstream of each drafting monitoring site in August and September.

(D) A pump test shall be conducted by an RPF at each site prior to commencement of any drafting activities and monthly thereafter. The purpose of this test is to establish if enough flow is present to allow for water drafting without significantly altering flow as measured by the wetted width of the channel. The test shall provide an estimate of the maximum change in water surface elevation as measured at the pool water level gauge that would result in a change of less than 0.10 foot to the wetted width at each monitoring site (the first downstream riffle crest).

(E) The diversion rate shall not exceed 300 gallons per minute.

(F) In aggregate, for GRT operations (including water drafting for Bedrock's gravel mining operations), GRT will use less than 25,000 gallons per day from active channel water holes. Separately, GRT will use 8000 gals or less per day in the two holes on the North Fork of the Gualala.

(G) Water truck operators shall be in possession of log books that shall contain the following information, kept current during operations: 1) drafting site location, 2) date, 3) time, 4) pump rate, 5) filling time 6) screen cleaning/inspection notes, 7) pre and post drafting pool water elevation as recorded from the water level gauge. Drafting logbook data shall be submitted to CDFW monthly for each year that drafting operations occur.

(H) If, during any drafting activity, the water level as read on the pool water gauge drops by more than 0.05, or the amount determined by the pump test (see item D above) to cause a change greater than 0.10 foot to the wetted width at the riffle downstream, pumping shall immediately cease.

All water drafting for timber operations are subject to each requirement below unless, as is likely, the Department of Fish and Wildlife modifies the requirement in a Lake or Streambed Alteration agreement that authorizes the drafting operation

(A) All water drafting intakes shall be screened to prevent impingement of aquatic species. The following requirements apply to screens and water drafting:

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).
2. The screen surface shall have at least 2.5 square feet of openings submerged in water.
3. The drafting operator shall regularly inspect, clean, and maintain screens to ensure proper operation whenever water is drafted.

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4. **The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.**
5. **The diversion rate shall not exceed 300 gallons per minute.**

(B) 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.

(C) 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.

(D) 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.

(E) Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream.

27. Are site specific practices proposed in-lieu of, or as an alternative to, the following standard WLPZ practices?

a. [X]Yes [☐] No Prohibition of the construction or use of tractor roads in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except as follows (916.3 [936.3, 956.3](c)):
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At new tractor and road crossings approved by Department of Fish and Wildlife.

b. [☐]Yes [X] No Retention of non-commercial vegetation bordering and covering meadows and wet areas?

c. [ ]Yes [X] No Directional felling of trees within the WLPZ away from the watercourse or lake?

d. [☐]Yes [X] No Decrease of width(s) of the WLPZ(s)?

e. [☐]Yes [X] No Protection of watercourses which conduct class IV waters?

f. [X]Yes [☐] No Exclusion of heavy equipment from the WLPZ except as follows (916.4 [936.4, 956.4](d) and (f)):
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At existing road crossings.
(4) At new tractor and road crossings approved by Department of Fish and Game.

g. [☐]Yes [X] No Establishment of ELZ for Class III watercourses unless sideslopes are <30% and EHR is low?

h. [☐]Yes [X] No Retention of at least 50% of the overstory canopy in the WLPZ?

i. [☐]Yes [X] No Retention of at least 50% of the understory in the WLPZ?

j. [ ]Yes [x] No Are any additional in-lieu or any alternative practices proposed for watercourse or lake protection?

NOTE: A yes answer to any of items "a." through "j." constitutes an in-lieu or alternative practice. Refer to 916.1 [936.1, 956.1] for addressing the in lieu practices. For each item marked "yes", the operational information proposed under #2 below should be provided in Section II, including mapping requirements [1034(x)(15) and (16)]; and the following should normally be provided in Section III:

1. State the standard rule;

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2. Explain and describe each proposed practice
3. Explain how the proposed practice differs from the standard practice;
4. Provide an explanation and justification as to how the protection provided is equal to the standard rule and provides for the protection of the beneficial uses of water, as per 916.1 (936.1, 956.1) (a).

Refer to 916.6 [936.6, 956.6] and/or 916.9 [936.9, 956.9] (v) for addressing alternative practices .

Exception to 27a, and 27f- See Section III for explanation and justification for in lieu practices.

All in lieu skid trails will be water barred at the extreme EHR hazard rating. (100 feet when grade is 10% or less, 75 feet when grade is 11-25% and 50 feet when grade is greater than 26%)

Note to LTO regarding WLPZ skid trails- All skid trails in the WLPZ have been flagged and the LTO will only be allowed to use flagged skid trails.

28. a. [X]Yes [ ] No Are there any landowners within 1000 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? If yes, the requirements of 1032.10 apply. Proof of notice by letter and newspaper should be included in THP Section V. If No, "28 b." need not be answered.

b. [ ]Yes [X] No Is an exemption requested of the notification requirements of 1032.10? If yes, the required explanation and justification for the exemption should be provided in THP Section III. Specify if requesting an exemption from the letter, the newspaper notice or both.

c. [☐]Yes [X] No Was any information received on domestic water supplies that required additional mitigation beyond that required by standard Watercourse and Lake Protection rules? If yes, list site specific measures to be implemented by the LTO.

29. [☐]Yes [X] No Is any part of the THP area within a Sensitive Watershed as designated by the Board of Forestry and Fire Protection? If yes, identify the watershed and list any special rules, operating procedures or mitigation that will be used to protect the resources identified at risk?

HAZARD REDUCTION

30. a. [ ]Yes [X] No Are there roads or improvements which require slash treatment adjacent to them? If yes, specify the type of improvement, treatment distance, and treatment method.

b. [☐]Yes [X] No Are any alternatives to the rules for slash treatment along roads and within 200 feet of structures requested? If yes, RPF must explain and justify how alternative provides equal fire protection. Include a description of the alternative and where it will be utilized below.

31. [☐]Yes [X] No Will piling and burning be used for hazard reduction? See 917, [937,957] et seq., for specific requirements. Note: LTO is responsible for slash disposal. This responsibility

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cannot be transferred.

BIOLOGICAL AND CULTURAL RESOURCES

32. NOTE: See THP Form Instructions or the CDF Mass Mailing, 07/02/1999, section on "CDF Guidelines for Species Surveys and Mitigations" to complete these questions.

a. [X]Yes [☐] No Are any plant or animal species, including their habitat, which are listed as rare, threatened or endangered under federal or state law, or a sensitive species by the Board, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species.

It was determined that the following sensitive animal species had a possibility, based on known range or historic range, of being found in or near the plan area. If a species was observed during plan layout it will be noted below.

Note to LTO-
1- The LTO should be on the lookout for these species and report any observations to the supervising RPF who will report the presence to CDFW for consultation.

Non listed "species of concern" as listed by the California Department of Fish and Wildlife

These species include Vaux's swift, Coopers' hawk, Sonoma tree vole, sharp-shinned hawk, purple martin, tailed frog, western pond turtle, Townsend's big-eared bat and southern torrent salamander.

All of these species except for the southern torrent salamander, Townsend's big-eared bat and tailed frog have been observed in the past on landowners' property but unless specifically noted have not been observed on this THP area. For more information on non-listed species of concern see cumulative impacts analysis for more information.

Sonoma Tree Vole-

Sonoma tree vole is known to occur extensively on GRT property and many sites have been recorded and protected over the last decade. During plan layout for this plan however no signs of Sonoma tree voles were observed. Sonoma tree voles make domed nests of fir needles in trees. The LTO shall inform their fallers to be on the lookout for nests, to protect trees where nests are found and to inform the supervising RPF if

nests are found so that additional screen trees can be marked for retention if necessary.

Western pond turtles-

Western pond turtles may be found within the plan area and will be protected by standard WLPZ protections if present.

Coopers hawks, sharp-shinned hawks and Vaux's swifts are also likely to be occasionally present although no nests are known.

Townsend's big-eared bat (Coto)-

This THP is within the historic range of COTO. No COTO have ever been known to occur on GRT property although no targeted COTO surveys have taken place. There are no caves, mines, or abandoned buildings within the THP, which are currently considered the preferred habitat. Any bats that are observed that have extremely large ears should be reported to the supervising forester.

Board of Forestry Sensitive animal species-

Golden eagle, Great blue heron, Great egret, Northern Goshawk, Osprey. Only the Osprey and Great blue heron are known to occur regularly on GRT property.

Osprey-

There are no known Osprey nest locations within the THP or close enough to units or appurtenant roads to have buffers that will be affected by operations.

Great blue heron –

There are no known Great blue heron nests on GRT lands.

Listed Species Endangered or Threatened, (either California or Federal)-

Northern spotted owl, California red legged frog, foothill yellow-legged frog, bald eagle, peregrine falcon, marbled murrelet, coho salmon, chinook salmon, steelhead trout, gray wolf.

The LTO should be alert for these species during operations. The area was examined for these animals. The CNDDB was also searched, and the results of that search are included in Section V. Northern spotted owl, red-legged frog, foothill yellow-legged frog and gray wolf are addressed below. Biological information on the other species can be found in the biological section of the CIA found in Section IV of the THP.

Gray Wolf (Canus lupus)-

The plan and assessment areas include habitat for gray wolves. On June 4th, 2014, the gray wolf became listed as endangered under the California Endangered Species Act (CESA). According to CDFW information titled California's Known Wolves Past and Present (February 2020) the gray wolf is moving back into northeastern California in small but increasing numbers. Two wolf packs identified as the Lassen and Shasta packs are known. The Shasta pack is thought to be no longer operating as a pack. Other wolves fitted with tracking collars that are known to be or known to have been in California include (OR7), (OR25), (OR54, now deceased), (OR44) and (OR59, now deceased). Other contemporary wolf sightings have been reported in Siskiyou, Modoc, Lassen, and Plumas counties. Although unlikely to occur, protection measures are in the next sentence should a gray wolf be observed in the plan area. If any wolves are sighted, rendezvous locations identified, or an active den is observed all vegetation disturbing activities within 200' will be suspended and the RPF will consult with CDFW and CalFire. The results of the consultation will be amended into the plan.

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Marbled Murrelet- (Brachyramphus marmoratus)-

Although there are a few scattered and exposed large trees in or near the THP it was not considered to be habitat because of the lack of canopy cover and/or adequate size branches. The nearest known occurrence of marbled murrelets is 12.5 miles south of the most southern boundary of the plan area where, in 1999, CDFW staff documented vocalizations and below-canopy flight over the Clipper Mill Bridge. In 2015 marbled murrelets were reportedly seen in the Clipper Mill area again. Consultation with CDFW will be sought if 1) trees or stands are identified within ¼ mile of the plan area that meet the definition of suitable habitat; 2) the location and boundary lines of the proposed THP are expanded; or 3) CDFW, the RPF, the property owner or CALFIRE receive any new information regarding marbled murrelet occurrences near the proposed plan area. If suitable habitat is found then operations will not occur within ¼ mile until surveys are completed. Surveys will not be required for operations within the boundaries of this plan since the habitat is unsuitable for murrelets. In 2017 and 2018 a Murrelet survey point was established and surveyed to protocol at the junction of the North fork and the South fork of the Gualala River. This is approximately one mile south of the southern end of this THP and is the most likely route a marbled murrelet would take if it was flying in the direction of this plan. There were no detections. the RPF will re-consult with CDFW prior to commencing operations, including timber hauling, should operations plan to proceed after the beginning of the 2024 Marbled Murrelet breeding season and if within 0.25 mile of the Green Bridge Marbled Murrelet Habitat Area

Foothill Yellow-Legged frog- (Rana boylii) - (California Species of Special Concern)

Adult foothill yellow-legged frogs are moderately sized — between 1.5 and 3 inches long — with a distinctive lemon-yellow color under their legs. They inhabit partially shaded, rocky perennial streams and their life cycle is synchronized with the seasonal timing of streamflow conditions. Adult frogs move throughout stream networks from winter refugia to mating habitat where eggs are laid in spring and tadpoles rear in summer. They breed along streams that have relatively open canopy within slow velocity edge waters, shallow end pools, back water areas, and riffles containing cobble-sized or larger rocks as substrate that provide a velocity barrier. These frogs need perennial water where they can forage through the summer and fall months. (Excerpt from Center for Biological Diversity). Additional information can be found in the cumulative impacts portion of Section IV. These frogs do occur in suitable habitat in the assessment area and may occur in the same habitat that has been identified as potential red legged frog habitat in the plan area.

Any adult frogs that may exist near the THP will be protected by WLPZ requirements and red legged frog protections that are part of the plan. Desiccation and dislodgment of egg masses is a concern therefore the

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frog's egg masses will also be protected by limitations that are part of the 1600 agreement. This agreement ensures that water levels will not be significantly reduced during water drafting. Note to LTO-For the "off channel water holes" that are not part of the 1600 agreement (see drafting sites map) the water truck will be required to use a bucket in the water hole into which the hose is placed. The bucket must be covered by < 1 inch mesh, and the mouth of the hose must be covered by 1/4 inch mesh. These are the same requirements as for the red legged frog.

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Protection Measures for Northern Spotted Owl (Strix occidentalis caurina)

For the purposes of review of this plan, the provision of 14 CCR 919.9 (e) following the USF&W Northern Spotted Owl Take Avoidance Analysis and Guidance for California Coast Forest District, Attachment A, (November 1, 2019) shall be used for compliance with Northern Spotted Owl take avoidance.

The THP complies with the recommendations put forth in Attachment A. Timber operations within this THP shall not commence until surveys have been completed according to the survey standards in USF&W 2011 Protocol For Surveying Proposed Management Activities That May Impact Northern Spotted Owls (revised January 9, 2012) and the results have been provided to CAL FIRE and amended into the THP.

The plan area contains habitat suitable for the Northern Spotted Owl. NSO is Federally Threatened, State Threatened, and a BOF Species of Special Concern. **Previous surveys and Landowner information show MEN0179, MEN0212 and MEN0371 activity centers within 0.7 miles. MEN0179, MEN0212 and MEN0371 are within ¼ mile of harvest area; therefore, seasonal restrictions may apply.**

Status;

Valid Site including occupancy and reproductive status;

- **MEN0179– Has not been detected in the past 3 years.**
- **MEN0212 – No contact in 2018. Pair, nesting inconclusive in 2017.**
- **MEN0371 – No contact in2017 or 2018. Single NSO in 2016. Pair, nesting likely in 2015.**

Activity Center Protections

For all known NSO activity centers, timber operations should adhere to the following recommendations outlined in Attachment A:

1. Within the 100-acre core area of an NSO AC:
   a. Outside the breeding season, limited timber operations (i.e. road use and maintenance, map point work, tail-hold placements, use of existing roads, and loading may be conducted, provided no trees> 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area.
   b. During the NSO breeding season, timber operations (including the use of roads prior to July 9) are not allowed within the 100-acre core area, except as noted as in subsections 4 & 5 below.

   Exceptions to Attachment A: see exceptions to breeding season restrictions on road use (proposed below under "Road Use.")
2. Timber operations outside the 100-acre core area, but within 0.25 mile of an

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AC:

a. Outside the breeding season, timber operations may be conducted.
b. During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.

Exceptions to Attachment A: None

3. For all NSO ACs, prior to May 15 (until the required surveys are conducted on May 15 or later):
   a. Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas > 0.25 mile from the AC.
   b. Helicopter yarding and staging may occur only on those THP areas > 0.5 mile from the NSO AC.

   Exceptions to Attachment A: see exceptions to breeding season restrictions on road use (proposed below under "Road Use.")

4. For all NSO ACs where reproductive status has been determined to be non-nesting or nesting failed:
   a. Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tailhold placements and loading) may be conducted within the 100-acre core area of the AC provided no trees > 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area.
   b. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core area of the AC. Helicopter fly-overs shall not occur within 1000 feet of the NSO AC.

   Exceptions to Attachment A: None.

5. For NSO ACs where reproductive status has been determined to be nesting:
   a. For ACs where fledging status has been determined, timber operations may be conducted only on those THP areas that are> 0.25 mile from the AC until the end of the breeding season.
   b. Helicopter yarding and staging may occur only on those THP areas> 0.5 mile from the NSO AC.

   Exceptions to Attachment A: None.

6. For NSO ACs where fledgling status has been determined (either nest failure or fledglings have left the core area):
   a. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core area of the AC. Helicopter fly-overs shall not occur within 1000 feet of the NSO AC.
   b. Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre core area of the AC provided no trees> 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area.

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Exceptions to Attachment A: None.

7. For any NSO AC regardless of AC status:
    a. If NSO move to a new location (> 1000 feet from the historical AC) and reproductive behavior is confirmed at the new site, request technical assistance to evaluate the status of the historical AC.

Exceptions to Attachment A: None.

Core Area Habitat Protections

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 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.

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 preharvest within this area (i.e. maintain the pre-harvest habitat type post-harvest).

6. Nesting/roosting habitat contiguous with the AC, which are larger than 100 acres provide the most operational flexibility. If the nesting/roosting is 200 acres or greater, and operations in the polygon outside the core area retained functional nesting/roosting habitat (i.e. no more than 33% of the basal area is harvested retaining a minimum of 100 sq. ft. of basal area per acre of trees greater than 11 inches DBH), then the 100-acre core area can be redrawn in subsequent entries. However, the 500-foot radius should remain unchanged, and the redrawn core area should not include any acres harvested within the previous 5 years.

Exceptions to Attachment A: None.

Habitat Retention within 0.7 miles of Activity Centers
Within the 0.7 mile radius (985 acres) of each AC:

1. Retain habitat to maximize attributes desirable for NSO.

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2. Retain at least 500 acres of suitable (nesting/roosting/foraging) NSO habitat, post-harvest, as follow:
    a. Retain 200 acres nesting/roosting habitat within a 0.7 mile radius of the AC consisting of:
        1. 100 acres of the 200 acres of nesting/roosting habitat retained should be contiguous, or contiguous as possible with the AC.
        ii. An additional 100 acres of nesting/roosting within the 0.7 mile radius:
            1. If the second 100 acres of nesting/roosting habitat is also contiguous with the AC, or within the same drainage, operations should retain a minimum of 66% of the pre-harvest basal area per acre of trees at least 11 inches DBH.
            2. If the remaining 100 acres of nesting/roosting habitat is not contiguous with the AC, retain at least 100 acres of nesting/roosting habitat.
    b. Retain at least 300 acres of suitable NSO habitat, post-harvest, of at least foraging quality.

3. Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an AC during the life of the timber operations.

Exceptions to Attachment A: None.

Road Use

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:

1. Following an activity center search (2019 NSO Protocol) on or after May 15, the NSO is determined to be absent, 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 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.

Exceptions to Attachment A: We propose additional exceptions to the above road use restrictions include:

During the breeding season the following road uses are permitted:

- Use of pickups and ATVs on existing roads.
- Use and maintenance of existing permanent roads as designated by maps in the THP.
- Use of public roads.
- Use and maintenance of existing seasonal haul roads that *(I)* are located at least the same distance from the current spotted owl activity center as a public road or mainline haul road; or *(2)* are existing seasonal roads> 500 feet from the activity center and in use throughout the time the spotted owl territory has been active.

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- Allow a logging vehicle to stop only for safety reasons when within 0.25 mile of a nest site known to be currently active unless the vehicle is on an existing permanent road.

Justification and operational limitations to mitigate exception to road use limitations:

The permanent road along the Little North Fork Gualala River has been in existence for over 100 years, originally as a logging railroad. Other roads in the area have been in place for decades. On the ridge to the west of the THP area is Old Stage Road, a heavily trafficked county road that parallels the entirety of the THP area. NSO in the area have been monitored yearly since the early 1990s and their presence has been stable until the recent invasion by Barred Owls. Continued occupancy of activity centers on the landowner's property for over 25 years preceding Barred Owls demonstrates a tolerance to the existing permanent arterial roads. Additionally, the USFWS has issued hundreds of no take determinations without limitations on road use within ¼ mile of activity centers in the past.

Prior to July 10, within 0.25 mile of an NSO Activity Center the speed limit on THP permanent roads as mapped shall be 15 mph and the use of Jake brakes is prohibited.

During the non-breeding season, the following road uses are permitted:

- Operations, including use and maintenance of all existing roads and rockpits.

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California Red Legged Frog (Rana aurora draytoni)-

Red Legged frogs are believed to have been discovered adjacent to the plan area in an inside ditch. Note- Under scenario IV item i below the existing main haul road runs within 30 feet of the habitat that has been discovered. It is proposed that a covered half pipe and a fence will be placed using material that the frogs cannot jump thru for the length of the inside ditch wet area during operation so that frogs will be protected (see road point #41 for details).

a. The exclusion fencing shall be secured so that it prevents frogs from slipping under the fence;
b. Include a barrier at the top of the exclusion fencing (e.g. fold or ledge) to prevent frogs from climbing over;
c. Exclusion fencing shall be checked and maintained whenever the road is in use; and
d. All material shall be removed prior to the winter period and upon the completion of operations

Also, two ponds within the THP area and one adjacent have been identified as potential frog habitat in addition to the potential habitat of the Class I and Class II watercourses (see frog habitat map). The following CRLF restrictions will also protect the Yellow legged frog if any exist in the same habitat.

The California Red Legged frog will be protected by adhering to USFWS Scenario III and Scenario IV for the wet and dry weather periods respectively (see below for specifics). The wet weather period is defined as starting with the first frontal rain system depositing a minimum of 0.25 inches of rain after October 15 and ends on April 15. (Note to LTO - These wet and dry periods very slightly from the wet weather periods described elsewhere in the plan so make sure that you understand the differences and the restrictions involved.)
The dry weather period starts April 16 and ends with the first frontal rain system which deposits a minimum of 0.25 inches of rain.

Scenario III mitigations apply during the red legged frog wet weather period as defined above.

Scenario III: Suitable habitat within 2 miles of harvest units or in units and harvest activities planned within 300 feet of suitable habitat during the wet season (applies to winter period falling and to any other activities that are allowed elsewhere in the plan between April 1 and April 15th and between the first ¼ inch rain after October 15th and before Nov 15th).
No take is estimated only under the following conditions:
i. During the wet weather period for Class III watercourse, when dry, maintain a 30-foot no cut buffer, trees felled away from watercourse
ii. During the wet weather period for Class II watercourse and intermittent ponds/wetlands that meet the definition of suitable habitat, where water is present, 300 foot no cut buffer; where dry, 30-foot no cut

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buffer, no equipment within 75 feet of annual high water mark, trees felled away from suitable habitat.
iii. During the wet weather period for Class I watercourse and permanent ponds/wetlands that meet the definition of suitable habitat - no cutting and no equipment within 300 feet of this suitable habitat.

Scenario IV mitigations that apply during the red legged frog dry weather period as defined above.
Scenario IV: Suitable habitat within 2 miles of harvest units or in units and harvest activities planned within 300 feet of suitable habitat during the dry season.
i. All suitable habitats must maintain a 30-foot no-cut buffer; no equipment within the no-cut buffer; trees felled away from suitable habitat.

Under both of the above scenarios, the following operational conditions must also be included:
1) Pile burning must be outside the 300-foot buffer of suitable habitat
2) No herbicide use allowed within 300 feet of suitable habitat except for direct application to stumps
3) Roads and landings, if constructed, must be at least 300 feet from suitable habitat, and construction must occur in the dry season.
2) Water drafting from suitable habitat (for dust abatement) must be done with a hose placed in a bucket in a deep pool. The bucket must be covered by < 1 inch mesh, and the mouth of the hose must be covered by 1/4 inch mesh

<u>Rare plants</u>-

A scoping process for rare plants was conducted and is included in section IV. A botanical survey with seasonal timing and project coverage consistent with 2018 CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plants Populations and Natural Communities is included in THP Section IV.

Special Treatment Flagging will be hung around areas where rare plants are discovered. If rare plants are discovered protection will be incorporated into the THP, dependent on the plant, its location, and consultation with CDFW.

<u>Additional beneficial actions for wildlife protection</u>-

Nests- All fallers shall be informed to leave trees in which nests or nest holes are observed and to report any nests found to the LTO who shall report to the landowner's representative.

Dead and down Materials- Dead and down materials within the WLPZs

shall be left on the ground to provide habitat for amphibians, reptiles, birds, and small mammals.

Hardwoods-All hardwoods within the WLPZs shall be left uncut. Leave hardwoods outside of the WLPZs that are 24" or greater DBH (up to 4 per acre) unless they pose a threat to safety.

Springs- If springs are discovered during operations that are not specifically addressed under item #25, a spring drain will be installed at the location if a crossing is needed. Otherwise no equipment will operate within 25 feet of springs, seeps, or any wet areas except on flagged skid trails or designated roads.

Wildlife trees- Trees have been marked with a "W" to indicate a wildlife no-cut tree. Fallers will be instructed to avoid falling trees into trees marked with a "W" or falling merchantable trees into snags (which are all meant to be left) unless there is a safety risk.

b. [☐]Yes [**X**] 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.

33. [**X**]Yes [☐] No Are there any snags which must be felled for fire protection or safety reasons? If yes, describe which snags are going to be felled and why.

Any snag that the LTO determines to be a hazard to worker or public safety may be felled. All snags that do not constitute a safety hazard will be retained to the extent feasible during timber harvest.

34. [☐]Yes [**X**] No Are any Late Succession Forest Stands proposed for harvest? If yes, describe the measures to be implemented by the LTO that will avoid long-term significant adverse effects on fish, wildlife and listed species known to be primarily associated with the late succession forest.

35. [☐]Yes [**X**] No Are any other provisions for wildlife protection required by the rules? If yes, describe.

36. a. [**X**]Yes [ ] No Has an archaeological survey been made of the THP area?
b. [**X**]Yes [☐] No Has a current archaeological records check been conducted for the THP area?
c. [**X**]Yes [ ] No Are there any archaeological or historical sites located in the THP area? Specific site locations and protection measures shall be included in the Confidential Archaeological Addendum, which should be located in Section VI of the THP. Note, this is not available for general public review.

37. [☐]Yes [**X**] No Has any inventory or growth and yield information designated "trade secret" been submitted in a separate confidential envelope in Section VI of this THP?

38. Describe any special instructions or constraints that are not listed elsewhere in Section II.

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. No excavation shall occur on flood prone areas except at watercourse crossings described in section II or as needed to improve drainage or resolve access problems resulting from previous logging operations.

Note to LTO regarding falling operations;
Consistent with safety, trees should be felled in whatever direction best preserves the canopy as long as no part of any tree falls into a watercourse.

At a minimum, the LTO shall not do either of the following during timber operations-

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, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

The plan submitter is responsible for notifying the Department of the commencement of timber operations.

Telephone Mendocino Unit= (707) 459-7440
Mail: 17501 N.Hwy 101 Willits ,CA 95490
Email: current office technician using the formula firstname.lastname@fire.ca.gov

Flagging Key-

Pink flagging - THP boundaries.

Blue and white striped flags- Boundary between class I zones and non-WLPZ regular selection areas.

Solid blue flagging- Class III watercourses have their centerlines flagged in ground based skidding areas- See table under item 26 for specifics.

Solid yellow – All usable skid trails within all WLPZ zones have been flagged.

Road Points- Road point numbers are painted on nearby trees or banks in blue paint.

Orange and White striped with Special Operating Zone printed on it- rare plant location if any.

Orange flagging- existing or proposed road

Two flags hung together usually mean an abrupt change in direction, three flags hung together mean the end of the flag line.

Anadromous Salmonid Protections rules monitoring:

The Plan Submitter has agreed to conduct ASP rule effectiveness monitoring during timber operations on this Plan. The first aspect of this monitoring is aimed at determining if erosion control is being implemented and what degree of soil disturbance is occurring from ground based operations within the flood prone area. Channel migration will also be monitored. The outline for this is in Section V. THP page 366.6. This draft protocol was designed by CALFIRE's Drew Coe, Pete Cafferata and Will Olsen. The Plan Submitter will work with the Review Team agencies to further refine the design of the study and identify the sample area of skid trails to measure soil disturbance. Results of the monitoring will be submitted by the Plan Submitter to CAL FIRE yearly as collected.

The second aspect of the monitoring will consist of placing temperature/humidity sensors in two locations, one harvested and one control (unharvested) to determine if there is a temperature or humidity change following harvest. The first location will be inside the harvest area on the alluvial flats but outside of the designated flood prone area. The silviculture in the area will be standard single tree selection. The second location will be outside of the harvest area on the alluvial flats but outside what would be considered the flood prone area. Actual locations have not been selected yet but sensors will be placed prior to harvest. Sensors will remain in place as long as timber operations are being conducted. MWAT (maximum weekly average temperature) and humidity measurements will be calculated for each location. Results of the monitoring will be submitted by the Plan Submitter to CAL FIRE.

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DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: Dominik Schwab September 23, 202
(Signature) (Date)

Dominik Schwab Forester III
(Printed Name) (Title)

PROFESSIONAL FORESTER ★ Dominik Schwab No. 2823 ★ STATE OF CALIFORNIA

RECEIVED
JUN 21 2021
COAST AREA
RESOURCE MANAGEMENT

6/3/2021

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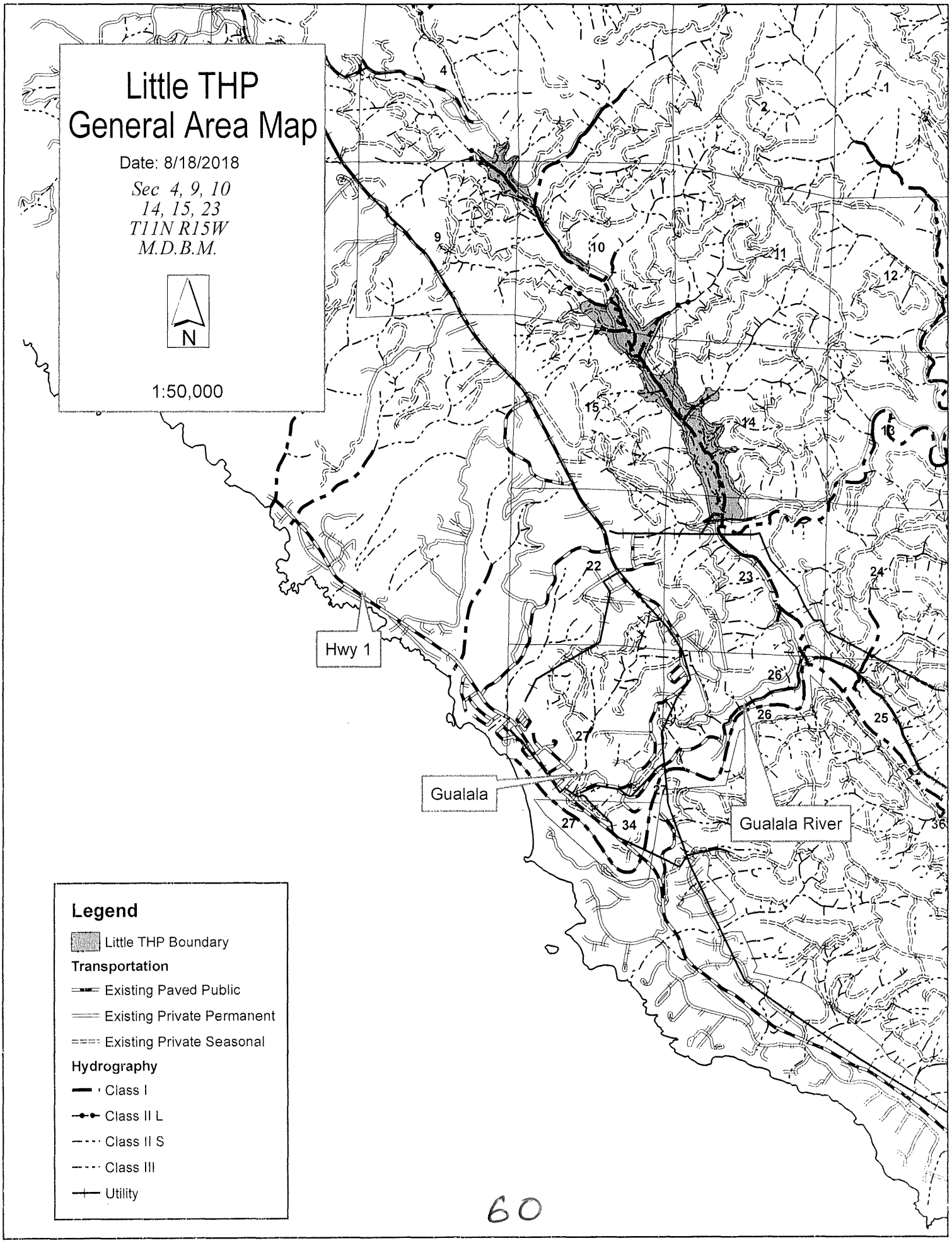
Section II
Maps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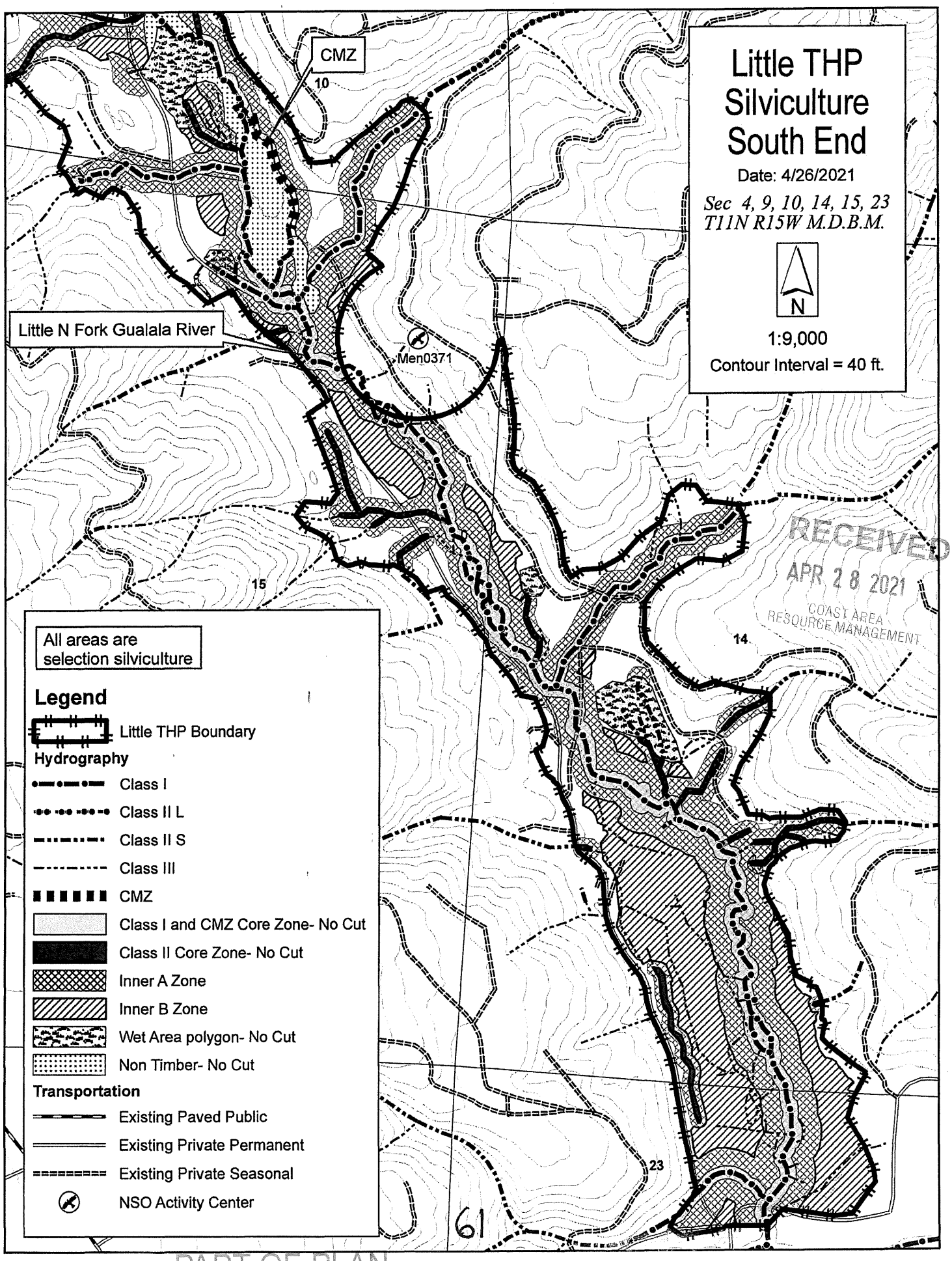
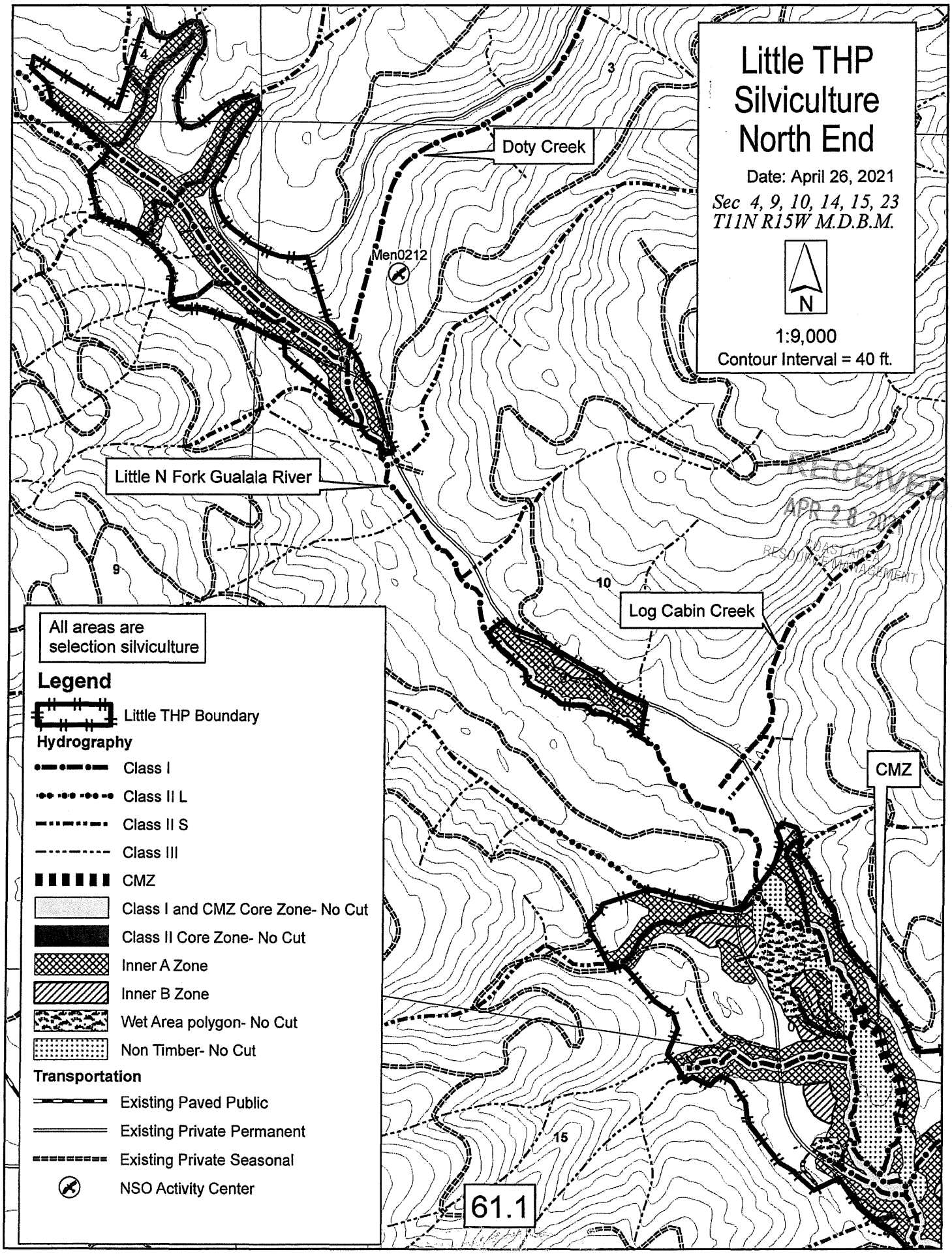
General Area Map
Date: 8/18/2018
Sec 4, 9, 10
14, 15, 23
T11N R15W
M.D.B.M.
N
1:50,000
Hwy 1
Gualala
Gualala River
Legend
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Hydrography
Class I
Class II L
Class II S
Class III
Utility

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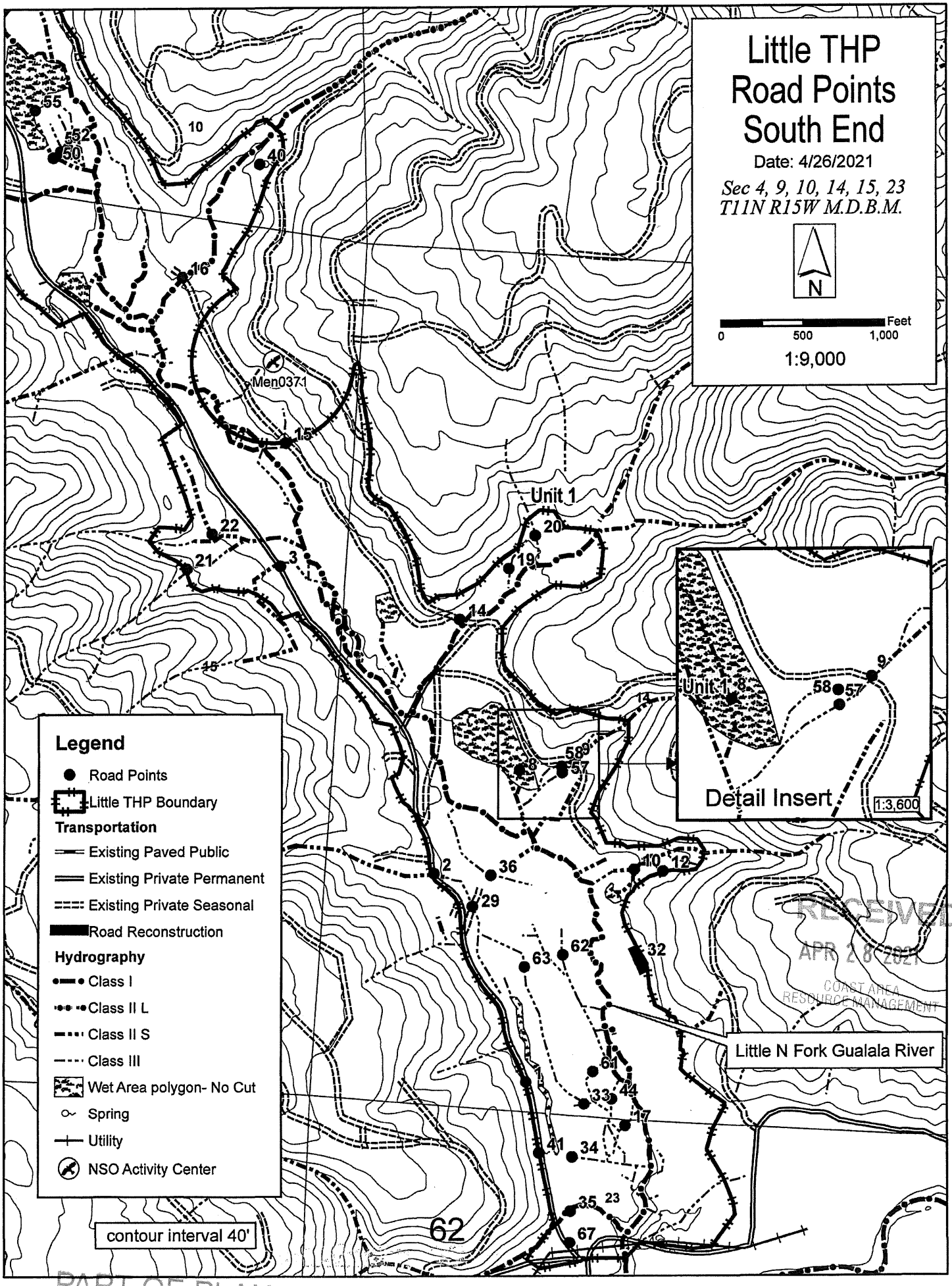
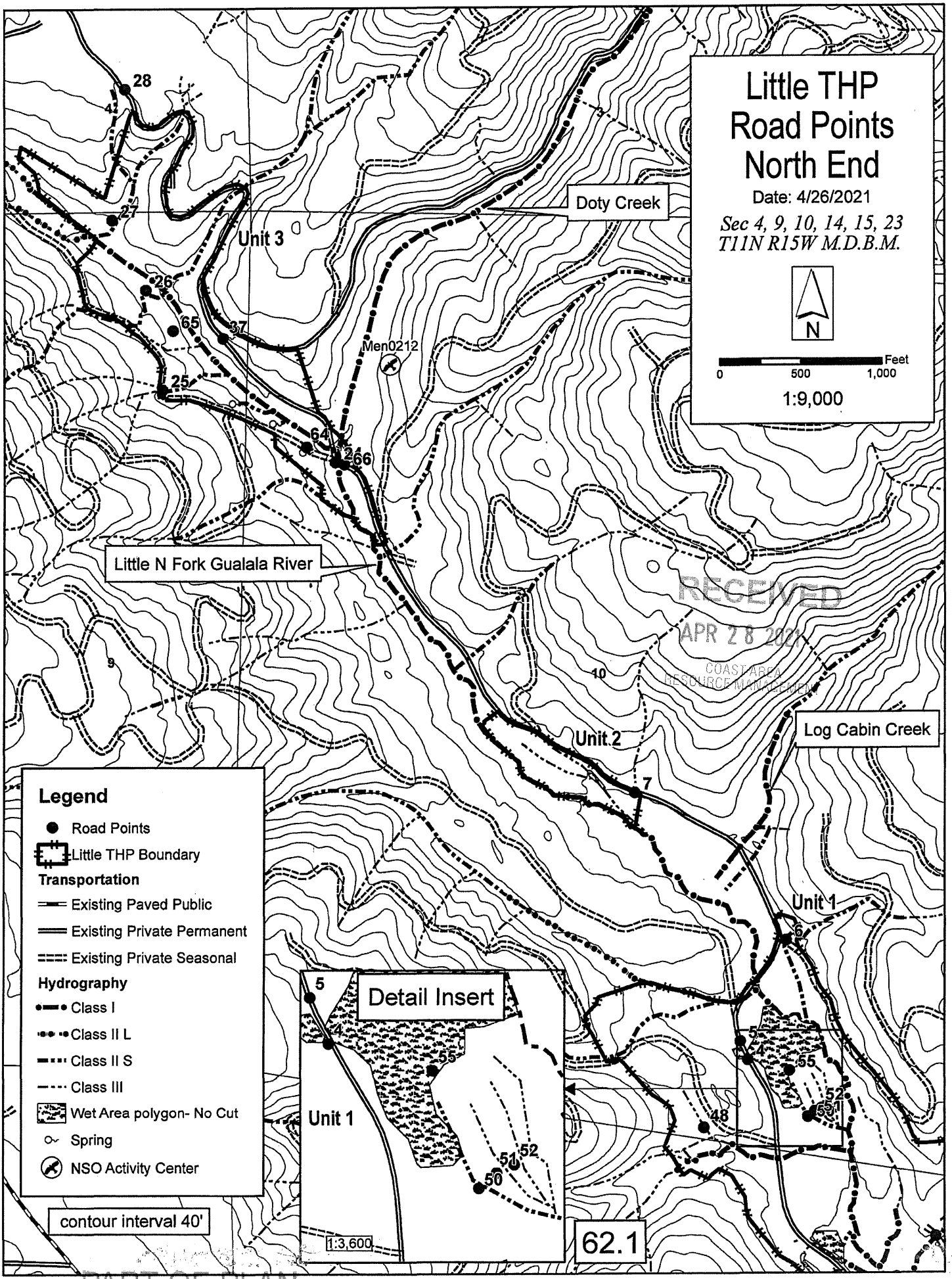
Date: April 26, 2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
1:9,000
Contour Interval = 40 ft.
Doty Creek
Men0212
Little N Fork Gualala River
Log Cabin Creek
CMZ
RECEIVED
APR 28 2021
RESOURCE MANAGEMENT
All areas are selection silviculture
Legend
Little THP Boundary
Hydrography
Class I
Class II L
Class II S
Class III
CMZ
Class I and CMZ Core Zone- No Cut
Class II Core Zone- No Cut
Inner A Zone
Inner B Zone
Wet Area polygon- No Cut
Non Timber- No Cut
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
NSO Activity Center
61.1

PART OF PLAN


Little THP
Road Points
South End
Date: 4/26/2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
Feet
0
500
1,000
1:9,000
Men0371
Unit 1
Unit 1-8
Detail Insert
1:3,600
Little N Fork Gualala River
Legend
Road Points
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Road Reconstruction
Hydrography
Class I
Class II L
Class II S
Class III
Wet Area polygon- No Cut
Spring
Utility
NSO Activity Center
contour interval 40'
62
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
PART OF PLAN


Little THP
Road Points
North End
Date: 4/26/2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
Feet
0
500
1,000
1:9,000
Doty Creek
Unit 3
Men0212
Little N Fork Gualala River
Unit 2
Log Cabin Creek
Unit 1
Detail Insert
Unit 1
Legend
Road Points
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Hydrography
Class I
Class II L
Class II S
Class III
Wet Area polygon- No Cut
Spring
NSO Activity Center
contour interval 40'
1:3,600
62.1
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
PART OF PLAN

THP Road Work

THP# 18-095 Little

Road # 0

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
35	0.000	0.000	6,654	6,654	Temp. Crossing	Temp. Crossing	THP Non-Road	-	I	Medium	0
Comments:	Skid xing on class I. Expected to be dry during operations. If water is present install minimum 18" pipe or larger adequate to handle flow. . Cover xing with existing channel material. Crossing will be pulled prior to Oct. 15. Remove any debris or dirt on the gravel and reshape back to original channel. Reestablish berm along north side of channel to match existing berm that is alredy there.										
21	0.000	0.000	6,638	6,638	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
22	0.000	0.000	6,639	6,639	Temp. Crossing	Temp. Crossing	THP Non-Road	-	II	Medium	0
Comments:	Skid xing on class II. Expected to be dry during operations. If water is present install minimum 4" pipe or larger adequate to handle flow. Pull pipe and dip out prior to November 15th, but do not dip out too much because we don't want to drain little pond above this point.										
19	0.000	0.000	6,636	6,636	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. dip out prior to November 15th.										
44	0.000	0.000	6,635	6,635	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
26	0.000	0.000	6,643	6,643	Temp. Crossing	Temp. Crossing	THP Non-Road	-	II	Medium	0
Comments:	Install 4"+ pipe adequate to handle flow if water is present. Pull all material down to grade and pull banks back to stable repose prior to November 15th.										
27	0.000	0.000	6,644	6,644	Temp. Crossing	Temp. Crossing	THP Non-Road	-	II	Medium	0
Comments:	Install Spittler crossing, (fill with logs or hay bales then cover with dirt). Pull all material down to grade and pull banks back to stable repose prior to November 15th.										
12	0.000	0.000	6,629	6,629	Temp. Crossing	Temp. Crossing	THP Non-Road	-	II	Medium	0
Comments:	Skid xing on class II. Expected to be dry during operations. If water is present install minimum 4" pipe or larger adequate to handle flow. Pull pipe and dip out prior to November 15th.										
57	0.000	0.000	6,648	6,648	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										
33	0.000	0.000	6,650	6,650	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
34	0.000	0.000	6,651	6,651	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
20	0.000	0.000	6,637	6,637	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
36	0.000	0.000	6,652	6,652	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
55	0.000	0.000	6,647	6,647	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										
61	0.000	0.000	6,663	6,663	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
50	0.000	0.000	6,658	6,658	Temp. Crossing	Temp. Crossing	THP Non-Road	-	II	Medium	0
Comments:	Dipo out prior to November 15th.										
51	0.000	0.000	6,659	6,659	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										
52	0.000	0.000	6,660	6,660	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										
48	0.000	0.000	6,661	6,661	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										

6/3/2021 PART OF PLAN 63

Section II

65	0.000	0.000	6,674	6,674	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Install 4"+ pipe adequate to handle flow if water is present. Pull all material down to grade and pull banks back to stable repose prior to November 15th.										
8	0.000	0.000	6,662	6,662	Surface Drainage	Other	THP Non-Road	-	N/A	Medium	0
Comments:	Slash pack this segment of skid trail for approximately 50 feet where it is at its closest point to the class I.										
63	0.000	0.000	6,666	6,666	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										
62	0.000	0.000	6,665	6,665	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Dip out prior to November 15th.										
58	0.000	0.000	6,664	6,664	Temp. Crossing	Temp. Crossing	THP Non-Road	-	III	Medium	0
Comments:	Skid xing on class III. Dip out prior to November 15th.										

Number of Sites = 24

Road # 26

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
66	0.000	0.000	6,678	6,678	Other	Other	THP Non-Road	-	I	Medium	0
Comments:	WLPZ landing- This landing is at the intersection of two roads that will already be disturbed. Seed and mulch at close of operations										
67	0.000	0.000	6,679	6,679	Other	Other	THP Non-Road	-	I	Medium	0
Comments:	WLPZ landing- This landing intrudes about twenty feet into a class I WLPZ. The topography of the area will prevent soil from migrating in the direction of the watercourse. LTO shall place a brow log along the edge of the landing along the WLPZ boundary. Landing will be slash packed prior to completion of operations.										

Number of Sites = 2

Road # 60.4

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
41	0.100	0.000	6,656	6,656	Spring	Vented Ford	THP App. Rd.	-	Spr.	Medium	0
Comments:	Do not drain the wet inboard ditch. Presently the inboard ditch collects a number cut bank seeps along a ±80-foot stretch of permanent all-season rocked road. When receiving ditch flow exceeds the ground infiltration rate overflow from the ditch drains across the road via a shallow constructed dip. Over a recent time period (i.e., likely since the last harvest operation) a small pool has formed along the inboard ditch line at this point. The pool is 18 feet in length, 24 to 36 inch in width, and 0 to 8 inches in depth. The pool covers over with duckweed during the summer dry season and presently provides seasonal refugium habitat for one or more California red-legged frogs (CRLF). Until it can be determined that no CRLFs are present in the pool area, the pool shall be protected and no drainage alterations or drain improvements are to be made to the road surface. The following measures will be implemented to protect the frog and the present habitat, while allowing continued use of the road during harvest operations: 1)A rigid culvert half round or a temporary bridge structure with a minimum height clearance of 12 inches shall be install over the road surface where seep flow is weeping across the road surface. This crossing structure shall simply be placed on the existing road bed with no digging or alterations to that would impact the adjacent pool. The placed structure is intended to provide free passage of frogs below a drivable road surface while the road is in use for timber operations. 2)Clean ¾ crushed river run gravel is to be used at the bridge approaches and/or as fill to cover the culvert to create a vented ford road passage. 3)To discourage any frogs from entering onto the road and to funnel frog movement to the built underpass, a fine mesh vinyl construction fence shall be installed along each side of the drivable road surface for distance of at least 100 feet. 4)Upon completion of harvest operations, the frog protection structures will be carefully dismantled so as not to disturb the pool area and the gravel will be spread out over the surface away from the road dip.										
1	0.200	0.000	6,618	6,618	Culv.-Ditch Relief	Culv. Maintenance	THP App. Rd.	-	N/A	Medium	0
Comments:	Clean outlet of culvert. Also on the main haul road between map point #1 and #24 the LTO will address low spots that are ponding water by either spot rocking them or by eliminating them by road grading prior to completion of operations.										
2	0.500	0.000	1,534	6,619	Culv.	Culv. Replace	THP App. Rd.	60"	II	Medium	300
Comments:	Replace with 60" culvert. Inlet and outlet shall be appropriately armored to protect the fill. Rock will be at least 8" for the headwalls and 12" for the apron. Same as Far North THP map point 45.										

6/3/2021 PART OF PLAN 64

Section II

3	0.870	0.000	1,531	6,620	Culv.	Culv. Replace	THP App. Rd.	24"	N/A	Medium	0
Comments:	Replace with 24" culvert. Inlet and outlet shall be appropriately armored with 8" rock to protect the fill. Also at this point a skid trail comes down the hill and crosses the inside ditch. LTO will place a brow log or straw bale crossing when skidding logs across this ditch which is adjacent to map point 3. LTO will reestablish the inside ditch above the inlet of the culvert prior to close of operations. Same as Far North THP MP 42.										
4	1.570	0.000	6,621	6,621	Culv.	Culv. Replace	THP App. Rd.	24"	II	Medium	0
Comments:	Replace with 24" culvert. Inlet and outlet shall be appropriately armored with 8" rock to protect the fill. This is same as Far North THP (1-20-00150-MEN) MP 64										
5	1.580	0.000	6,622	6,622	Temp. Crossing	Temp. Crossing	THP App. Rd.	12"	N/A	Medium	0
Comments:	Inside ditch. Install 12" culvert if wet at time of operations. If dry just dip out at close of operations.										

Number of Sites = 6

Road # 60.4016

THP#	Milage St.	End	ID# GIS#	New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
29	0.050	0.000	6,646	6,646	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	III	Medium	0
Comments:	Dip out crossing and help define channel with mounds if necessary so that it doesn't meander across adjacent landing after operations.										

Number of Sites = 1

Road # 60.402002

THP#	Milage St.	End	ID# GIS#	New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
9	0.220	0.000	1,599	6,626	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	III	Medium	0
Comments:	Expected to be dry during operations. If water is present install minimum 4" pipe or larger adequate to handle flow. Pull pipe and dip out to grade prior to November 15.										
10	0.400	0.000	6,627	6,627	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	II	Medium	0
Comments:	Expected to be dry during operations. If water is present install minimum 4" pipe or larger adequate to handle flow. Pull pipe and dip out to grade prior to November 15.										
32	0.600	0.000	6,649	6,649	Other	Other	THP Recon.	-	N/A	Medium	0
Comments:	Reconstruct road across area that is disrupted. Remove material that has slid onto this section of road. Shave off the two humps of material and fill the depressions with the material after removing any large organic matter. There is a place for organic matter at north east end of this reconstruction. Install a rolling dip at bottom of each of the two swales (see diagram in Section II maps). Keep road widening to a minimum at south end of reconstruction and avoid cutting into toe of slope if feasible.										

Number of Sites = 3

Road # 60.402005

THP#	Milage St.	End	ID# GIS#	New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
14	0.020	0.000	1,586	6,631	Temp. Crossing	Bridge - Temp	THP App. Rd.	-	II	Medium	0
Comments:	Exisitng temporary bridge installation. No alteration to bed or bank required as abutments are in place and bridge will just be set on to them without altering bed or banks.										

Number of Sites = 1

Road # 60.40200501

THP#	Milage St.	End	ID# GIS#	New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
15	0.310	0.000	385	6,632	No Problem	Dip Rolling	THP App. Rd.	-	III	Medium	0
Comments:	Existing rock armored rolling dip. No action necessary										
16	0.510	0.000	1,584	6,633	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	II	Medium	0
Comments:	Expected to be dry during operations. If water is present install minimum 4" pipe or larger adequate to handle flow. Pull pipe and dip out to grade prior to November 15.										

6/3/2021 PART OF PLAN 65

Section II

40	0.700	0.000	6,653	6,653	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	Spr.	Medium	0
Comments:	Road xing downslope from spring. Install spring drain 4" at time of operations if wet.										

Number of Sites = 3

Road # 60.4072

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
6	0.010	0.000	1,559	6,623	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	II	Medium	0
Comments:	Install a temporary pipe if wet at time of operations. Dip out prior to November 15.										

Number of Sites = 1

Road # 80.4

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
28	0.130	0.000	1,432	6,645	Surface Drainage	Dip Rolling	THP App. Rd.	-	N/A	Medium	10
Comments:	Maintain and enhance if necessary rolling dip at this location.										
37	0.720	0.000	6,655	6,655	Spring	Dip Rolling	THP App. Rd.	-	Spr.	Medium	0
Comments:	Maintain rolling dip . If necessary install spring drain.										
7	1.430	0.000	1,466	6,624	Surface Drainage	Dip Rolling	THP App. Rd.	-	III	Medium	0
Comments:	Existing class III truck road crossing will be dipped out prior to November 15.										

Number of Sites = 3

Road # 80.4046

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
24	0.010	0.000	1,492	6,641	Temp. Crossing	Bridge - Temp	THP App. Rd.	-	I	Medium	0
Comments:	Bridge may be installed on existing concrete blocks (24A option) or adjacent to blocks upstream on road resting on the ground(24B option) . All ramped material will be incorporated back into road bed upon bridge removal and will be seeded and mulched to item 18 standards.										

Number of Sites = 1

Road # 80.404614

THP#	Milage St.	Milage End	ID# GIS#	ID# New	Problem	Solution	Repair Type	Culvert Dia.	Cr. Class	Priority	PSD FSD
64	0.040	0.000	6,673	6,673	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	Spr.	Medium	0
Comments:	Install 4"+ pipe adequate to handle flow if water is present. Pull pipe and dip out prior to November 15.										
25	0.090	0.000	1,491	6,642	Temp. Crossing	Temp. Crossing	THP App. Rd.	-	III	Medium	0
Comments:	Road xing on class III. Dip out prior to November 15.										

Number of Sites = 2

PART OF PLAN

6/3/2021

Section II

THP Road Work

- Road – This is a unique road ID number for each road segment on the property.
- Map# - This is the working number created by the inspector in the field. It is often found on field flagging.
- Mileage – Each numbered road has mileage ticks from 0 to the end of the road.
  a. St. – "Start" mileage is the distance of the site out the road.
  b. End – If the site is along a length of road, like upgrading, there is a "start" and "end" mileage.
- ID# - Each "new" road site visit has a unique ID number. It is generated when the record is entered into the database. Each existing site in the field (like a culvert) has a unique "old" number, usually the first visit ID#. It appears on the map. A new visit to an existing site will reference the "old" number. You can look up the history of visits to a particular site.
- Problem – The type of problem.
- Solution – The type of solution.
- Repair type – Why the work was done.
- Priority – Implementation Priority
  - THP Low – Mitigation applied prior to THP completion.
  - THP Med – Mitigation applied concurrent with operations affecting site.
  - THP High – Mitigations applied in the first year after THP approval or as described in the plan.
  - PSD FSD – Potential sediment delivery (Cal Fire) Future sediment delivery (WQ) - This is the yards of soil that will be prevented from being delivered into the watercourses if the project is completed.

PART OF PLAN

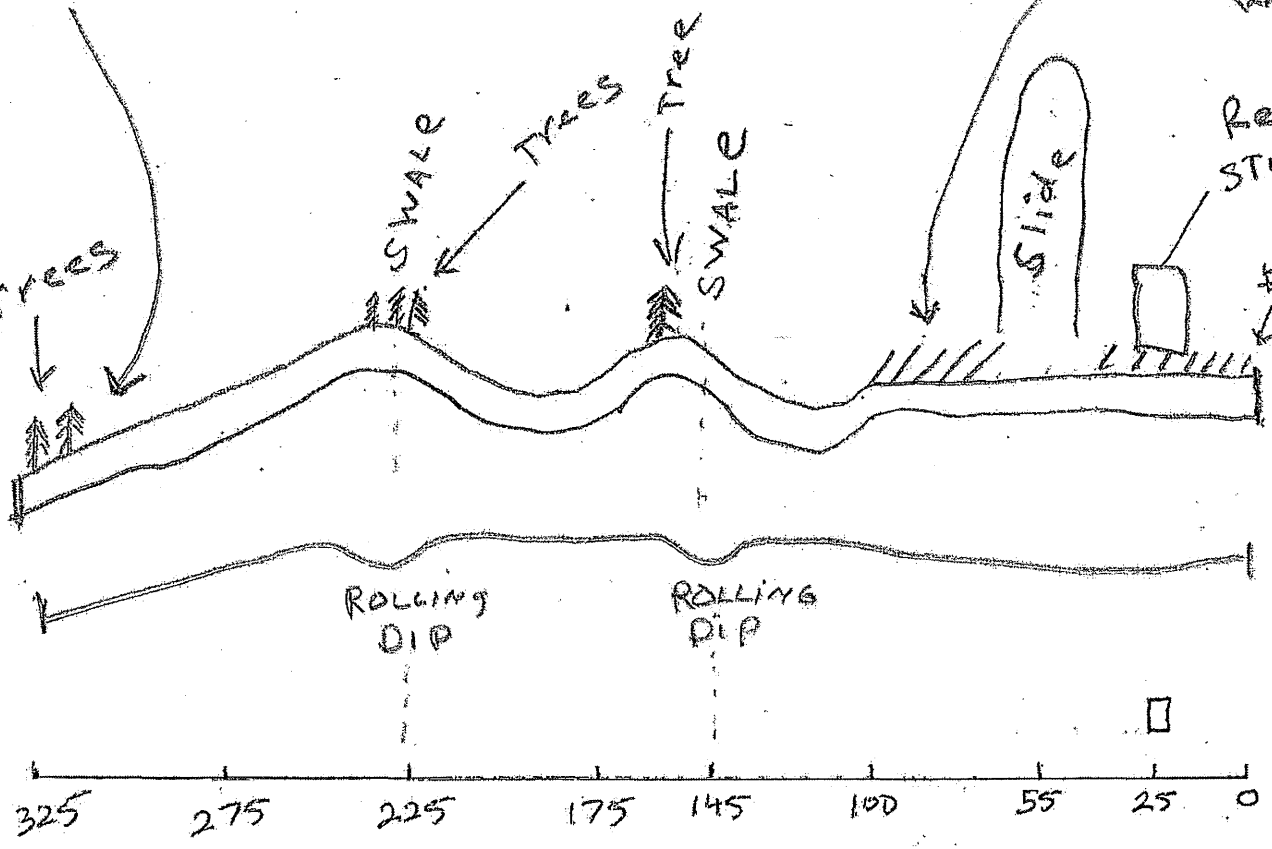
Some organic matter can be placed east of road in this area

Diagram of map point #32

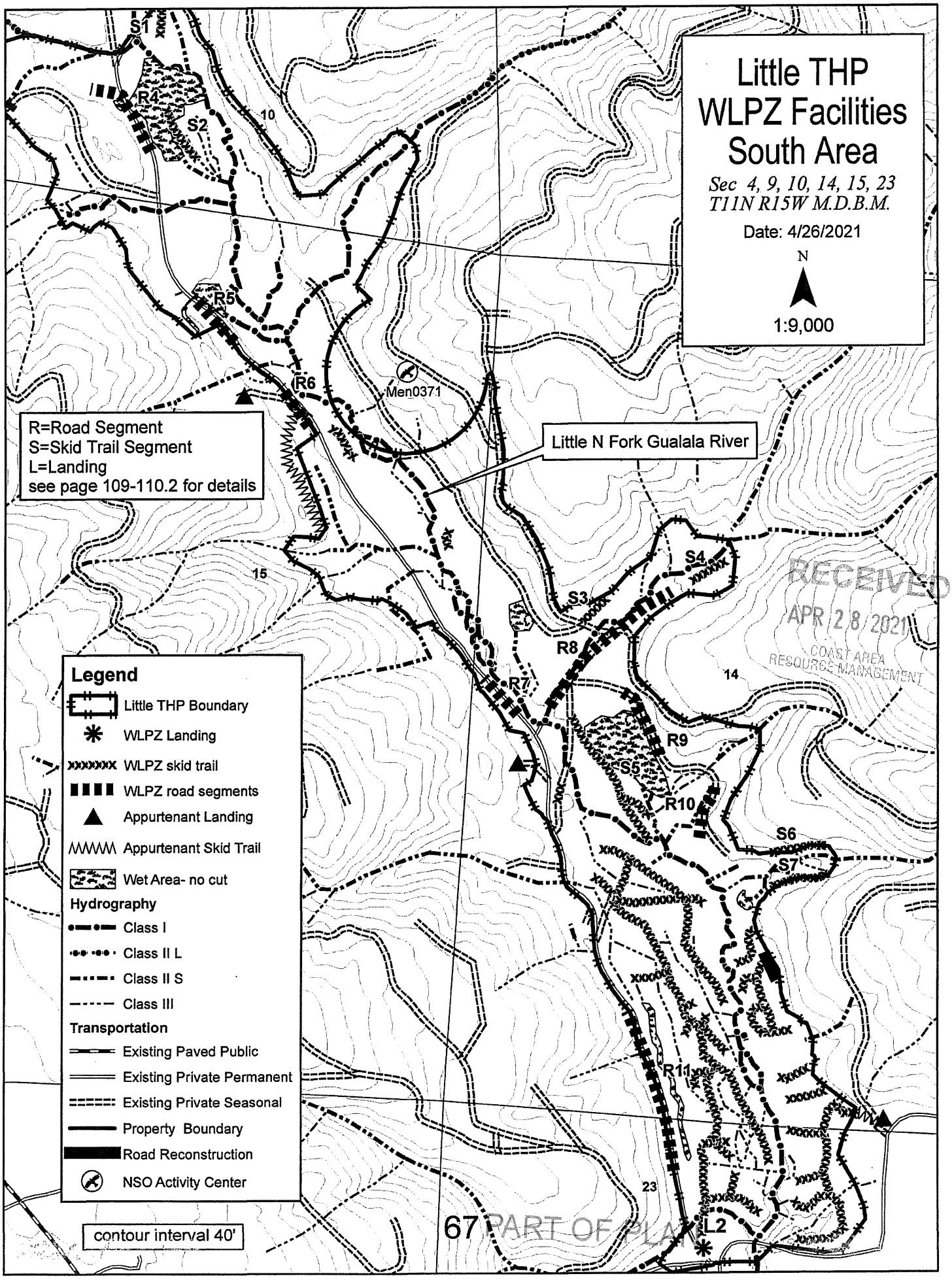
Avoid widening road by cutting toe of slope where cross hatched

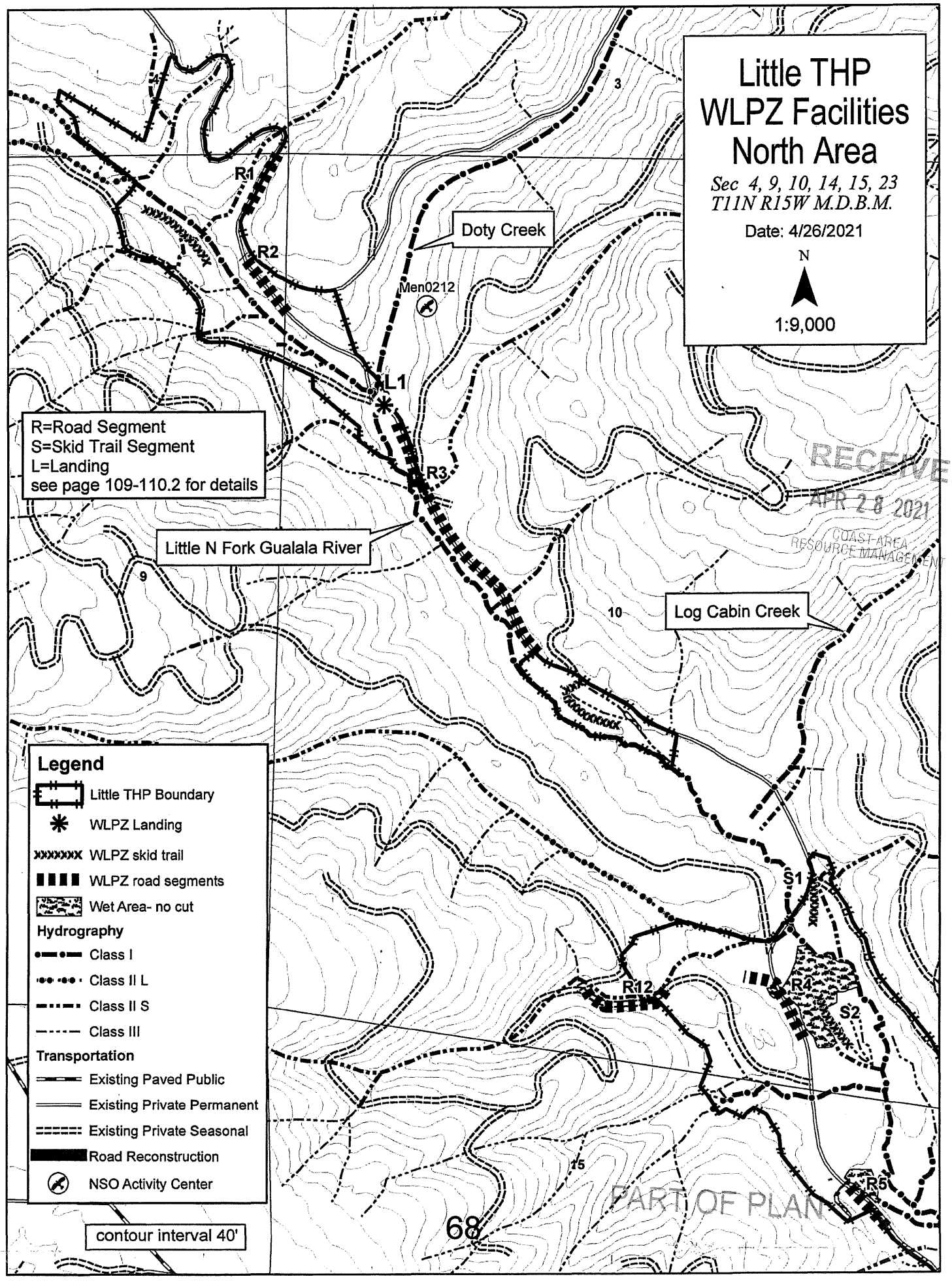
8/7/19

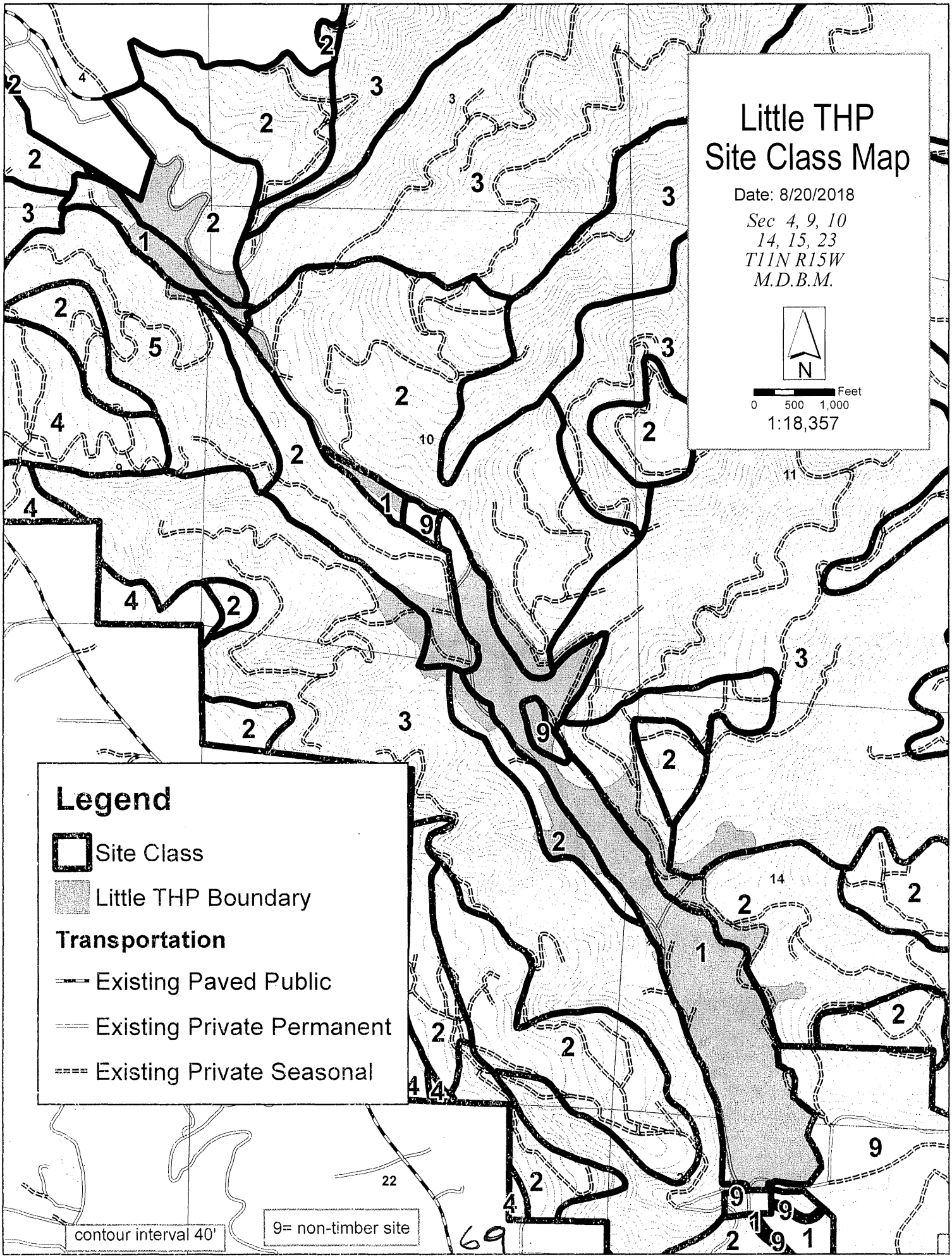
Page 66-2



INSTRUCTIONS - After removing organic matter take material from mounds and fill low spots. Create rolling dips at bottom of each swale.


Little THP
WLPZ Facilities
South Area
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
Date: 4/26/2021
N
1:9,000
R=Road Segment
S=Skid Trail Segment
L=Landing
see page 109-110.2 for details
Little N Fork Gualala River
Men0371
S1
R4
S2
R5
R6
S3
S4
R7
R8
R9
S5
R10
S6
S7
R11
L2
10
15
14
23
Legend
Little THP Boundary
WLPZ Landing
WLPZ skid trail
WLPZ road segments
Appurtenant Landing
Appurtenant Skid Trail
Wet Area- no cut
Hydrography
Class I
Class II L
Class II S
Class III
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Property Boundary
Road Reconstruction
NSO Activity Center
contour interval 40'
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
67
PART OF PLAN


Little THP
WLPZ Facilities
North Area
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
Date: 4/26/2021
N
1:9,000
Doty Creek
Men0212
Little N Fork Gualala River
Log Cabin Creek
R1
R2
R3
L1
R4
R5
R12
S1
S2
R=Road Segment
S=Skid Trail Segment
L=Landing
see page 109-110.2 for details
Legend
Little THP Boundary
WLPZ Landing
WLPZ skid trail
WLPZ road segments
Wet Area- no cut
Hydrography
Class I
Class II L
Class II S
Class III
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Road Reconstruction
NSO Activity Center
contour interval 40'
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
PART OF PLAN


Little THP
Site Class Map
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Sec 4, 9, 10
14, 15, 23
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M.D.B.M.
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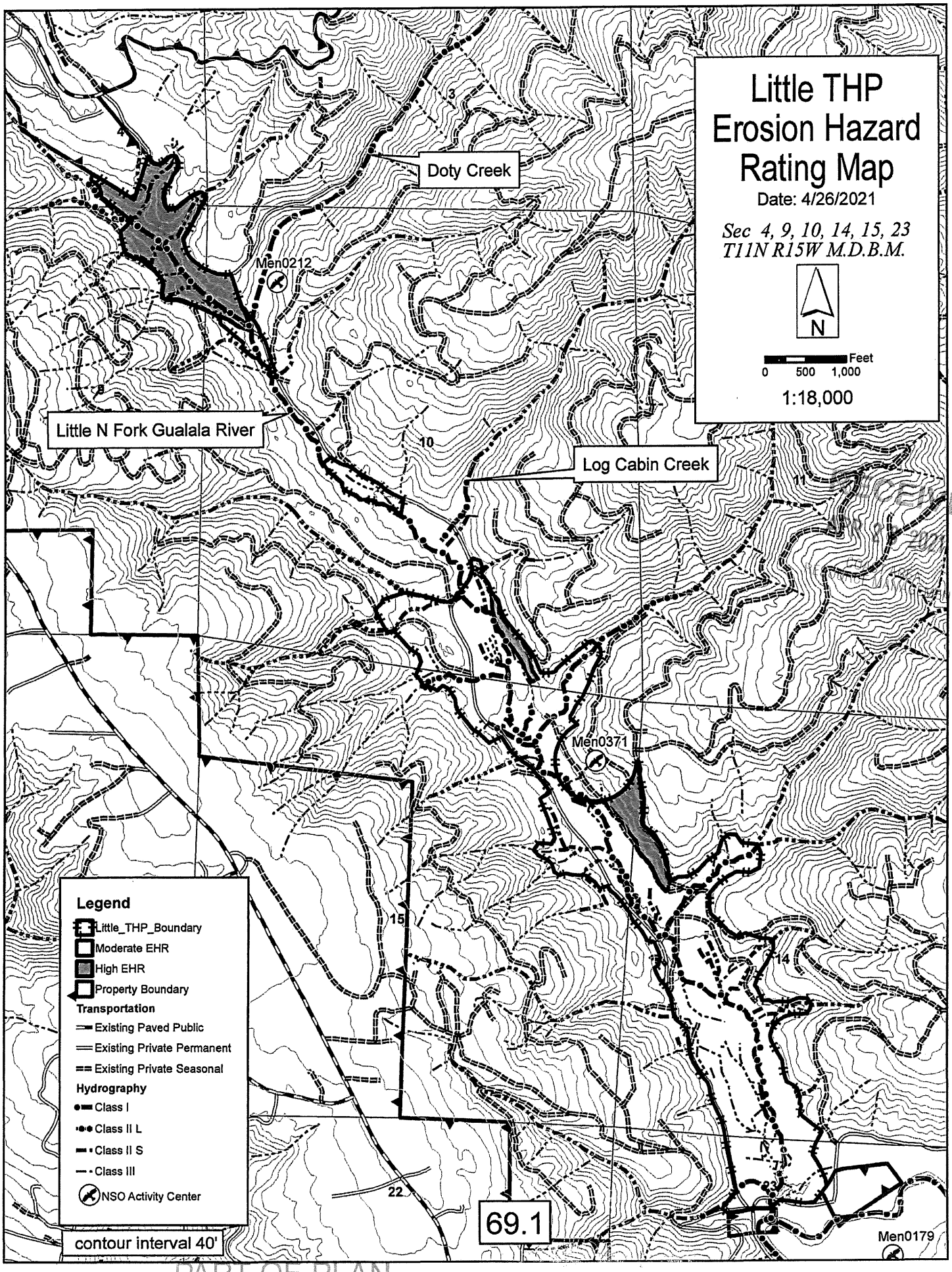
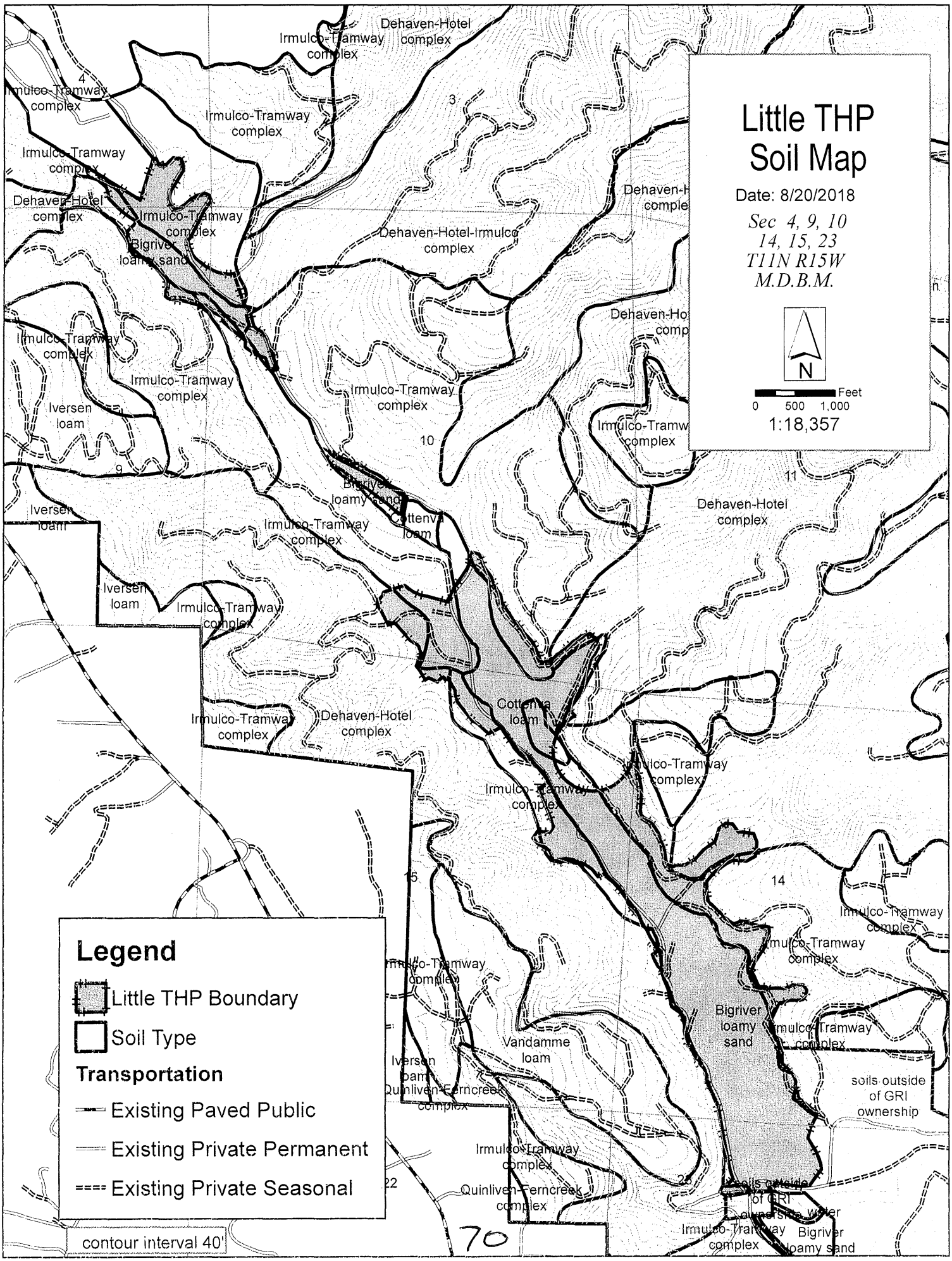
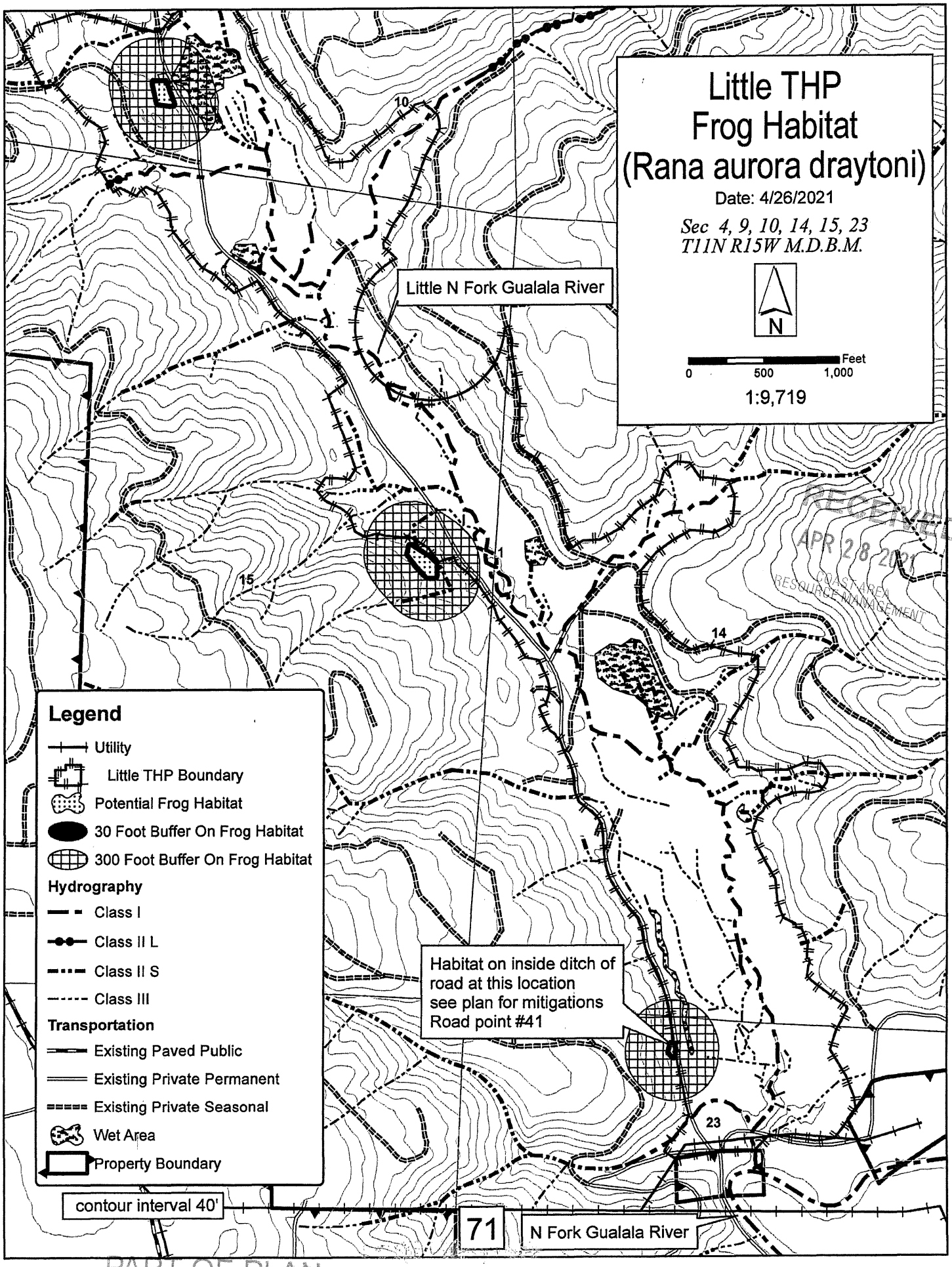
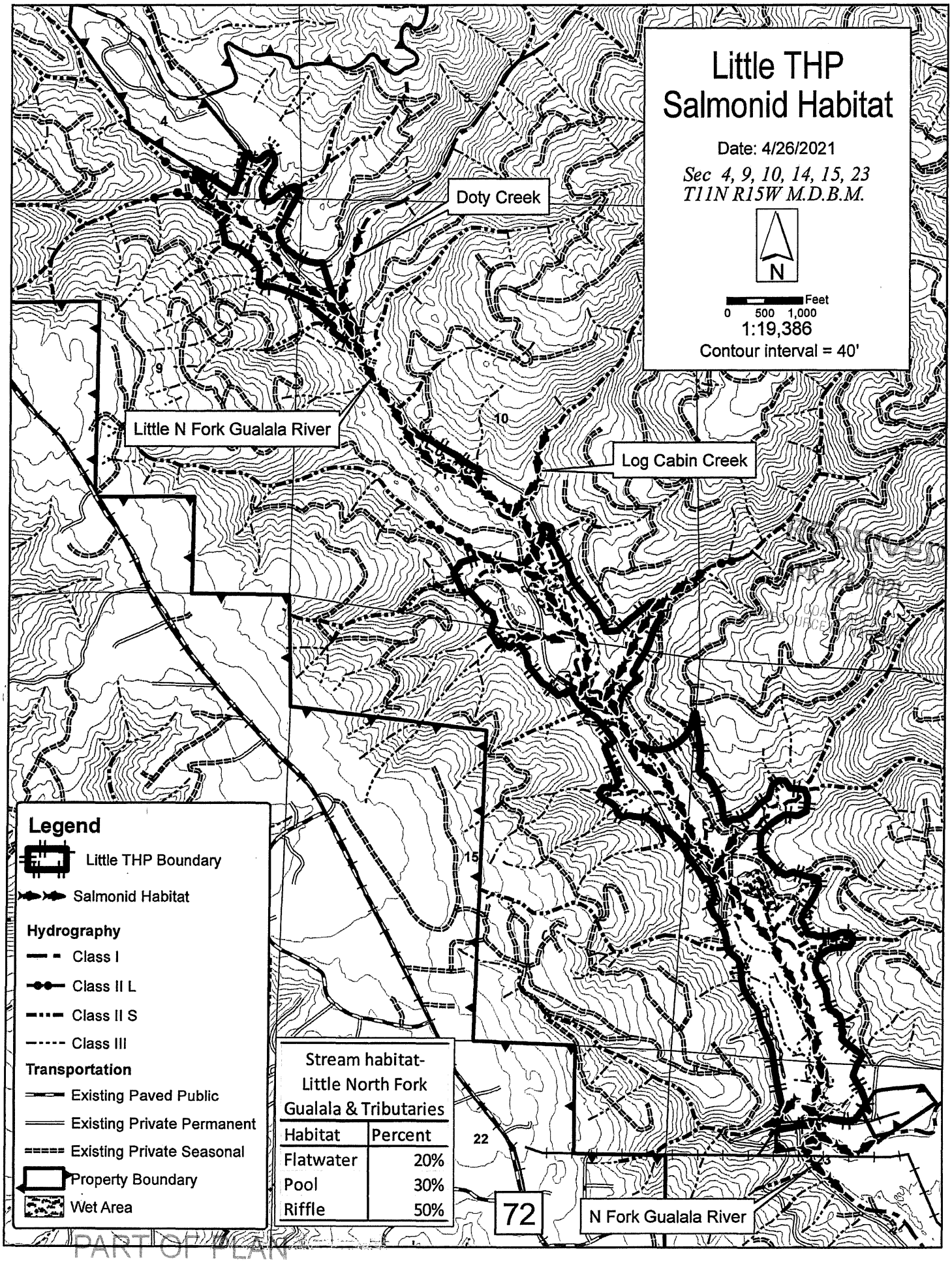
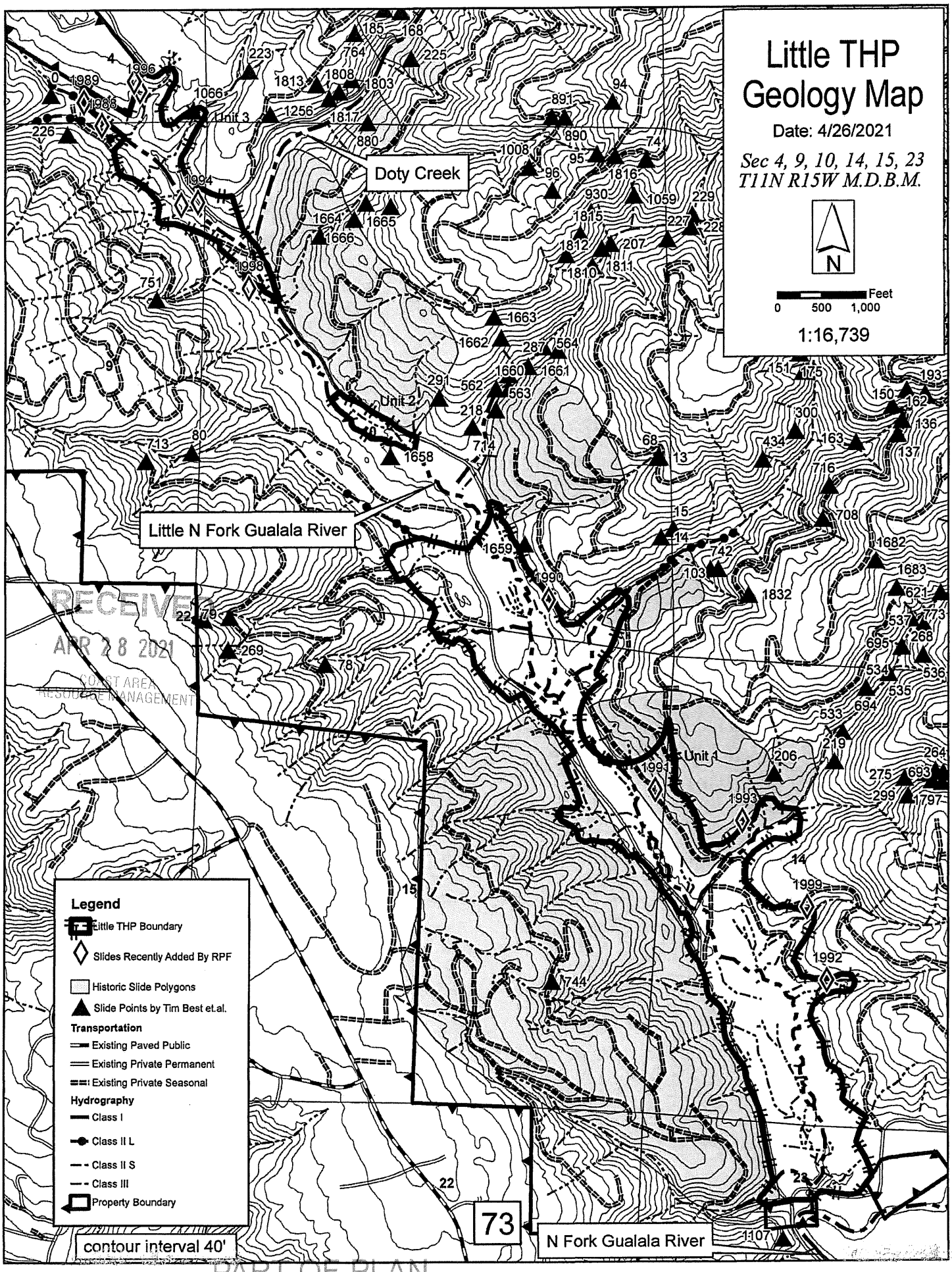
1:18,357
Legend
Site Class
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
contour interval 40'
9= non-timber site

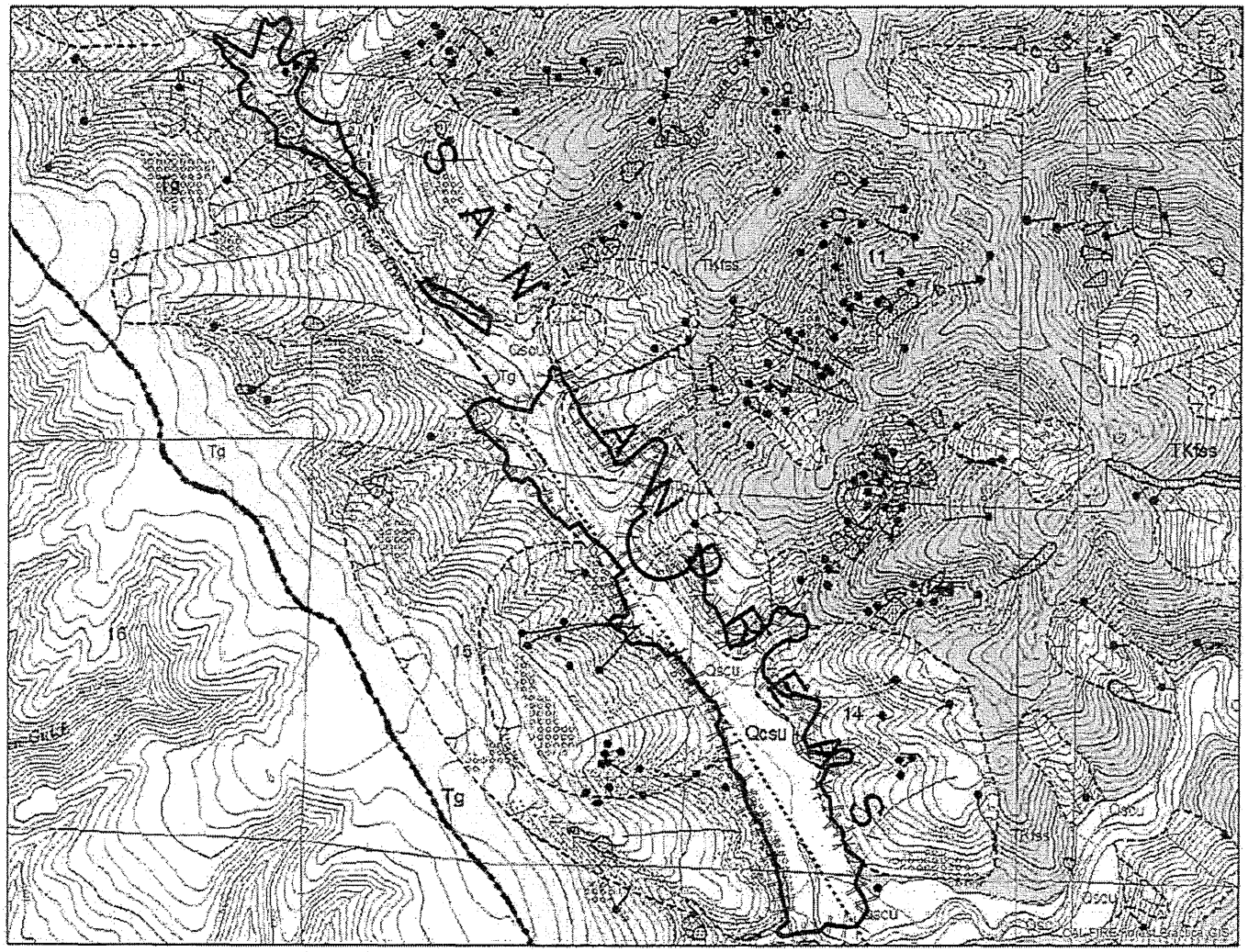



Little THP
Soil Map
Date: 8/20/2018
Sec 4, 9, 10
14, 15, 23
T11N R15W
M.D.B.M.
N
Feet
0 500 1,000
1:18,357
Legend
Little THP Boundary
Soil Type
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
contour interval 40'
Irmulco-Tramway complex
Dehaven-Hotel complex
Dehaven-Hotel-Irmulco complex
Bigriver loamy sand
Iversen loam
Cottenwa loam
Vandamme loam
Quinliven-Ferncreek complex
soils outside of GRI ownership
water


Little THP
Frog Habitat
(Rana aurora draytoni)
Date: 4/26/2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
Feet
0
500
1,000
1:9,719
Little N Fork Gualala River
Habitat on inside ditch of road at this location see plan for mitigations Road point #41
Legend
Utility
Little THP Boundary
Potential Frog Habitat
30 Foot Buffer On Frog Habitat
300 Foot Buffer On Frog Habitat
Hydrography
Class I
Class II L
Class II S
Class III
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Wet Area
Property Boundary
contour interval 40'
71
N Fork Gualala River
10
15
1
14
23
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
PART OF PLAN


Little THP
Salmonid Habitat
Date: 4/26/2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
Feet
0 500 1,000
1:19,386
Contour interval = 40'
Doty Creek
Little N Fork Gualala River
Log Cabin Creek
N Fork Gualala River
72
Legend
Little THP Boundary
Salmonid Habitat
Hydrography
Class I
Class II L
Class II S
Class III
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Property Boundary
Wet Area
Stream habitat-
Little North Fork
Gualala & Tributaries
Habitat | Percent
Flatwater | 20%
Pool | 30%
Riffle | 50%
PART OF PLAN


Little THP
Geology Map
Date: 4/26/2021
Sec 4, 9, 10, 14, 15, 23
T11N R15W M.D.B.M.
N
Feet
0 500 1,000
1:16,739
Doty Creek
Little N Fork Gualala River
Unit 1
Unit 2
Unit 3
N Fork Gualala River
73
Legend
Little THP Boundary
Slides Recently Added By RPF
Historic Slide Polygons
Slide Points by Tim Best et.al.
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Hydrography
Class I
Class II L
Class II S
Class III
Property Boundary
contour interval 40'
RECEIVED
APR 28 2021
COAST AREA
RESOURCE MANAGEMENT
PART OF PLAN



PART OF PLAN

Explanation

TKfss	Coastal Belt Franciscan Formation
Tg	German Rancho Formation
Qcsu	Undifferentiated stream channel deposits

N

0 1250' 2500'

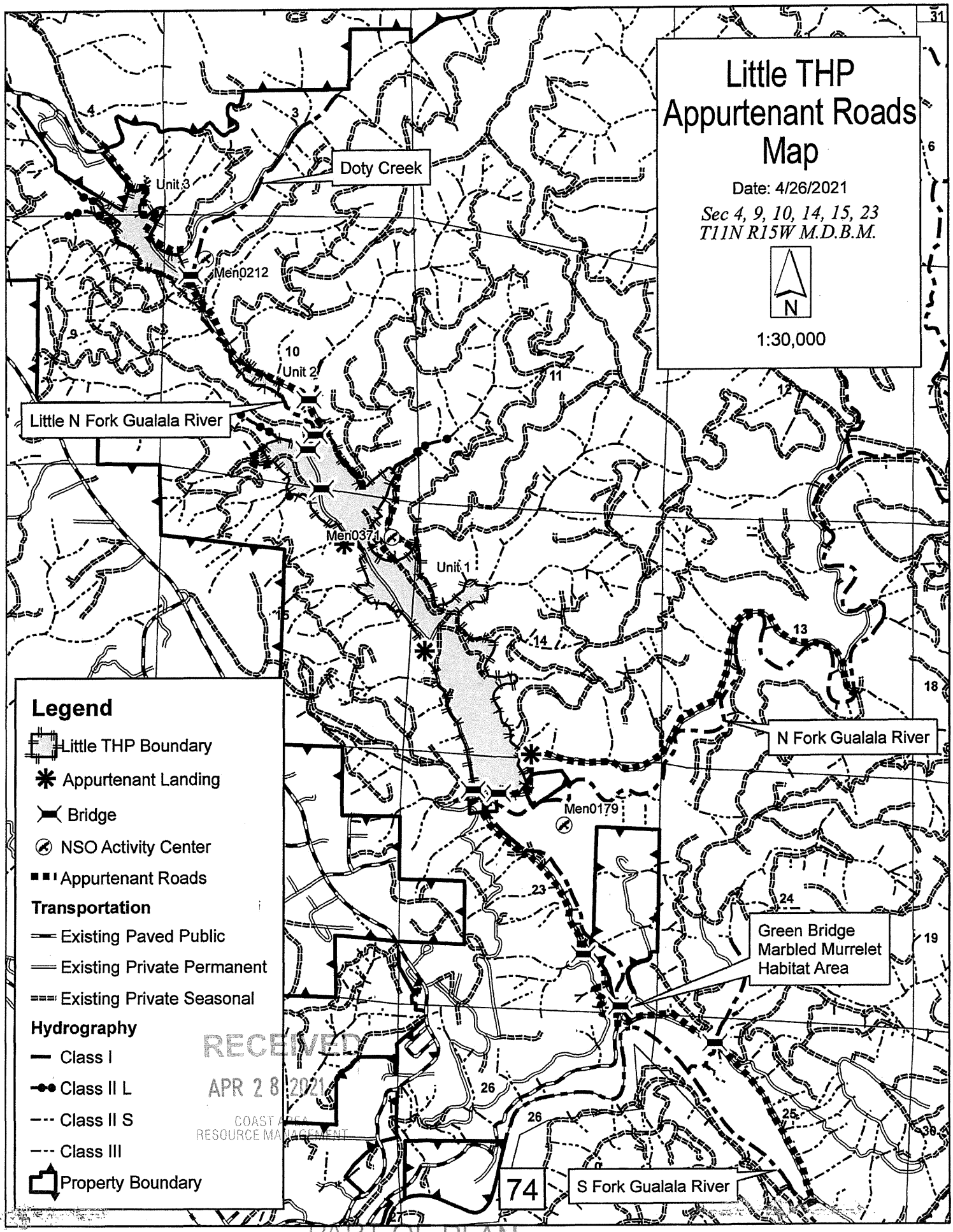
Base Map: Modified from Fuller, M.S., Haydon, W.D., Purcell, M.G., and Custis, K. 2002, Geologic and Geomorphic Features Related to Landsliding, Gualala River Watershed, Sonoma and Mendocino Counties, California: California Department of Conservation, California Geological Survey, Plate 1, Sheet 1 of 3, CGS CD 2002-08, map scale 1:24,000.

- Geologic contact, dashed where approximately located
- Rotational/Translational Landslide
- Earthflow
- Debris Slide
- Debris Flow/Torrent Track
- Debris Slide Amphitheater/ Slope
- Inner gorge
- Active Landslide (too small to show at map scale)
- Disrupted ground
- Slopes >70 percent
- 75 Strike and dip of bedding
- Outlined area represents estimated limits of proposed harvest area.

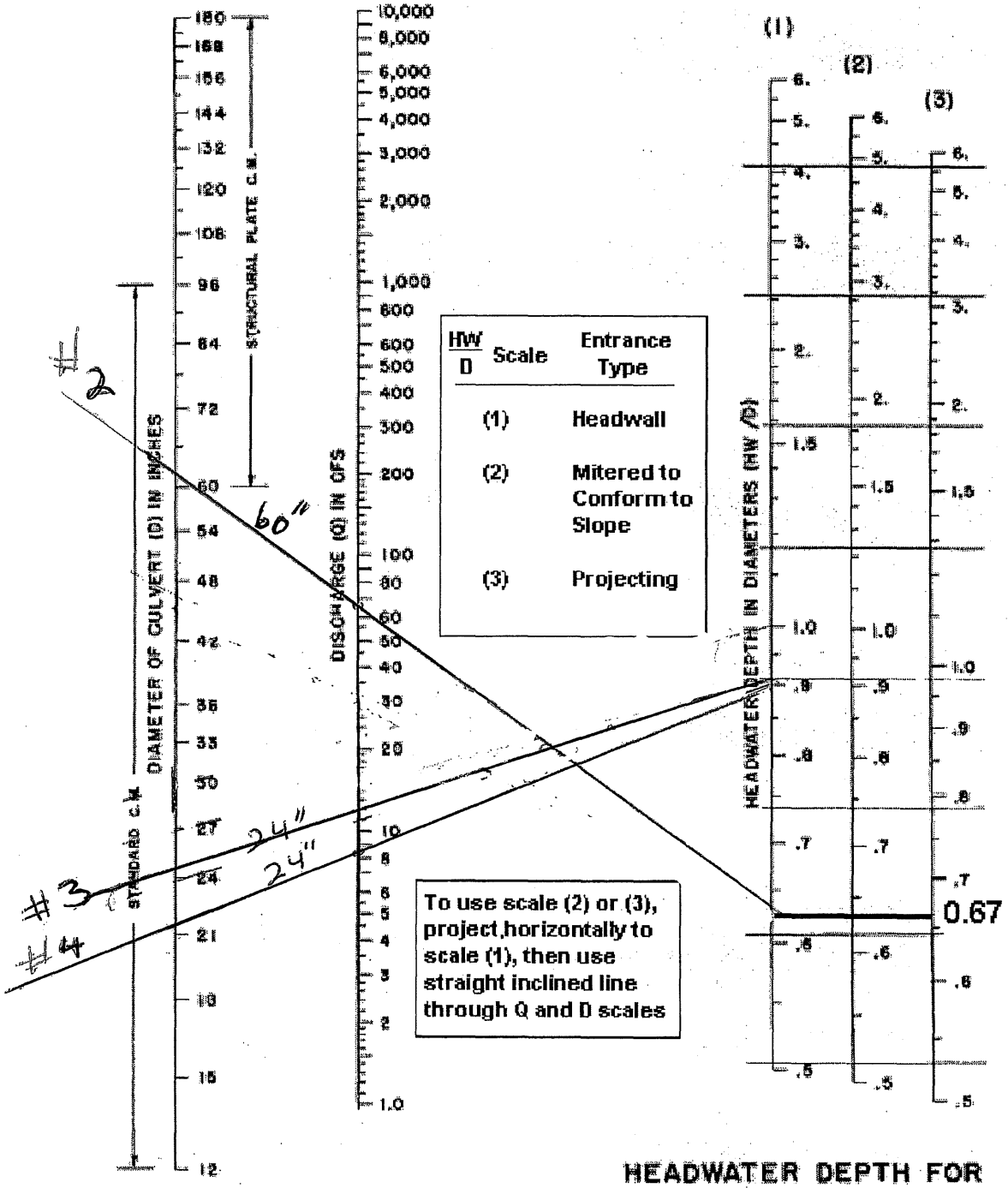
Date: Jan. 2019	Regional Geologic Map* To Accompany Engineering Geologic Review of THP 1-18-095 MEN	RECEIVED AUG 08 2019 COAST AREA OFFICE RESOURCE MANAGEMENT	Figure: 1
Scale: 1" = 2500'			
Approved By: CGS			

73.1

Added 8/6/19



Little



HEADWATER DEPTH FOR C. M. PIPE CULVERTS WITH INLET CONTROL

BUREAU OF PUBLIC ROADS JAN. 1963

Determination of 100-Year Flood Flow

Location: THP

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow (A > 50 acres)

No.	Crossing	Area (acres) A	Basin maximum elevation (ft)*	Crossing elevation (ft)*	Area (mi^2) A	Avg. Annual Precipitation (in/yr) P	Average Basin Elevation H	100-yr flood flow Q_{100} (cfs) North Coast[1] (NC)	Sierra[2] (S)	North-east[3] (NE)	Central Coast[4] (CC)
1					0.000	47	0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
2	*2*	80	840	80	0.125	47	460	*68.1*	*85.6*	*63.3*	*88.1*
3	*3*	14	600	100	0.022	47	350	*15.1*	*20.0*	*17.7*	*20.4*
4	*4*	7	360	140	0.011	47	250	*8.3*	*11.9*	*10.7*	*11.4*
5					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
6					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
7					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
8					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
9					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*
10					0.000		0	*0.0*	*#DIV/0!*	*0.0*	*0.0*

See below for M&F equations

Rational Method for 100-year flood flow (A < 200 acres, best < 100 acres)

No.	Crossing	$T_c = 60((11.9 \times L^3)/H)^{0.385}$ Channel length (to top of basin) (mi) L	Elevation difference (ft) H	Concentration time (min) Tc	$Q_{100} = CIA$ Runoff coefficient C	100-year Return-Period Precipitation (in/hr) I*	Area (acres) A	100-yr flood flow (cfs) Q100
1			0	*#DIV/0!*			0	*0.0*
2	*2*	0.76	760	*9*	0.3	2.8	80	*67.2*
3	*3*	0.37	500	*5*	0.3	2.8	14	*11.8*
4	*4*	0.21	220	*3*	0.3	2.8	7	*5.9*
5			0	*#DIV/0!*	0.3		0	*0.0*
6			0	*#DIV/0!*	0.3		0	*0.0*
7			0	*#DIV/0!*	0.3		0	*0.0*
8			0	*#DIV/0!*	0.3		0	*0.0*
9			0	*#DIV/0!*	0.3		0	*0.0*
10			0	*#DIV/0!*	0.3		0	*0.0*

**Use 100-yr precipitation of duration similar to Tc or for 10 min, whichever is larger; convert to in/hr for input as "I"*

Magnitude & Frequency Q_{100} equations

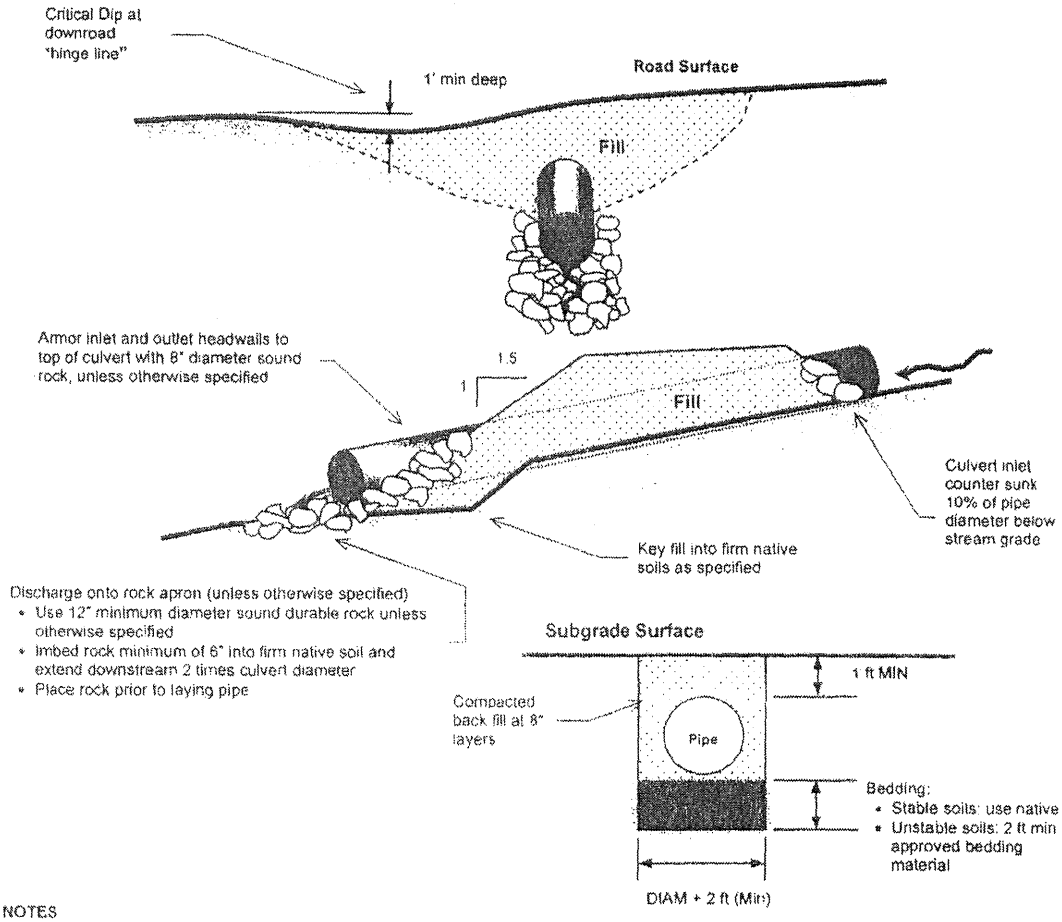
NC (1) $Q_{100} = 48.5(A)^{0.866}(P)^{0.556}$

S (2) $Q_{100} = 20.6\,(A)^{0.874}(P)^{1.24}(H)^{-0.250}$

NE (3) $Q_{100} = 0.713\,(A)^{0.731}(P)^{1.56}$

CC (4) $Q_{100} = 11.0\,(A)^{0.84}(P)^{0.994}$

PERMANENT CULVERT



NOTES

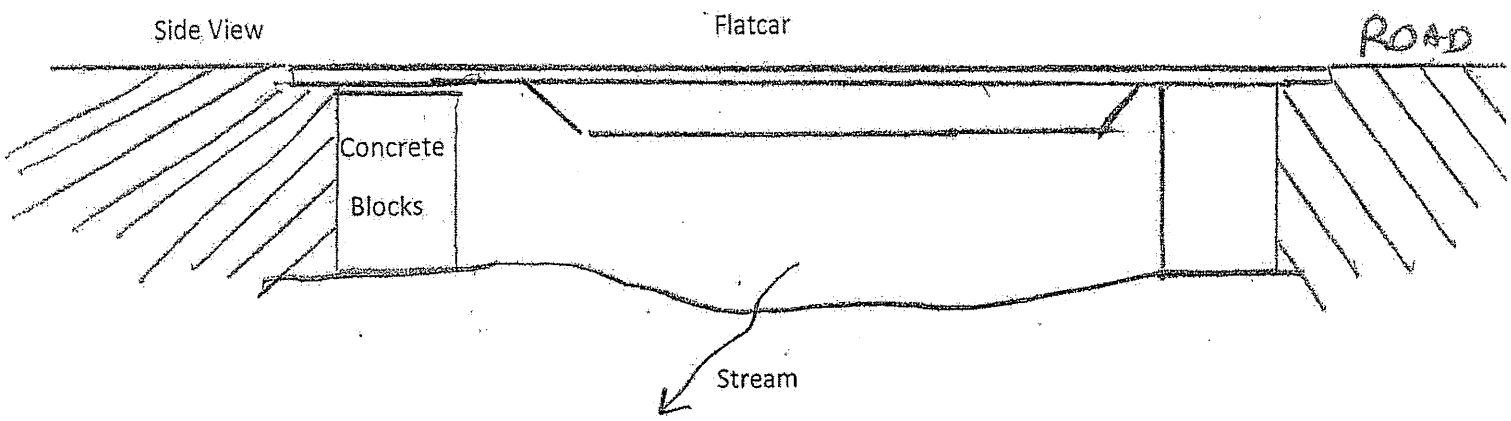
- Culverts should be installed at the natural stream level, grade and orientation.
- The culvert bed shall be clean and free of large woody debris and large rocks.
- The width of trenches shall permit satisfactory joining and thorough tamping of the backfill material.
- The inlet to the culvert should be slightly below the streambed so that the water falls into the culvert inlet.
- Culverts distorted more than 10% of normal dimension; ruptured or broken shall be replaced.
- Unsuitable foundation material (highly plastic material – "blue goo") shall be excavated below the inlet elevation of the culvert to an approximate depth of 2 feet and a width of at least the culvert diameter plus 4 feet.
- Fill shall be keyed and benched into firm native soils. Areas to receive fill shall be stripped to remove all vegetation, roots, brush, highly organic soils and other unsuitable fill material. Depth of stripping is assumed to be a minimum of 6 to 12 inches.
- Onsite soils may be reused as fill. Backfill should consist of select structural back fill, no rock or cobbles greater than 3 inches in size, and free of organic material. Any imported fill should consist of non-expansive soil.
- Fill shall be placed in maximum 8 inch thick horizontal lifts and compacted to a degree greater than the surrounding soils. Soil moisture shall be adequate to achieve suitable compaction.
- Critical dip shall be installed at the hinge line.
- On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
- Inlet and outlet shall be appropriately armored to protect the fill from the hydrologic energy of the stream.
- Conform to Department of Fish and Game 1600 permit where applicable.

PERMANENT WATERCOURSE CROSSING STANDARD PLAN	Standard Detail C1
	Date: March 24, 2008

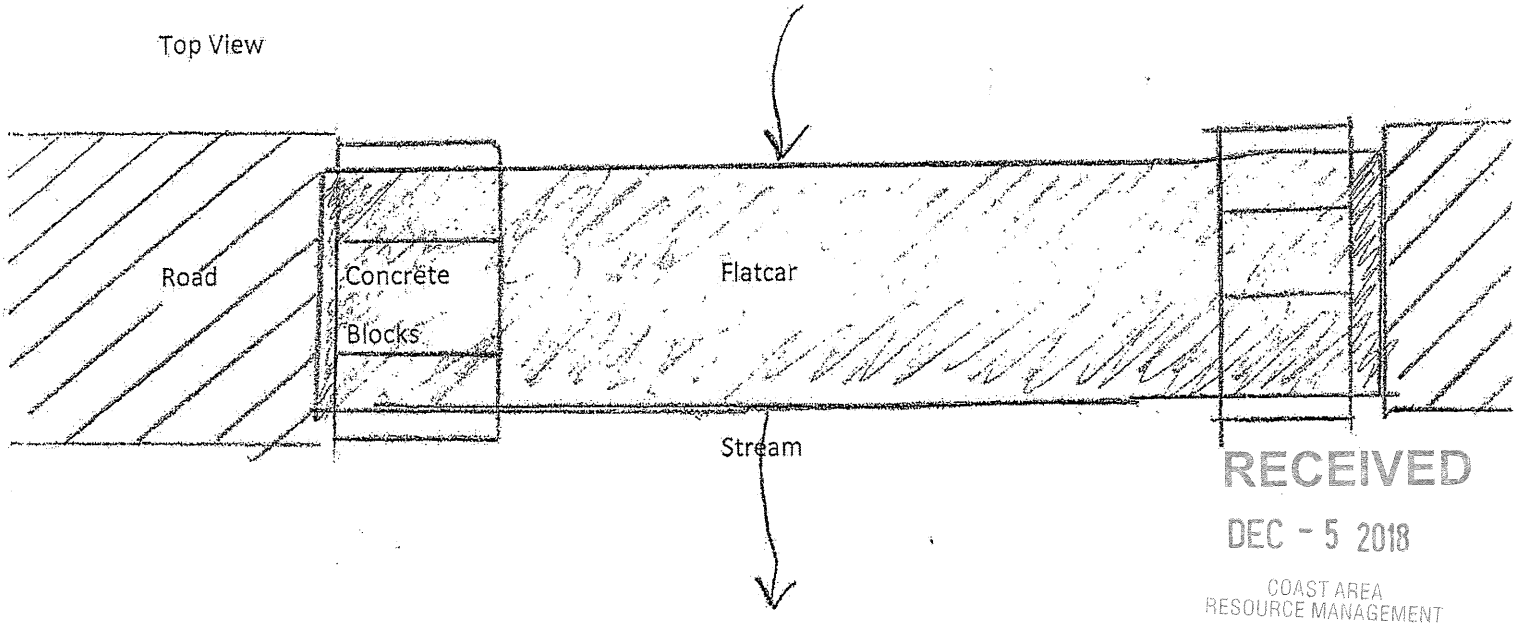
Temporary Bridge Installation

Flat Car

The bridge at road point #14 will look like the diagrams below. The bridge at road point #24 may rest directly on the ground.



PART OF PLAN



MEN0179
SEASONAL AND PERMANENT NSO RESTRICTIONS

April 26, 2021

PERMANENT RESTRICTIONS:
No harvesting within 500 feet of NSO without amendment.
Maintain nest/roost habitat between 500-1,000 ft.

SEASONAL RESTRICTIONS:
Seasonal restrictions apply within 0.25 miles of active NSO. No timber operations (except use of permanent roads) until after July 31.
(See USFWS Attachment A, 2019)

Legend

- MEN0179 LOCATION

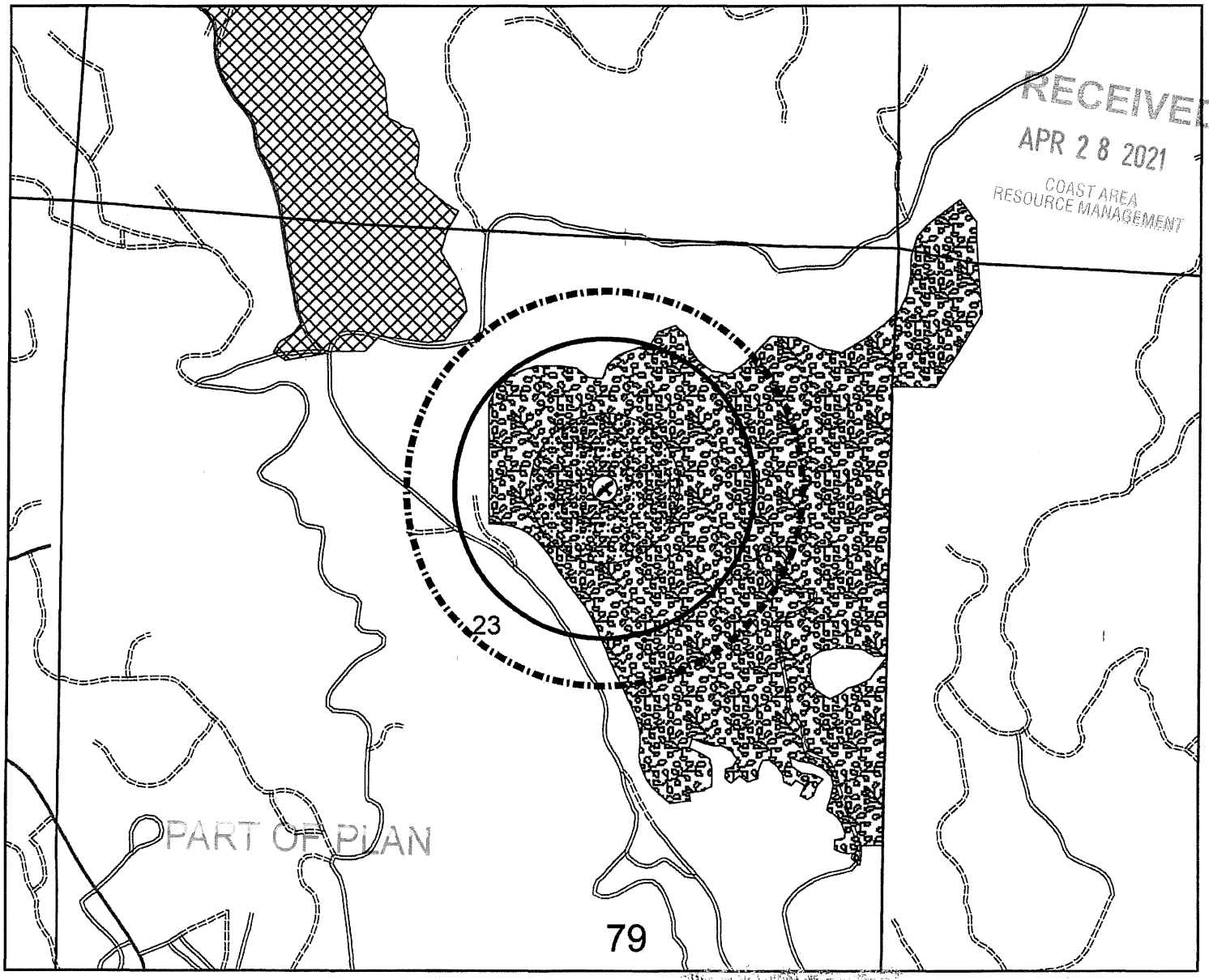
ROADS

Road Class

- Paved Public
- Unpaved Public
- Private Permanent
- Private Seasonal
- WATERCOURSES
- MEN0179 CORE AREA
- 500 FOOT BUFFER
- 1,000 FOOT BUFFER
- 0.25 MILE BUFFER
- LITTLE THP BOUNDARY

N

1 in = 1,000 ft



MEN0371
SEASONAL AND PERMANENT NSO RESTRICTIONS

APRIL 26, 2021

PERMANENT RESTRICTIONS:
No harvesting within 500 feet of NSO without amendment.
Maintain nest/roost habitat between 500-1,000 ft.

SEASONAL RESTRICTIONS:
Seasonal restrictions apply within 0.25 miles of active NSO. No timber operations (except use of permanent roads) until after July 31.
(See USFWS Attachment A, 2019)

Legend

- MEN0371 LOCATION

ROADS

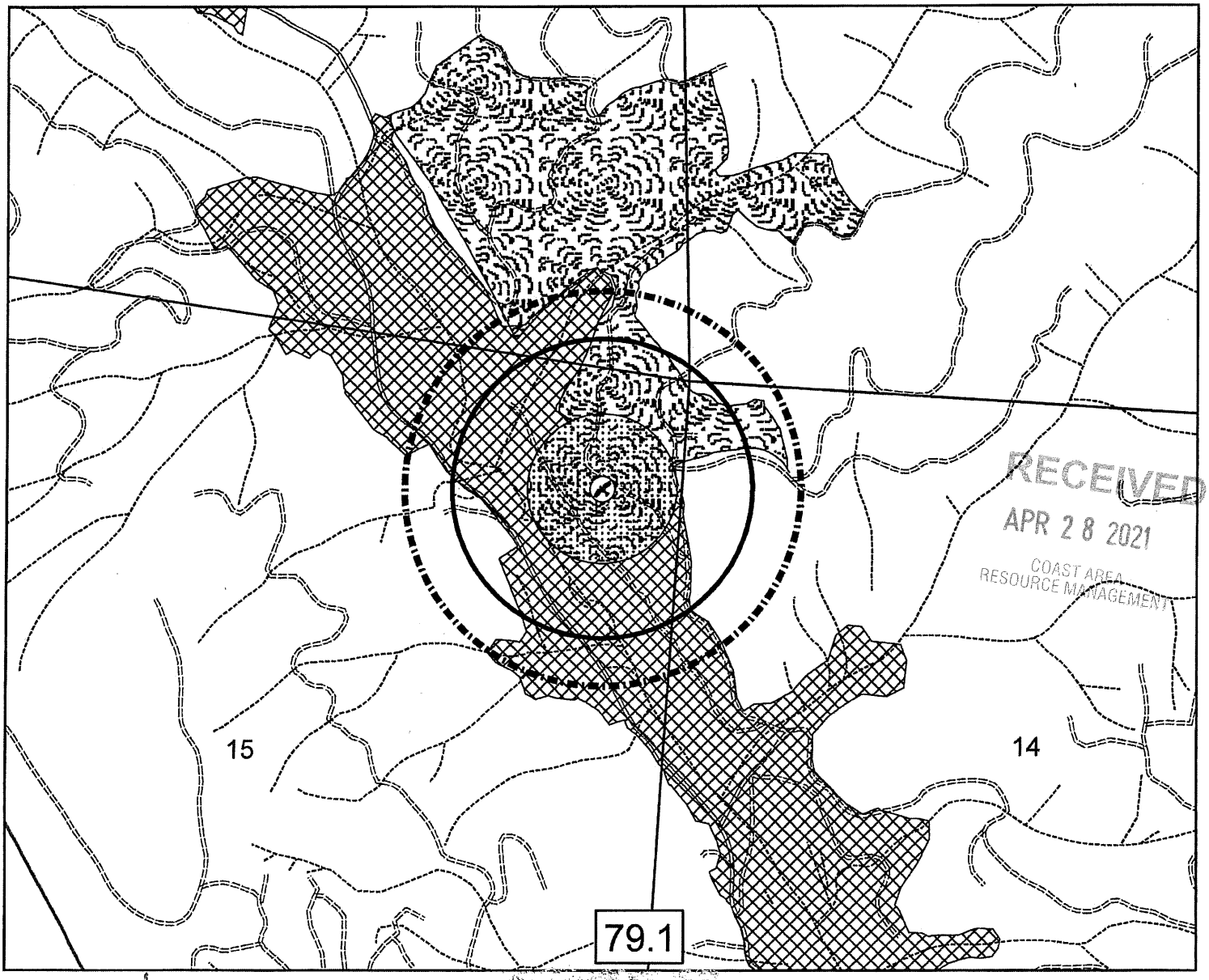
Road Class

- Paved Public
- Unpaved Public
- Private Permanent
- Private Seasonal

- WATERCOURSES
- MEN0371 CORE AREA
- 500 FOOT BUFFER
- 1,000 FOOT BUFFER
- 0.25 MILE BUFFER
- LITTLE THP BOUNDARY

N

1 in = 1,000 ft



MEN0212
SEASONAL AND PERMANENT NSO RESTRICTIONS

APRIL 26, 2021

PERMANENT RESTRICTIONS:
No harvesting within 500 feet of NSO without amendment.
Maintain nest/roost habitat between 500-1,000 ft.

SEASONAL RESTRICTIONS:
Seasonal restrictions apply within 0.25 miles of active NSO. No timber operations (except use of permanent roads) until after July 31.
(See USFWS Attachment A, 2019)

Legend

- MEN0212 LOCATION

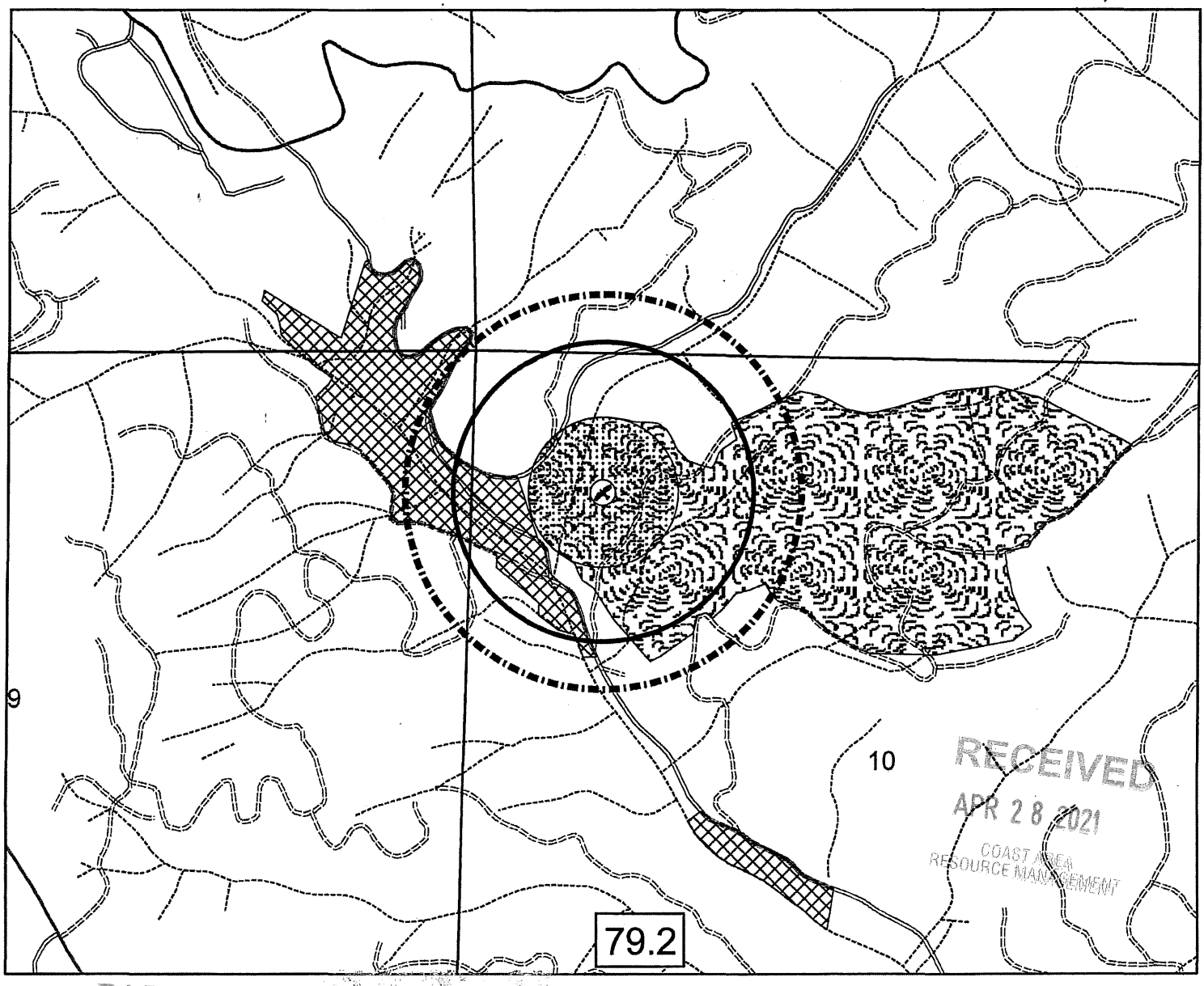
ROADS

Road Class

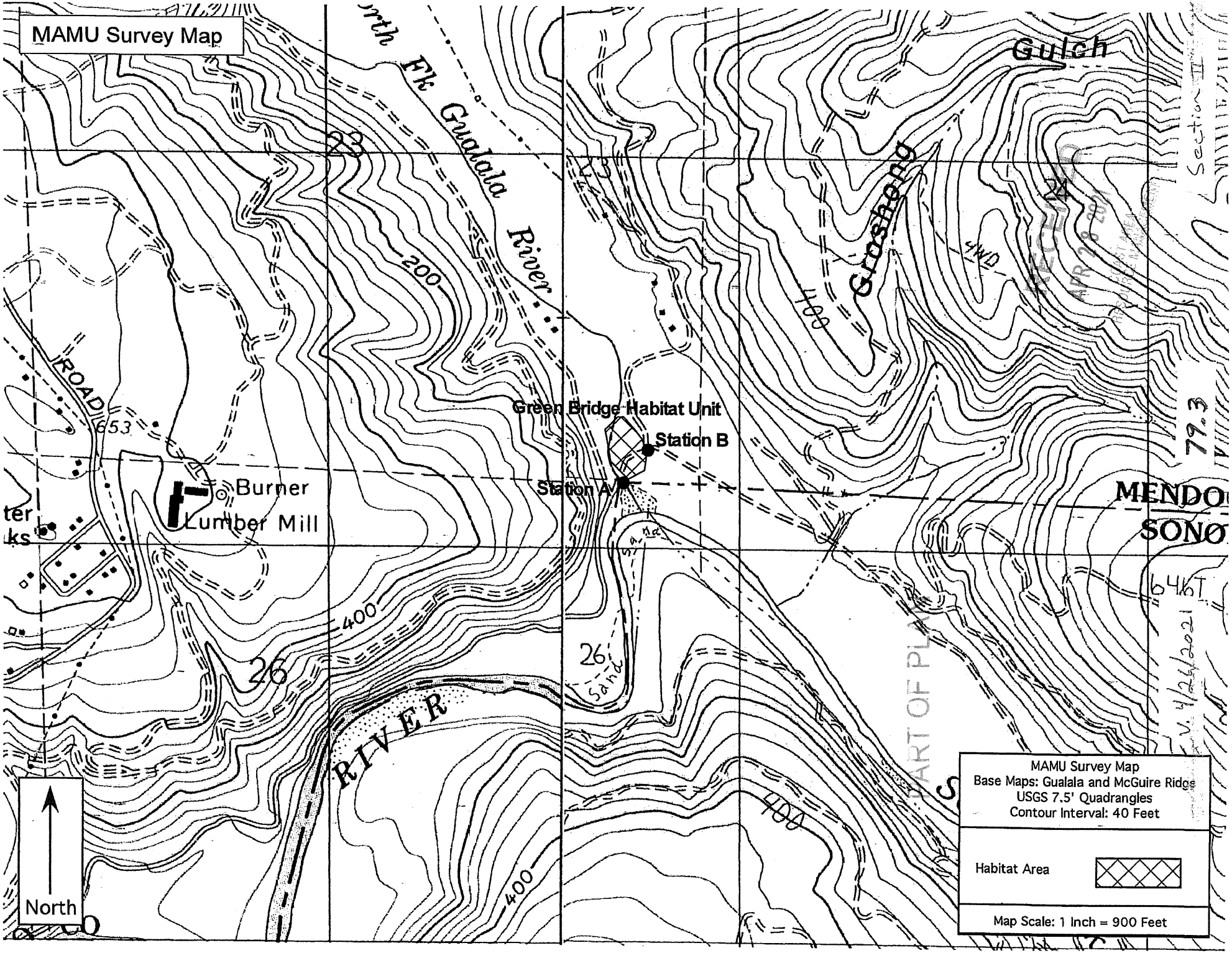
- Paved Public
- Unpaved Public
- Private Permanent
- Private Seasonal
- WATERCOURSES
- MEN0212 CORE AREA
- 500 FOOT BUFFER
- 1,000 FOOT BUFFER
- 0.25 MILE BUFFER
- LITTLE THP BOUNDARY

N

1 in = 1,000 ft



PART OF PLAN


MAMU Survey Map
North Fk Gualala River
Gulch
Grasshorn
ROAD 653
Burner
Lumber Mill
Green Bridge Habitat Unit
Station B
Station A
MENDO
SONO
RIVER
North
MAMU Survey Map
Base Maps: Gualala and McGuire Ridge
USGS 7.5' Quadrangles
Contour Interval: 40 Feet
Habitat Area
Map Scale: 1 Inch = 900 Feet

Section II
1600 Agreement

FOR DEPARTMENT USE ONLY				
Date Received	*Amount Received*	*Amount Due*	*Date Complete*	*Notification No.*
	$	$		

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.

1. APPLICANT PROPOSING PROJECT

Name	John Bennett		
Business/Agency	Gualala Redwood Timber LLC		
Street Address	PO Box 197		
City, State, Zip	Gualala, CA 95445		
Telephone	894-4245	Fax	
Email	jbennett@pacificstates.com		

2. CONTACT PERSON (*Complete only if different from applicant*)

Name	John Bennett		
Street Address	P.O. Box 197		
City, State, Zip	Gualala, CA 95445		
Telephone	894-4245	Fax	
Email	jbennett@pacificstates.com		

3. PROPERTY OWNER (*Complete only if different from applicant*)

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

PART OF PLAN

RECEIVED
MAR 16 2021
COAST AREA OFFICE
RESOURCE MANAGEMENT

4. PROJECT NAME AND AGREEMENT TERM

A. Project Name	Little THP			
B. Agreement Term Requested	☑ Regular (*5 years or less*) ☐ Long-term (*greater than 5 years*)			
C. Project Term		D. Seasonal Work Period		E. Number of Work Days
Beginning (*year*)	Ending (*year*)	Start Date (*month/day*)	End Date (*month/day*)	
2019	2024	04/01	11/15	15.00

5. AGREEMENT TYPE

Check the applicable box. If box B, C, D, or E is checked, complete the specified attachment.		
A.	☐ Standard *(Most construction projects, excluding the categories listed below)*	
B.	☐ Gravel/Sand/Rock Extraction (*Attachment A*)	*Mine I.D. Number:* _____
C.	☑ Timber Harvesting (*Attachment B*)	THP *Number:* no number at this time
D.	☐ Water Diversion/Extraction/Impoundment (*Attachment C*)	*SWRCB Number:* _____
E.	☐ Routine Maintenance (*Attachment D*)	
F.	☐ DFG Fisheries Restoration Grant Program (FRGP)	*FRGP Contract Number:* _____
G.	☐ Master	
H.	☐ Master Timber Harvesting	

6. FEES

Please see the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. *Note: The Department may not process this notification until the correct fee has been received.*

	A. Project	B. Project Cost	C. Project Fee
1	no charge timber harvest plan		$0.00
2	2 bridges, 12 temporary culverts, 3 permanent culverts		
3	four water drafting sites		
4			
5			
		D. Base Fee *(if applicable)*	
		E. TOTAL FEE ENCLOSED	$0.00

7. PRIOR NOTIFICATION OR ORDER

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?

☐ Yes (*Provide the information below*) ☑ No

Applicant: _____ Notification Number: _____ Date: _____

B. Is this notification being submitted in response to an order, notice, or other directive ("order") by a court or administrative agency (including the Department)?

☑ No ☐ Yes (*Enclose a copy of the order, notice, or other directive. If the directive is not in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.*)

☐ *Continued on additional page(s)*

8. PROJECT LOCATION

A. Address or description of project location. *(Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway)*
see continuation sheet attached ☐ *Continued on additional page(s)*

B. River, stream, or lake affected by the project.	see continuation sheet attached
C. What water body is the river, stream, or lake tributary to?	see continuation sheet attached
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?	☐ Yes ☑ No ☐ Unknown
E. County	see continuation sheet attached

F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
see continuation sheet attached				

☑ *Continued on additional page(s)*

K. Meridian (*check one*)	☐ Humboldt ☑ Mt. Diablo ☐ San Bernardino
L. Assessor's Parcel Number(s)	
see continuation sheet attached ☐ *Continued on additional page(s)*	

M. Coordinates (*If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes)*

Latitude/Longitude	*Latitude:* see continuation sheet attached	*Longitude:*	
	☑ Degrees/Minutes/Seconds	☐ Decimal Degrees	☐ Decimal Minutes
UTM	*Easting:*	*Northing:*	☐ Zone 10 ☐ Zone 11
Datum used for Latitude/Longitude or UTM	☐ NAD 27	☑ NAD 83 or WGS 84	

9. PROJECT CATEGORY AND WORK TYPE *(Check each box that applies)*

PROJECT CATEGORY	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR/MAINTAIN EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	☐	☐	☐
Bank stabilization – rip-rap/retaining wall/gabion	☐	☐	☐
Boat dock/pier	☐	☐	☐
Boat ramp	☐	☐	☐
Bridge	☑	☐	☐
Channel clearing/vegetation management	☐	☐	☐
Culvert	☑	☐	☐
Debris basin	☐	☐	☐
Dam	☐	☐	☐
Diversion structure – weir or pump intake	☐	☐	☐
Filling of wetland, river, stream, or lake	☐	☐	☐
Geotechnical survey	☐	☐	☐
Habitat enhancement – revegetation/mitigation	☐	☐	☐
Levee	☐	☐	☐
Low water crossing	☐	☐	☐
Road/trail	☐	☐	☐
Sediment removal – pond, stream, or marina	☐	☐	☐
Storm drain outfall structure	☐	☐	☐
Temporary stream crossing	☑	☐	☐
Utility crossing : Horizontal Directional Drilling	☐	☐	☐
Jack/bore	☐	☐	☐
Open trench	☐	☐	☐
Other *(specify)*: drafting holes	☑	☐	☐

10. PROJECT DESCRIPTION

A. Describe the project in detail. Photographs of the project location and immediate surrounding area should be included.

- Include any structures (e.g., rip-rap, culverts, or channel clearing) that will be placed, built, or completed in or near the stream, river, or lake.
- Specify the type and volume of materials that will be used.
- If water will be diverted or drafted, specify the purpose or use.

Enclose diagrams, drawings, plans, and/or maps that provide all of the following: site specific construction details; the dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; an overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, and where the equipment/machinery will enter and exit the project area.

see continuation sheet attached

☑ *Continued on additional page(s)*

B. Specify the equipment and machinery that will be used to complete the project.

Tractors and excavators/backhoes

☐ *Continued on additional page(s)*

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).	☑ Yes ☐ No (*Skip to box 11*)
D. Will the proposed project require work in the wetted portion of the channel?	☑ Yes (*Enclose a plan to divert water around work site*) ☐ No

11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

see continuation sheet attached

☑ *Continued on additional page(s)*

B. Will the project affect any vegetation? ☐ Yes (*Complete the tables below*) ☑ No

Vegetation Type	Temporary Impact	Permanent Impact
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)

☐ *Continued on additional page(s)*

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

☑ Yes *(List each species and/or describe the habitat below)* ☐ No ☐ Unknown

Habitat for red-legged frogs, western pond turtle or yellow-legged frogs. Steelhead and Coho are known to be present in the class I watercourses.

☐ *Continued on additional page(s)*

D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.

Little THP (no number at this time) biological evaluation for cumulative impacts.

☐ *Continued on additional page(s)*

E. Has a biological study been completed for the project site?

☑ Yes (*Enclose the biological study*) ☐ No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.

F. Has a hydrological study been completed for the project or project site?

☑ Yes (*Enclose the hydrological study*) ☐ No

Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics, and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.

12. MEASURES TO PROTECT FISH, WILDIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

see continuation sheet attached

☑ *Continued on additional page(s)*

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

see continuation sheet attached

☑ *Continued on additional page(s)*

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

see continuation sheet attached

☑ *Continued on additional page(s)*

13. PERMITS

List any local, state, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. Timber Harvest Plan permit CalFire ☑ Applied ☐ Issued

B. _____ ☐ Applied ☐ Issued

C. _____ ☐ Applied ☐ Issued

D. Unknown whether ☐ local, ☐ state, or ☐ federal permit is needed for the project. (*Check each box that applies*)

☐ *Continued on additional page(s)*

14. ENVIRONMENTAL REVIEW

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA)?

☑ Yes (*Check the box for each CEQA, NEPA, CESA, and ESA document that has been prepared and enclose a copy of each*)

☐ No (*Check the box for each CEQA, NEPA, CESA, and ESA document listed below that will be or is being prepared*)

☐ Notice of Exemption	☐ Mitigated Negative Declaration	☐ NEPA document (*type*): _____
☐ Initial Study	☐ Environmental Impact Report	☐ CESA document (*type*): _____
☐ Negative Declaration	☐ Notice of Determination *(Enclose)*	☐ ESA document (*type*): _____
☑ THP/ NTMP	☐ Mitigation, Monitoring, Reporting Plan	

B. State Clearinghouse Number (*if applicable*)			
C. Has a CEQA lead agency been determined?	☑ Yes (*Complete boxes D, E, and F*)	☐ No (*Skip to box 14.G*)	
D. CEQA Lead Agency	CalFire		
E. Contact Person	Dominik Schwab	F. Telephone Number	(707) 576-2953

G. If the project described in this notification is part of a larger project or plan, briefly describe that larger project or plan.

Little Timber Harvest Plan (no number at this time)

☐ *Continued on additional page(s)*

H. Has an environmental filing fee (Fish and Game Code section 711.4) been paid?

☐ Yes (*Enclose proof of payment*) ☑ No (*Briefly explain below the reason a filing fee has not been paid)*

Fee not required.

Note: If a filing fee is required, the Department may not finalize a Lake or Streambed Alteration Agreement until the filing fee is paid.

15. SITE INSPECTION

Check one box only.

☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.

☑ I request the Department to first contact (*insert name*) John Bennett at (*insert telephone number*) 884-9464 to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.

16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?
☐ Yes (Please enclose the information via digital media with the completed notification form)
☑ No

17. SIGNATURE

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

Signature of Applicant or Applicant's Authorized Representative

3/11/2021
Date

John R Bennett
Print Name

PART OF PLAN

RECEIVED
MAR 16 2021
COAST AREA OFFICE
RESOURCE MANAGEMENT

ATTACHMENT B

Additional Information for Projects Included in Timber Harvesting Plans

Project name -Little THP -no number at this time
Project Location- See attached Map
Project Description-see below

A. Table for Encroachments

Table 1

Road Point	type	watercourse	Structure size
2	Replace Culvert	Class II	60
3	Replace Culvert	Class II	24
4	Replace Culvert	Class III	24
6	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
8	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
9	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
10	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
12	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
14	Bridge	Class II	Flat car bridge
16	temporary culvert	Class I	Install temporary pipe adequate to handle flow if any
22	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
24	Bridge	Class I	Flat car bridge
25	temporary culvert	Class III	Install temporary pipe adequate to handle flow if any
26	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
27	temporary culvert	Class II	Install temporary pipe adequate to handle flow if any
29	Dip out	Class III	Dip out at close of operations
35	temporary culvert	Class I	Install temporary pipe adequate to handle flow if any
50	temporary culvert	Class II	Install temporary pipe adequate to

			handle flow if any
"A"	Drafting Hole		
"B"	Drafting Hole		
"C"	Drafting Hole		
"D"	Drafting Hole		

B. *Conditions at Encroachment(s).* Describe any torrent, debris, or landslide conditions at each encroachment.

None known.

C. *Work Period(s).* If temporary crossings are proposed, specify dates and conditions requiring temporary crossing removal.

Bridges and temporary pipes must be removed prior to winter period of each year (November 15 to April 1).

D. *Culverts.* **Permanent culverts 2, 3, and 4 will have culvert size as indicated in the table above. All other culverts are temporary and will be a 4" by 20' or larger culvert if wet at time of operations.**

E. *Bridges.* If a bridge is proposed, include the following:

1. Indicate if the abutments or road approaches will encroach into the floodplain or stream channel

The abutments for #14 will not encroach on the channel zone. Bridge at point #24 will either be placed on existing abutments (option 24A) or placed on ground adjacent to concrete blocks just upstream at present road location (option 24B in which case one side of the bridge will rest on gravel bar and the other side will rest on the road.)

2. Provide the calculations or data used to determine bridge height and flow capacity.

These are temporary installments that are only being used during low flows.

3.Describe the type of abutments and scour protections with dimensions.

Approaches will use concrete blocks at crossing #14 to support the bridge. Crossing #24 may just be set on the ground or on concrete blocks for support. Material that is used for the transition from the bridge to the road will be spread out when the bridge is removed and will be seeded and mulched.

4.Provide any engineering reports, plans, or other related documentation.

See attached diagrams.

F. *Water Diversion or Drafting.* If water will be present, and will be drafted or diverted around the work site, specify the following.

See measures to protect fish (part 12) below for details.

Water Drafting – Will be from existing water holes shown at points "A" and "B" and hole will be dug off wetted channel in gravel bar of class I watercourses at points "C" and "D".

Continuation sheet Little 1600 permit-

8. Project Location

A-Address or description of project location				
#1- Part 1-From the intersection of Hwy 1 and Old State Hwy (at the south end of Gualala) go east on Old State Hwy. After a tenth of a mile take a slight right to stay on Old State Hwy and follow it for 1.8 miles to the intersection that is right before a large green suspension bridge. Go left on main haul road that follows the North Fork of the Gualala River . Part 2. Proceed for 1.3 miles heading north and staying to the west of the river which will take you to road point #1. From here all other road points can be found by referring to the 1600 Points map attached.				
B-River, stream or lake affected by the project				
2	Unnamed class III			
3	Unnamed class III			
4	Unnamed class II			
6	Unnamed class II			
8	Unnamed class II			
9	Unnamed class II			
10	Unnamed class II			
12	Unnamed class II			
14	Unnamed class II			
16	Unnamed class I			
22	Unnamed class II			
24	Little North Fork of the Gualala			
25	Unnamed class III			
26	Unnamed class II			
27	Unnamed class II			
29	Unnamed class III			
35	Unnamed class I			
50	Unnamed class II			

"A"	Unnamed class II water hole			
"B"	Unnamed class II water hole			
"C"	South fork of the Gualala river			
"D"	North Fork of the Gualala River			
C-What water body is the river, stream of lake tributary to?				
2	The Little North Fork of the Gualala River			
3	The Little North Fork of the Gualala River			
4	The Little North Fork of the Gualala River			
6	The Little North Fork of the Gualala River			
8	The Little North Fork of the Gualala River			
9	The Little North Fork of the Gualala River			
10	The Little North Fork of the Gualala River			
12	The Little North Fork of the Gualala River			
14	The Little North Fork of the Gualala River			

16	The Little North Fork of the Gualala River			
22	The Little North Fork of the Gualala River			
24	The North Fork of the Gualala River			
25	The Little North Fork of the Gualala River			
26	The Little North Fork of the Gualala River			
27	The Little North Fork of the Gualala River			
29	The Little North Fork of the Gualala River			
35	The Little North Fork of the Gualala River			
50	The Little North Fork of the Gualala River			
"A"	Not connected			
"B"	Not connected			
"C"	Main stem of the Gualala			
"D"	Main stem of the Gualala			
D-Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?				
All points	No			
E-County				
All points except "B and "C"	Mendocino			
"B" and "C"	Sonoma			

F.	USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
2	Gualala	11 N	15W	14	SW1/4
3	Gualala	11 N	15W	15	NE1/4
4	Gualala	11 N	15W	10	SE1/4
6	Gualala	11 N	15W	10	SE1/4
8	Gualala	11 N	15W	14	SW1/4
9	Gualala	11 N	15W	14	SW1/4
10	Gualala	11 N	15W	14	SW1/4
12	Gualala	11 N	15W	14	SW1/4
14	Gualala	11 N	15W	14	NW1/4
16	Gualala	11 N	15W	15	NE1/4
22	Gualala	11 N	15W	15	NE1/4
24	Gualala	11 N	15W	10	NW1/4
25	Gualala	11 N	15W	9	NE1/4
26	Gualala	11 N	15W	9	NE1/4
27	Gualala	11 N	15W	9	NE1/4
29	Gualala	11 N	15W	14	SW1/4
35	Gualala	11 N	15W	23	NW1/4
50	Gualala	11 N	15W	10	SE1/4
"A"	Gualala	11 N	15W	10	SW1/4
"B"	McGuire Ridge	11N	15W	25	NW1/4
"C"	McGuire Ridge	11N	15W	25	NW1/4
"D"	McGuire Ridge	11N	15W	13	SE1/4
K. Meridian					
All	Mt Diablo				
L. Assessors Parcel Numbers					
2	141-220-05				
3	144-210-12				
4	141-220-02				
6	141-220-02				
8	141-220-05				
9	141-220-05				
10	141-220-05				
12	141-220-05				
14	141-220-05				
16	144-210-12				
22	144-210-12				
24	141-220-02				
25	144-18-02				
26	144-180-02				
27	144-180-02				

29	141-220-05			
35	141-270-12			
50	141-220-02			
"A"	141-220-02			
"B"	121-010-03			
"C"	121-010-03			
"D"	141-220-07			
M. Coordinates	**Latitude**	**Longitude**	**Datum**	
2	38°47'53"N	123°30'50"W	Nad 83	
3	38°48'11"N	123°48'11"W	Nad 83	
4	38°48'39"N	123°31'24"W	Nad 83	
6	38°48'47"N	123°38'47"W	Nad 83	
8	38°48'0"N	123°30'43"W	Nad 83	
9	38°47'60"N	123°30'39"W	Nad 83	
10	38°47'54"N	123°30'35"W	Nad 83	
12	38°47'53"N	123°30'31"W	Nad 83	
14	38°48'8"N	123°30'48"W	Nad 83	
16	38°48'29"N	123°31'10"W	Nad 83	
22	38°48'14"N	123°31'7"W	Nad 83	
24	38°49'16"N	123°31'58"W	Nad 83	
25	38°49'20"N	123°32'11"W	Nad 83	
26	38°49'26"N	123°32'13"W	Nad 83	
27	38°49'30"N	123°32'15"W	Nad 83	
29	38°47'51"N	123°30'46"W	Nad 83	
35	38°47'32"N	123°30'38"W	Nad 83	
50	38°48'36"N	123°31'20"W	Nad 83	
"A"	38°48'34"N	123°31'25"W	Nad 83	
"B"	38°46'7"N	123°29'12"W	Nad 83	
"C"	38°46'8"N	123°29'10"W	Nad 83	
"D"	38°47'52"N	123°28'58"W	Nad 83	

10. Project Description-

Permanent culvert on Class II or III (road point #2, #3, #4)
Install 60" culvert at road point #2, 24" culvert at road point #3, 24" culvert at road point #4. Divert around site if water is present during installation using plastic over straw bales and diversion pipe (and pump if necessary). See road work order for any additional specifics.

Temporary Bridges (road point numbers #14 and #24)

These crossings will use a temporary bridge. Approaches will use Monschke blocks at crossing #14 to support the bridge. Crossing #24 may just be set on the ground or on Monschke blocks for support. Material that is used for the transition from the bridge to the road will be spread out when the bridge is removed and will be seeded and mulched.

Temporary class I, II or III crossing (road point #6, 8, 9, 10, 12, 16, 22, 25, 26, 27, 29, 35, 50)-
Install pipe adequate to handle flow if any is present. If necessary, divert around site if water is present during installation and removal using plastic over straw bales and diversion pipe (and pump if necessary).
Removal pipe and all loose material down to natural grade at close of operations.

Drafting holes A, B -Existing off wetted channels holes and **C and D** will be dug at least ten feet from wetted channel in adjacent gravel bar. Water will be drafted at the rates and with the limitations outlined under item 26 in section III of the Little THP document.

11. Project Impacts-

No significant mature vegetation will be impacted at any of these sites. An insignificant amount of willow or conifer reproduction may have become established in the road surface in a couple of locations. The total area disturbed per crossing will be approximately 40 by 20 (800 square feet) or less. The banks will be returned to the pre-crossing condition or better and any loose soil be removed and placed in a stable location away from the watercourse.

12. Measures to Protect Fish, Wildlife and Plant Resources

Bridge Installation at site #14 and 24

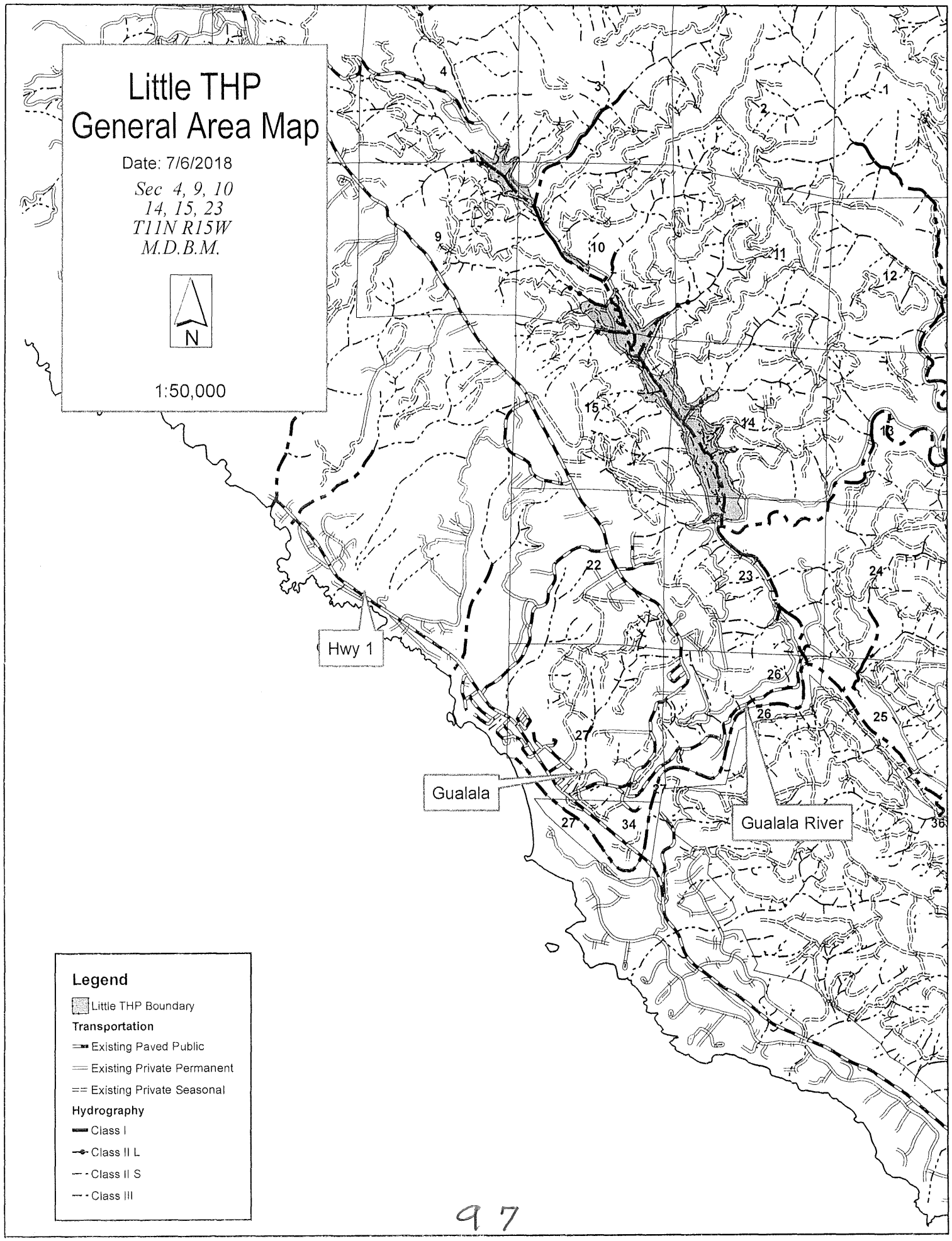
Fish-
1.At each bridge site, prior to bridge installation and removal, if crossing of the wetted channel is necessary, an experienced fisheries technician (and trained field support technicians if needed) shall perform fish hazing if water is present. This shall include a minimum of three sweeps with hand-held nets or other suitable tools to be used when walking in a downstream direction beating the water until in-stream habitat is reached that contains suitable cover into which fish can move and hide.

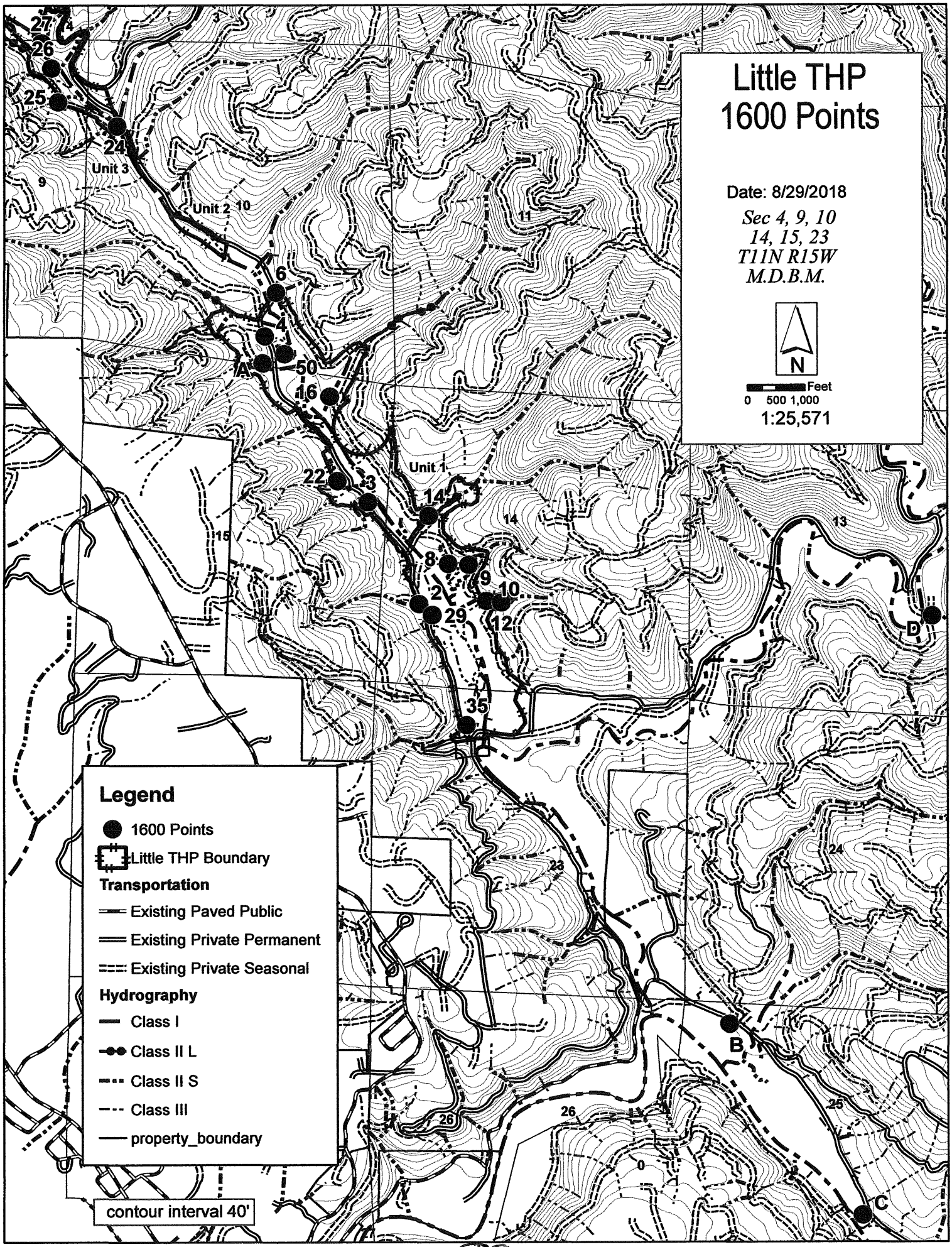
2. The experienced fisheries technician, in consultation with the qualified fisheries biologist, shall determine the need, and if necessary install a block-net upstream of the watercourse crossing site to keep new fish from moving into the path of the heavy equipment,

3. Following the initial hazing described above, the experienced fisheries technician shall walk in front of the heavy equipment as it crosses the watercourse and agitate the water and substrate to move any remaining fish out of the path of the heavy equipment.

Permanent and temporary pipe installations on class II and IIIs and also bridges above.

Frogs-
Depending on consultation with CDFW, Red Legged Frog and Foothill Yellow Legged frog detection measures may apply for the two bridge sites or of the sites that have water at the time of installation or removal.


Little THP
General Area Map
Date: 7/6/2018
Sec 4, 9, 10
14, 15, 23
T11N R15W
M.D.B.M.
N
1:50,000
Hwy 1
Gualala
Gualala River
Legend
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Hydrography
Class I
Class II L
Class II S
Class III


Little THP
1600 Points
Date: 8/29/2018
Sec 4, 9, 10
14, 15, 23
T11N R15W
M.D.B.M.
N
Feet
0 500 1,000
1:25,571
Unit 1
Unit 2
Unit 3
A
B
C
D
Legend
1600 Points
Little THP Boundary
Transportation
Existing Paved Public
Existing Private Permanent
Existing Private Seasonal
Hydrography
Class I
Class II L
Class II S
Class III
property_boundary
contour interval 40'

Planned Road Work

Hydrologic Unit All **Repair type** All
Planning Watershed All **Priority** All
Road # All **From Mi** All **To Mi** All **Road Class** All
THP All **From Date** 1/1/1980 **To Date** 8/31/2018

Road # / Road Class	GIS# / ID#	Mile End	Plan Crew	Final Done	THP# / Rd Pt	THP Name / ECP Number	Problem / Solution	Repair Type / Priority/Shedule	Cr. Class Old Dia	New Dia	DRCs Ln	Left D / Right D	Exca. Cat	Truck Labor	Gra. Com.	Rock Yds	Cost $/FSD	Total Yds FSD Yds
0	6639	0.000	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	0	0	0	0	$0	0
Existing Skid	6639	0.000	Unk		22	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	If water is present install pipe adequate to handle flow. Pull pipe and dip out to grade at close.																	
0	6658	0.000	Haschak		18-01	Little	Temp. Crossing	THP Non-Road	II		0	0	0	0	0	0	$0	0
Existing Skid	6658	0.000	Unk		50	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Dipo out at close.																	
0	6654	0.000	Haschak		18-01	Little	Temp. Crossing	THP Non-Road	I		0	0	0	0	0	0	$0	0
Existing Skid	6654	0.000	Unk		35	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Skid xing on class I. Install small pipe adequate to handle flow if wet at time of operations. Cover xing with existing channel material. At close of operations remove any debris or dirt on the gra and reshape back to original channel. Reestablish berm along north side of channel to match existing berm that is alredy there.																	
0	6644	0.000	Haschak		18-01	Little	Temp. Crossing	THP Non-Road	II		0	0	0	0	0	0	$0	0
Private Seasonal	6644	0.000	Unk		27	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Install Spittler crossing, (fill with logsor hay bales then cover with dirt). Pull all material down to grade at close and pull banks back to stable repose.																	
0	6643	0.000	Haschak		18-01	Little	Temp. Crossing	THP Non-Road	II		0	0	0	0	0	0	$0	0
Private Seasonal	6643	0.000	Unk		26	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Install 4"+ pipe adequate to handle flow if water is present. Pull all material down to grade at close and pull banks back to stable repose.																	
0	6662	0.000	Haschak		18-01	Little	Temp. Crossing	THP Non-Road	II		0	0	0	0	0	0	$0	0
Existing Skid	6662	0.000	Unk		8	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Dip out at close.																	
0	6629	0.000	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	0	0	0	0	$0	0
Existing Skid	6629	0.000	Unk		12	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
	Install pipe adequate to handle flow. Pull pipe and dip out at close of operations.																	
Road Number					0	**Grand Total All Sites**	7	**Culvert Costs**		$0		0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
60.4	1534	0.500	Haschak		18-01	Little	Culv.	THP App. Rd.	II		0	0	8	2	0	0	$3,980	300
Private Seasonal	6619	0.000	Unk		2	Little	Culv. Replace	Medium	-	60"	40	0	0	0	0	0	$13	300
	Replace with 60" culvert. Inlet and outlet shall be appropriately armored to protect the fill.																	
60.4	6620	0.870	Haschak		18-01	Little	Culv.	THP App. Rd.	II		0	0	0	0	0	0	$552	200
Private Seasonal	6620	0.000	Unk		3	Little	Culv. Replace	Medium	-	24"	30	0	0	0	0	0	$0	0
	Replace with 24" culvert. Inlet and outlet shall be appropriately armored to protect the fill.																	

Road # / Road Class	GIS# / ID#	Mile / End	Plan / Crew	Final / Done	THP# / Rd Pt	THP Name / ECP Number	Problem / Solution	Repair Type / Priority/Shedule	Cr. Class / Old Dia	/ New Dia	DRCs / Ln	Left D / Right D	Exca. / Cat	Truck / Labor	Gra. / Com.	Rock / Yds	Cost / $/FSD	Total Yds / FSD Yds
60.4	6621	1.570	Haschak		18-01	Little	Culv.	THP App. Rd.	II		0	0	0	0	0	0	$368	0
Private Seasonal	6621	0.000	Unk		4	ECP Not	Culv. Replace	Medium	24"	24"	20	0	0	0	0	0	$0	0
Replace with 24" culvert. Inlet and outlet shall be appropriately armored to protect the fill.																		
Road Number					60.4	**Grand Total All Sites**	3	**Culvert Costs**	$3,721			0	8	2	0	0	$4,901	500
												0	0	0	0	0	$16	300
60.4016	6646	0.050	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	III		0	0	0	0	0	0	$0	0
Private Seasonal	6646	0.000	Unk		29	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
Dip out crossing and help define channel with mounds if necessary so that it doesn't meander across adjacent landing after operations.																		
Road Number					60.4016	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
60.402002	1599	0.220	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	III		0	0	0	0	0	0	$0	0
Private Seasonal	6626	0.000	Unk		9	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
If water is present install pipe adequate to handle flow. Pull pipe and dip out to grade at close																		
60.402002	6627	0.400	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	0	0	0	0	$0	0
Private Seasonal	6627	0.000	Unk		10	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
If water is present install pipe adequate to handle flow. Pull pipe and dip out to grade at close.																		
Road Number					60.402002	**Grand Total All Sites**	2	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
60.402005	1586	0.020	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	3	0	0	0	$375	0
Private Seasonal	6631	0.000	Unk		14	ECP Not	Bridge - Temp	Medium	-	-	0	0	0	0	0	0	$0	0
Exisitng temporary bridge installation. No alteration to bed or bank required as abutments are in place and bridge will just be set on to them without altering bed or banks.																		
Road Number					60.402005	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	3	0	0	0	$375	0
												0	0	0	0	0	#Div/0!	0
60.40200501	1584	0.510	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	0	0	0	0	$0	0
Private Seasonal	6633	0.000	Unk		16	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
If water is present install pipe adequate to handle flow. Pull pipe and dip out to grade at close.																		
Road Number					60.40200501	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
60.4072	1559	0.010	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	II		0	0	0	0	0	0	$0	0
Private Seasonal	6623	0.000	Unk		6	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
Dip out at close. Install a temporary pipe if wet at time of operations.																		
Road Number					60.4072	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0

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Road # / Road Class	GIS# / ID#	Mile / End	Plan / Crew	Final / Done	THP# / Rd Pt	THP Name / ECP Number	Problem / Solution	Repair Type / Priority/Shedule	Cr. Class Old Dia	New Dia	DRCs Ln	Left D / Right D	Exca. / Cat	Truck / Labor	Gra. / Com.	Rock / Yds	Cost / $/FSD	Total Yds / FSD Yds
80.4046	1492	0.010	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	I		0	0	0	0	0	0	$0	0
Private Seasonal	6641	0.000	Unk		24	ECP Not	Bridge - Temp	Medium	-	-	0	0	0	0	0	0	$0	0
Bridge may be installed on existing concrete blocks (24A option) or adjacent to blocks upstream on road resting on the ground(24B option) . All ramped material will be incorporated back into ro bed upon bridge removal and will be seeded and mulched to item 18 standards.																		
Road Number					80.4046	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
80.404614	1491	0.090	Haschak		18-01	Little	Temp. Crossing	THP App. Rd.	III		0	0	0	0	0	0	$0	0
Private Seasonal	6642	0.000	Unk		25	ECP Not	Temp. Crossing	Medium	-	-	0	0	0	0	0	0	$0	0
Road xing on class III. Dip out at close.																		
Road Number					80.404614	**Grand Total All Sites**	1	**Culvert Costs**	$0			0	0	0	0	0	$0	0
												0	0	0	0	0	#Num!	0
						Grand Total All Sites	18	**Culvert Costs**	$3,721			0	11	2	0	0	$5,276	500
												0	0	0	0	0	$18	300

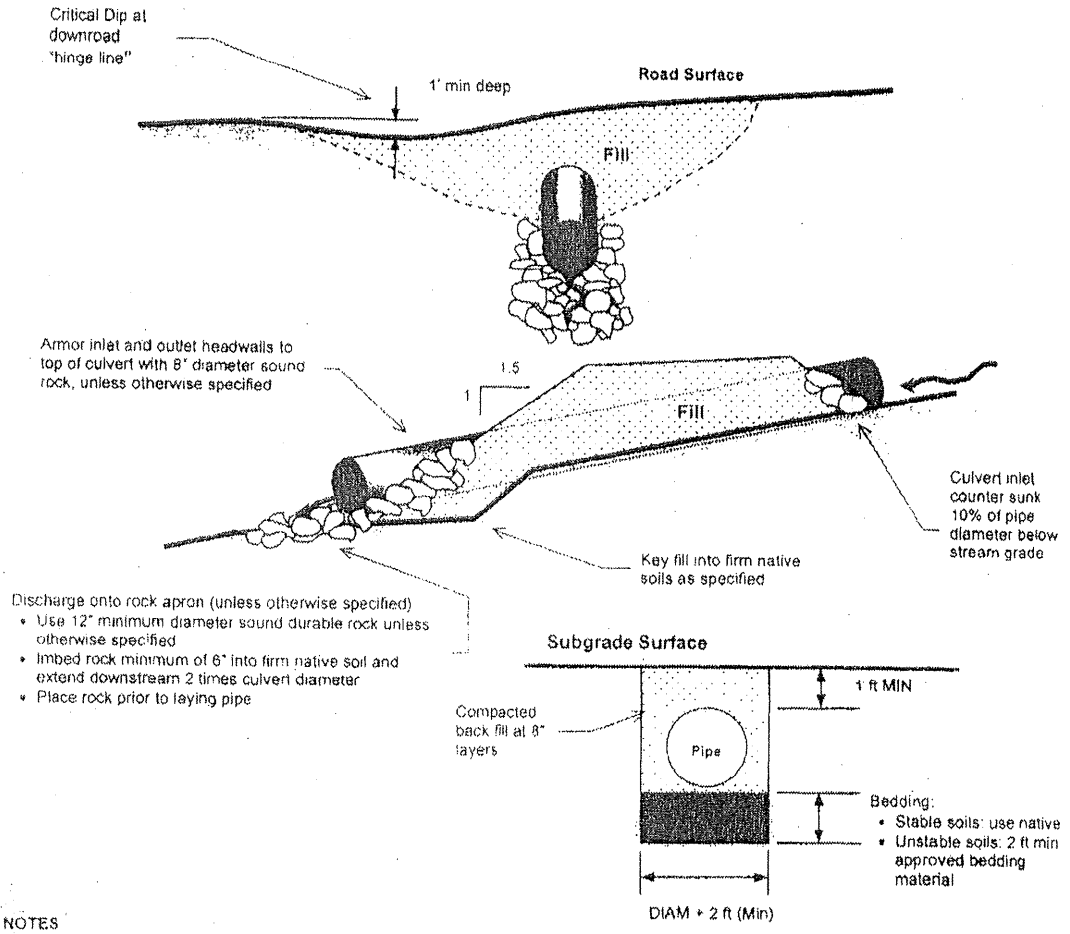
100-1

Road Work

- Road # – This is unique road ID number for each road segment on the property.
- Road Class – This is the type of road.
  - Upgraded – Outsloped and dipped
  - Storm proofed – Outsloped, dipped and culverts repaired.
  - Deactivation – Outsloped, dipped, culverts pulled, and the road will be reused.
  - Abandoned Fixed – Outsloped, dipped, culverts removed and the road will not be reused.
  - Abandoned Legacy – It will do more damage than good to work on the road. The road will not be reused.
- GIS# - Each existing site in the field (like a culvert) has a unique GIS number, usually the first visit ID#. It appears on the road maps. A new visit to an existing site will reference the GIS#. You can look up the history of visits to a particular site by calling up all the records with the same GIS#.
- ID# - Each "new" road site visit has a unique ID number. It is generated when the record is entered into the database.
- Mile – Each numbered road has mileage ticks from 0 to the end of the road. "Mile" is the distance out the road to the site.
- End – If the site is along a length of road, like tipping and dipping, there is a start point (Mile) and "end" mileage.
- Insp. – The name of the inspector that identified the site and made the prescription is listed here. The inspectors are trained to identify potential sediment sources and make prescriptions in accordance with the Handbook for Forest and Ranch Roads, Weaver and Hagans, 1992. Estimates of sediment production and delivery are made by the inspector.
- Crew – These are the initials of contractor that did the work.
- Planned – Date of site identification.
- Done – Date site work was completed.
- THP# - THP Number
- Rd Pt - This is the working number (THP road point) created by the inspector in the field. It is often found on field flagging.
- THP Name – The THP or program the work is associated with.
- ECP Name – The Erosion Control Plan the site is associated with.
- Problem – The type of problem.
- Solution – The type of solution.
- Repair type – Why was the work done.
- Priority – This reflects the urgency of the problem. A high priority site is one that is likely to deliver a significant amount of sediment during the next 5 year storm event. Medium and low priority sites need upgrading, but are unlikely to deliver significant amounts of sediment in the next several years. High priority sites will be scheduled for completion prior to a low or medium priority site. In a THP, the implementation priorities below apply.
  - THP Low – Mitigation applied prior to THP completion.
  - THP Med – Mitigation applied concurrent with operations affecting site.
  - THP High – Mitigations applied in the first year after THP approval or as described in the plan.
- Stream Class – As per the Forest Practice Rules
- Old Dia – The diameter of the old culvert.
- New Dia Ln – The diameter and length of the new culvert if any.
- DRCs – Number of ditch relief culverts needed for the site.
- Rock – Yards of rock needed at the site – rip rap, rock surface, etc.
- Right and Left Ditch – Feet of road to the right and left of the site that is connected and needs treatment.
- Equipment Hours
  - Exca. – Excavator
  - Cat – Caterpillar tractor
  - Labor – Hand labor
  - Truck – Dump truck or water truck
  - Gra. – Grader
  - Com. - Compactor and pilot car if needed.
- Yds - This is the total yardage of soil that must be moved at the site.
- Cost – All the equipment costs plus the culvert costs. This does not include administration or logistic costs.
- $/FSD – This is the total cost divided by the yards of soil prevented form delivery (FSD) to the watercourses.
- Total Yds – This is the estimate of yardage that will be mobilized in a failure if the work is not done.
- FSD (Future Sediment Delivery) PSD (Potential sediment delivery) – This is the amount of soil that will be prevented from being delivered into the watercourses if the project is completed. It is the relative potential for sediment delivery (RPSD). This yardage only appears if the inspector has been trained to estimate this. This also includes road surface erosion that disconnecting the roads from the watercourses will prevent from being delivered. On upgraded roads it is typically 0.2 cubic feet per square foot of road per decade for the portion (typically 50%) that has been disconnected. The road and cut bank width is assumed to be 25 feet.

100-2

PERMANENT CULVERT



NOTES

- Culverts should be installed at the natural stream level, grade and orientation.
- The culvert bed shall be clean and free of large woody debris and large rocks.
- The width of trenches shall permit satisfactory joining and thorough tamping of the backfill material.
- The inlet to the culvert should be slightly below the streambed so that the water falls into the culvert inlet.
- Culverts distorted more than 10% of normal dimension; ruptured or broken shall be replaced.
- Unsuitable foundation material (highly plastic material – "blue goo") shall be excavated below the inlet elevation of the culvert to an approximate depth of 2 feet and a width of at least the culvert diameter plus 4 feet.
- Fill shall be keyed and benched into firm native soils. Areas to receive fill shall be stripped to remove all vegetation, roots, brush, highly organic soils and other unsuitable fill material. Depth of stripping is assumed to be a minimum of 6 to 12 inches.
- Onsite soils may be reused as fill. Backfill should consist of select structural back fill, no rock or cobbles greater than 3 inches in size, and free of organic material. Any imported fill should consist of non-expansive soil.
- Fill shall be placed in maximum 8 inch thick horizontal lifts and compacted to a degree greater than the surrounding soils. Soil moisture shall be adequate to achieve suitable compaction.
- Critical dip shall be installed at the hinge line.
- On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
- Inlet and outlet shall be appropriately armored to protect the fill from the hydrologic energy of the stream.
- Conform to Department of Fish and Game 1600 permit where applicable.

PERMANENT WATERCOURSE CROSSING STANDARD PLAN	Standard Detail C1
	Date: March 24, 2008

Temporary Bridge Installation

Flat Car or Log bridge

The bridge at road point #14 will look like the diagrams below. The bridge at road point #24 may rest directly on the ground.