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GENERAL DESCRIPTION OF PLAN AREA

PROJECT LOCATION & BACKGROUND:
The proposed plan area is located within the Harold Richardson Redwood Reserve owned by Save the Redwoods League in Northern Sonoma County, which is acknowledged as the traditional lands of the first inhabitants, the Kashia Band of Pomo Indians. The Reserve was privately owned and managed by the Richardson Family for over a century until 2018 when the Reserve was transitioned to conservation status under the ownership of Save The Redwoods League. The parcels immediately adjacent to Tin Barn Road were recently purchased by the League from the Richardson Family, expanding the Reserve. Access to the plan area is facilitated via Skaggs Spring Road to Tin Barn Road. The plan area is located within the Haupt Creek watershed and drains to an unnamed Class I tributary to Haupt Creek which is tributary to Wheatfield Fork of the Gulala River. The plan area is located on two broad ridge tops both trending north to south and form a near contiguous ring with north, east, and west facing slopes. Elevation varies from approximately 1200 ft in the south along Tin Barn Road to approximately 600 ft in the north near the confluence with Haupt Creek. Slopes within the plan area are gentle and generally ≤30% with some instances of higher slope percentages ranging from 30-50% along the breaks of the ridges, and one area of slopes over 65% in the northern portion of the THP near the Class I tributary to Haupt Creek.

The Reserve was a section of the 8,000-acre Richardson Ranch established by Harold Richardson's pioneering grandfather in 1876, and the 730-acre section that makes up the Reserve was added to the larger ranch in the 1920s. The Richardson's harvest their forests selectively, contributing to the remarkable health of the redwood forest on the adjacent ranch. Harold Richardson had a particular fondness for the old-growth forest on the 730-acre Reserve and he did not harvest the old-growth despite having the legal right to do so. When Harold Richardson passed away in 2016 at age 96, he left the nearly pristine 730 acres of ancient giants, within the larger family ranch to his heirs who in turn worked with Save the Redwoods League to protect it for future generations. NCRM foresters and biologists worked with the League to produce the Forest Management Plan in 2020 to guide future management. Through the implementation of this plan, the goals of the landowner are to create a fire resilient property throughout the Reserve, provide protection for all resources, promote late seral stage qualities, and promote, improve, and maintain healthy wildlife habitat. Although there has not been any recent timber harvesting, one THP was submitted in 2000 for a small area on the eastern ridge that was never approved, and therefore not operated.

SOILS AND TOPOGRAPHY:
The two broad ridges that the proposed plan occupies contain generally gentle topography with increasing steepness towards the edges of the ridge tops. Within the plan area there are openings of grasslands that range from small to expansive creating fragmented stands that support variability in species composition, and fuel loading. Where the grasslands are large enough to map, they are identified on the Section II maps as "Non-Timbered". Although erosion issues were not noted, portions of the THP and appurtenant roads are located within Goldridge soils, known for their high erodibility formed from the Ohlsen Formation (Geology Report, 2026). Hugo-Atwell complex (50-75% slopes) occupies the plan area units to the north, east, west, and small portions of the southeast. Although this is the dominant soil type throughout these units, there is a small portion of Yorkville clay loam (30-50% slopes) that also is present. Goldridge fine sandy loam (15-30% slopes) is the dominant soil type in the southern portions of the plan area but this area also includes Mendocino sandy clay loam (9-30% slopes), Laughlin-Yorkville complex (30-75%), and a small portion of Hugo gravelly loam (50-75% slopes) (see Section II & V maps).

The Soil Survey Report for Sonoma County classifies the soils within the plan area as:

HnG: Hugo-Josephine complex (50-75% slopes)
HkG: Hugo very gravelly loam (50-75% slopes)
LhG: Laughlin-Yorkville complex (30-75%)
GdE: Goldridge fine sandy loam (15-30% slopes)
HIG: Hugo-Atwell complex (50-75% slopes)
MmE: Mendocino sandy clay loam (9-30% slopes)
YuF: Yorkville clay loam (30-50% slopes)

The **Hugo-Josephine complex (HnG)** is 60% Hugo soils, and 40% Josephine soils. The Hugo soils are deep, well drained, and formed from residuum weathered from sedimentary rock. Runoff is very rapid and erosion hazard is very high. Josephine loam is deep, well drained and formed from residuum weathered from sedimentary rock. Runoff is very rapid and the erosion hazard is high. The Hugo-Josephine complex's depth to restrictive bedrock is 40-60 inches. This soil type is used for timber production, particularly redwood and Douglas-fir and used for range and pasture where the soils have been logged.

The **Hugo very gravelly loam (HkG)** is well drained and formed from Residuum weathered from sedimentary rock. The depth to restrictive bedrock is 30-60 inches, permeability is moderate, runoff is very rapid, and the erosion hazard is very high. The soil is mainly used for the production of timber and areas that have been logged are used for grazing.

The **Laughlin-Yorkville complex (LhG)** is 60% Laughlin loam, 25% Yorkville loam, and 15% minor components. The Laughlin soil is moderately well-drained and formed from residuum weathered from sedimentary rock. Permeability is moderate, runoff is very rapid and the erosion hazard is very high. The Yorkville soil is moderately well-drained and formed from residuum weathered from sedimentary rock. Permeability is moderate, runoff is rapid, and the erosion hazard is high. The Laughlin-Yorkville complex's depth to restrictive bedrock is 20-30 inches. This soil type is mainly used for range.

The **Goldridge fine sandy loam (GdE)** is moderately well-drained and formed from residuum weathered from sandstone. Permeability is moderate, runoff is medium to rapid, and the erosion hazard is moderate to high. The depth to a restrictive layer is more than 80 inches. This soil type is mainly woodland, but areas that have been cleared have been used for orchards or to grow grass.

The **Hugo-Atwell complex (HIG) is 70% Hugo soils, 20% Atwell soils, and 10% minor components.** The Hugo soil is deep, well drained, and formed from residuum weathered from sedimentary rock. Permeability is moderate, runoff is very rapid and erosion hazard is very high. The Atwell soils are deep, moderately well drained and formed from residuum weathered from metasedimentary rock. Permeability is moderate, runoff is very rapid, and erosion hazard is very high. The Hugo-Atwell complex's depth to restrictive bedrock is 40-60 inches. This soil type is mainly used for the production of timber, particularly redwood and Douglas-fir.

The **Mendocino sandy clay loam (MmE)** is deep, moderately well drained and formed from Residuum weathered from sedimentary rock. Runoff is slow to medium and the hazard of erosion is slight to moderate. The depth to restrictive bedrock is 40-60 inches and this soil type is mainly used for the production of timber, particularly redwood and Douglas-fir.

The **Yorkville clay loam (YuF)** is moderately deep, moderately well drained and formed from Residuum weathered from igneous and metamorphic rock. Runoff is rapid, the hazard of erosion is high, and permeability is slow. The depth to restrictive bedrock is 40-60 inches and this soil type is mainly used for range.

WATERSHED AND STREAM CONDITIONS:

The plan area is located within the Haupt Creek (1113.840301) planning watershed. The two ridges where the plan is located surround a large drainage that is tributary to an unnamed Class I watercourse that is tributary to Haupt Creek. In addition to this and also within the drainage there are numerous Class II-S, and Class III watercourses which are within and adjacent to the plan area, all of which are tributary to the unnamed Class I watercourse. The watercourses within the plan area were walked and classified, and checked for erosion, channel stability, canopy cover, LWD and aquatic habitat. The 2020 Forest Management Plan for the Reserve included and assessment in which all watercourses were traversed by fisheries biologists and limits of anadromy were identified; the Section II maps depict these reaches with the Class I watercourse classification. Please see "Map 6: Stream and Assessment and Restoration Activities Map" provided in Section V from the FMP that displays the limits of anadromy as well as natural upstream fish barriers. MP 13 is a Class I crossing located near the lower reaches of the watercourse ("R" on Map 6) and with a culvert that may currently not pass all life stages of fish. Fish passage restoration is proposed for the crossing as part of this THP. Haupt Creek is designated as critical habitat under the Endangered Species Act (ESA) by NOAA Fisheries for the Northern California Steelhead Distinct Population Segment (DPS).

Haupt Creek watershed encompasses a total of 6,044 acres. While much of the area within the watersheds has been actively managed as timberlands or ranches utilizing a variety of silvicultural prescriptions, the Reserve was lightly managed with selective harvesting well over 10 years ago. A summary of past projects relating to timber production within these watersheds is located in Section IV. The remaining areas of these watersheds includes ranches, historic commercial development, habitational development, and private TPZ and/or lands preserved for agriculture use under the Williamson Act. Haupt Creek and the unnamed tributary is the primary Class I watercourse that receives drainage from the project area. The Haupt Creek watershed was listed on the 1994 303(d) list by the State of California as required by Section 303(d) of the Clean Water Act, as part of the broader Gualala River listing. This list describes water bodies that do not fully support all beneficial uses or are not meeting water quality objectives. It also describes the pollutant(s) for each water body that limit(s) its use or prevent(s) attainment of its water quality objectives. As required by Section 303(d), a TMDL must be developed for water bodies on the 303(d) list. For the Gualala Watershed, the listing was the result of water quality problems related to excessive sedimentation and siltation throughout the watershed and a TMDL was developed in 2001.

As per 14 CCR 916.4 a field evaluation was conducted of all watercourses within the vicinity of the project area and additional information concerning the watershed and stream conditions is contained within the Watershed Assessment portion of the Cumulative Impacts Assessment (Section IV).

VEGETATION AND STAND CONDITIONS:

The plan area is occupied mainly by a mature unevenaged redwood stand with areas of Douglas-fir and hardwoods mixed throughout on timber Site Class II. Many of the redwoods within these units are large mature second growth with some DBHs exceeding 60". Large DBH Douglas-fir exceeding 40" are present within the plan area but to a lesser extent than the large redwoods, and often exhibit poor form and declining health. Old-growth redwood is also found within and adjacent to the plan area but it is scattered and non-contiguous. A large area along the eastern ridge is located within an area of suitable nesting habitat for marbled murrelets, and the McApin Tree is located adjacent to the plan boundary within this habitat. The mid- and understory of the THP are occupied by ingrowth of third- and fourth-growth Douglas-fir and redwood, as well as hardwood (tanoak, live oak and madrone), brush, and a moderate amount of woody debris ranging from large tree boles (i.e. buckskin logs) to small branches. Evidence of multiple historical wildfires was noted throughout the THP and with a lack of recent management has revegetated with brush and small trees. Other areas adjacent to the THP have been burned under several prescribed burn projects conducted by SRL in the last 3 years, resulting in consumed and treated fuels. Several areas within the plan have been heavily impacted by storm damage which has resulted in increases of brush, hardwood regeneration, and downed woody material which has significantly increased ladder fuels and their connectivity. Additionally, the surface fuels, brush, hardwood and smaller sizes classes of redwood and Douglas-fir have created ladder fuels that are now connected to the co-dominant and dominant crown positions.

Other species represented in the units include tanoak (*Notholithocarpus densiflorus*), Pacific Madrone (*Arbutus menziesii*), and bay laurel (*Umbellularia californica*). Brush includes but is not limited to huckleberry (*Vaccinium ovatum*) blackberry (*Rubus spp.*), French broom (*Genista monspessulana*), and poison oak (*Toxicodendron pubescens*). Exact species composition of a given stand depends on elevation, aspect, soils, stand history, and proximity to watercourses.

Tree heath, timber quality and form are somewhat variable depending upon microsite and soil type but generally the plan area is stocked with trees of good form and vigor. Along the ridgetops, patches dominated by older Douglas-fir has experienced windthrow and uprooted many of the larger trees. Trees that remain standing may have healthy crowns, however some of the trees have been damaged by adjacent falling trees and exhibit damage to the crown or bole. A principal defect in the fir, especially in the older fir, is due to the presence of conk (*Phellinus pini*), a fungus that infects the heartwood of live trees. Conk is particularly evident on trees growing on the drier, more exposed, less productive ridge tops sites. Where conk fungus fruiting bodies are observed on at least 40% of the trees stem length, it is likely the entire tree is cull and contains no merchantable material. Brown root and butt rot or velvet-top fungus (*Phaelous schweinitzii*) has also been discovered in the stand. It is most often associated with mature Douglas-fir. Although this rot contributes to the defect in the stand, the amount of defect it causes is not significant.

SOD (Sudden Oak Death) has been discovered and recorded in areas adjacent to the plan. The plan contains requirements to prevent its spread.

ANALYSIS OF PROJECT ALTERNATIVES

As a Certified Regulatory Program under CEQA, CalFire's THP process is exempt from the requirement to prepare Environmental Impact Reports (EIRs); a THP is a "functional equivalent" document. However, like an EIR, a THP must include "a description of the proposed activity with alternatives to the activity, and mitigation measures to minimize any significant adverse effect on the environment of the activity." PRC § 21080.5(d)(3)(A); 14 CCR §§ 15250-15253.

Cal Fire has informed RPFs that they must submit an alternative analysis with proposed THPs and has given RPFs guidance in preparing that analysis, based on the CEQA guidelines that control the alternatives analysis in EIRs. 14 CCR § 15126.6.

The THP process functions to ensure a THP will be designed to avoid significant environmental effects or to mitigate such effects to the point where no significant effects will occur. The THP process is based on the Forest Practice Rules (promulgated by the Board of Forestry), which require a layer and level of analysis not utilized in the typical EIR process, and the requirements of CEQA. 14 Cal. Code Regs. 895 et seq. (The Board of Forestry's rulemaking program – pursuant to which the Forest Practice Rules are promulgated -- is itself a CEQA functional equivalent program, so that the rulemaking file serves as the functional equivalent of an EIR, and ensures that those Rules, if properly implemented, will not result in significant environmental impacts.) The Forest Practice Rules are programmatic prescriptions and best management practices designed to avoid or mitigate significant impacts of timber harvesting, road building and other timber operations that are applied by the Registered Professional Forester (RPF) in preparing a THP. In addition to requiring RPFs to apply these prescriptions in preparing THPs, the Forest Practice Rules require plan submitters to conduct a site-specific analysis of potentially significant individual and cumulative effects that may not have been avoided or mitigated to less-than-significant by application of the prescriptions contained in the Forest Practice Rules alone. The RPF must incorporate feasible measures in the THP to avoid such effects or mitigate to a less-than-significant level. In only the rarest of cases will CalFire adopt a statement of overriding considerations to approve a THP that has any impacts that have not been mitigated to a less-than-significant level.

In preparing this THP, the RPF has applied the highly prescriptive standards of the Forest Practice Rules for watersheds with salmonids. These include the Watercourse and Lake Protection Zone (WLPZ) Rules, special regulations designed to "maintain, protect, and contribute towards the restoration of" water quality and beneficial uses and aquatic and riparian habitat. 14 Cal. Code Regs. 916.2(a). In addition, the THP is subject to the Anadromous Salmonid Protection (ASP) Rules, an even more specialized subset of regulations applicable to logging in watersheds with listed anadromous salmonids to ensure that timber operations are "planned and conducted to protect, maintain, and contribute to restoration of Properly Functioning Salmonid Habitat and listed salmonid Species." 14 Cal. Code Regs. 916.9. In addition, the RPF has adopted additional measures in the plan as necessary to avoid or mitigate to a less-than-significant level potentially significant site-specific individual and cumulative effects identified during THP preparation. Accordingly, the RPF has submitted a THP that already serves CEQA's objective of avoiding environmental effects or reducing them to a less-than-significant level.

Although the THP has been designed through avoidance and mitigation to have less-than-significant environmental effects, the RPF has analyzed alternatives which could avoid or substantially lessen environmental effects that are typically identified in the preparation and review of THPs. The RPF has used the CEQA Guidelines as well as Cal Fire's guidance (dated June 10, 1997) for addressing alternatives in the THP process.

CEQA requires neither any fixed number of alternatives, nor inclusion of every conceivable alternative- 14 CCR 15126.6(a)(c). Further, CEQA does not require the consideration of alternatives whose effect cannot reasonably be ascertained and whose implementation is remote and speculative. Instead, the CEQA guidelines provide that a "reasonable range" of alternatives must be selected for discussion, applying a rule of reason. 14 CCR 15126.6(f). In accordance with CEQA and its guidelines, the alternatives selected for detailed examination in this THP are limited to ones that could avoid or substantially lessen significant effects of the project (if any) and that could feasibly attain most of the basic objectives of the project. Finally, under CEQA, the alternatives considered need only relate to the project as a whole, not to its various parts. This Analysis describes the rationale for selecting the alternatives to be discussed, including an explanation of why some alternatives were considered but not selected for detailed discussion in the THP.

I. PROJECT DESCRIPTION, PURPOSE AND NEED

A legal description of the THP area can be found in Section I "General Information" under Item 7 of this THP. In short, the plan proposes utilizing Selection and Fuelbreak/Defensible Space (Fuelbreak) silviculture methods. Tractor yarding is proposed as the logging method, with long-lining where appropriate. The existing seasonal roads within the plan area will be generally maintained or upgraded from previous conditions. The overall objectives of the project are to effectively manage the proposed THP area for fuel reduction and wildfire resiliency using sound forest practices, with due consideration for the protection of biological and watershed resources. The Timberland Productivity Act of 1982 restricts the use of lands zoned Timberland Production Zone (TPZ) exclusively to the growing and harvesting of timber and compatible uses; it also establishes a presumption that timber harvesting is expected to and will occur on such lands. All of the areas included in the THP are TPZ lands. Although timber production for revenue and income is not a main objective of the landowner, biomass removal, promotion of residual tree growth, fuel reduction, habitat restoration and other stand enhancements align with and are compatible with the use of timber production.

The operations on this project will ensure that watershed and biological resources will be protected, with the added emphasis of achieving a properly functioning condition over time. Specifically, the purposes and needs of the landowners include:

1) To provide good stewardship for the land and the numerous natural resources it provides.
2) To encourage and protect wildlife opportunities on the property.
3) To correct on-going sediment production areas and upgrade road systems to alleviate sediment concerns while improving access, restoring habitats and maintaining the investment in roads within the THP.
4) To protect, enhance, and promote wildfire resiliency and the growth of structurally complex mature redwood stands by selectively harvesting trees and ladder fuels which would increase the Quadradic Mean Diameter (QMD), improve stand vigor and spacing, and reduce the horizontal and vertical connectivity of fuels on strategic topographic locations on the property.
5) To increase the aesthetics of the forest around main road systems where access is available to the public.
6) To maintain and improve the road and fire trail system along with reducing surrounding fire hazards.

These landowners' goals (purposes and needs) are consistent with the historic use of the property. Further, implementation of this plan will meet significant environmental improvement objectives for the plan area, such as road improvements.

II. ALTERNATIVES CONSIDERED IN THE ANALYSIS

The RPF considered five alternatives for inclusion in the THP:

1. The project as proposed.
2. No project.
3. Alternative harvest approaches.
4. Alternative project location.
5. Alternative timing of project

II. ALTERNATIVES SELECTED FOR DETAILED EXAMINATION

(1) Project as Proposed:

The project as proposed consists of 129 acres, which includes 102 acres of Fuelbreak, 21 acres of Single Tree Selection, and 6 acres of No Harvest which meets the purposes, needs and objectives set forth above. Potentially significant impacts on the environment, including to wildlife habitat and cold-water fisheries, which could result from harvest operations such as these have been analyzed and avoided or mitigated to insignificance by the practices and measures included in the plan. Forest roads, skid roads, and landings are located to minimize the amount of sediment generation that could impact

watercourses. The harvest level in the Fuelbreak is "light" because the pre-harvest stand is occupied by numerous large and healthy redwood trees that are not intended for harvest and the silviculture will reflect a "thin from below" while treating ladder fuels and slash, and the single tree selection is very "light" as ground-based yarding is highly limited in these areas and operations will not occur directly adjacent to the Class I watercourse downslope of the Plan area. The plan's silvicultural prescriptions are designed to improve forest stocking, fire resiliency and health over time, while protecting and restoring salmonid habitat within the watercourse protection zones. The timber harvest will generate income for the landowners to offset land management costs and supply raw materials to local mills or supply large woody debris to stream restoration projects. Proposed road and crossing upgrades will improve the road system and reduce existing and potential sediment delivery to negligible amounts. Operations in accordance with the provisions of THP will not result in significant effects to environmental resources.

(2) No Project Alternative:

As explained above, this parcel is zoned as a TPZ, and is therefore dedicated to the sustainable production of forest products. The No Project Alternative is inconsistent with the zoning of the land. Under the Forest Practice Act (FPA), Maximum Sustained Production of High-Quality Timber Products (MSP) must be achieved on such lands, and such production cannot be achieved without harvest. Landowners are taxed at rates consistent with the expectation that they will achieve the MSP on their property, and to eliminate a harvest is to reduce revenues to Sonoma County generated by yield taxes. The No Project Alternative would reduce both the local employment base as logging and rehabilitation efforts will employ residents for extended periods of time. It would not decrease the need for forest products but could negatively impact the supply by reducing harvestable acres. This could potentially be offset by relying on timber harvest from areas outside of California, where significant environmental effects are not required to be comprehensively addressed and considered.

The No Project Alternative could avoid potential environmental impacts that might occur in connection with the proposed timber operations. However, this alternative would indefinitely delay or preclude the landowners from improving forest growth, health and fire resiliency in the THP area. It would neither improve stocking, nor achieve maximum sustained production of forest products, or improve tractor road drainage throughout the THP area. The proposed Plan includes treatments for SEPES at T1-T4, as well as the treatment of a Logging Road Watercourse crossing that is currently a barrier to some life stages of fish at MP 13. Overstocked stands are more susceptible to mortality due to competition for resources such as water and soil nutrients, and the additional stress of a drought will lead to increased stress induced mortality. Dense forest stands are also likely to experience increased fuel loading over time, and combined with drought induced mortality, fire risk in this landscape only stands to increase year over year. Leaving the stand without treatment would slow the recovery of the greater Gualala River watershed in reaching the ASP Rules' intended goal of a restored forest stand and structure that benefits anadromous salmonids.

In accordance with the CEQA guidelines, the existing conditions have been considered, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans. 14 CCR § 15126.6 (e) and the alternative prescription of No Project has not been chosen.

(3) Alternative Harvest Approaches:

This alternative would involve harvesting the THP area in a manner different from that proposed in the THP. Alternatives here could include different silvicultural prescriptions, different yarding methods, and/or reduction in the project footprint/size.

Even aged silvicultures such as shelterwood systems, and other similar silvicultures like clearcut regeneration were considered for this project but were ultimately determined to not meet the landowner's objectives for management in this THP nor for future management of the property after this THP.

Clearcutting is an alternative silviculture that was considered for this harvest plan. Clearcuts create opportunity for the replacement of an entire stand, allowing the regeneration and tending of a new cohort. Clearcuts have some similarities with

stand replacing natural disturbances and provide areas with high availability of resources such as sunlight and soil nutrients to support a new young stand. Due to the abundance of large redwood trees and the objectives of the landowner to implement unevenaged management, clearcutting was deemed to be a suboptimal silviculture in this stand.

Seed Tree and Shelterwood are alternative silvicultures that were considered for this harvest plan. The existing stand is comprised in large part of coast redwood. Redwood is not typically a reliable seed producer. Furthermore, the landowner (as described above) wishes to employ unevenaged silvicultural prescriptions in this portion of the ownership for a variety of reasons (wildlife, aesthetics, water quality, etc.) therefore this alternative was rejected because other silvicultural prescriptions are better suited to maintaining an unevenaged structure within this stand, keeping with the goals of the landowner.

Special Prescription silvicultures such as rehabilitation of understocked areas and variable retention are alternative silvicultures that were considered for this harvest plan but were ultimately determined to not meet the landowner's objectives for management in this THP nor for future management of the property after this THP.

Rehabilitation of understocked areas (rehab) is an alternative silviculture that was not seriously considered for this harvest plan. Rehab is used as a procedure for restoring and enhancing the productivity of commercial Timberlands which do not meet the stocking standards defined in the FPRs (912.7). This condition does not exist in the THP area, as the stands present are well-stocked. Due to the stand conditions and the level of stand stocking across the proposed project area, rehab was deemed to be a suboptimal silviculture for this THP.

Variable Retention retains between 10% to 40% or more of the original stand in both rolling and permanent pockets of untouched trees and critical refugia, composed of redwood, Douglas-fir, and other hardwood and conifer species specific to the site. This silviculture is often used in the north coast to restore hardwood dominated stands to conifer through post-harvest planting and reduction of hardwoods. This THP is already heavily dominated by conifer, therefore the need to utilize variable retention to help restore the stand is not in line with the current stand conditions nor the landowners long-term goals.

Intermediate Treatments such as commercial thinning and sanitation salvage were not seriously considered for this harvest plan. The commercial thinning prescription is inconsistent with the landowner's goal of developing and/or maintaining an unevenaged stand structure as well as removing some large unhealthy or hazardous Douglas-fir trees. Additionally, animal damage, disease, and insects and other damaging environmental effects have not been identified as seriously impacting the forest stand proposed for harvest under this THP, therefore sanitation salvage is not relevant at this time.

Unevenaged silvicultures such as Transition and Group Selection were considered, but ultimately were not chosen for a few specific reasons. Transition is used to develop an unevenaged stand from an evenaged stand. Many of the stands present in this THP already have three or more age classes, therefore Transition is not relevant. Furthermore, the pre-harvest stand stocking (basal area per acre) is too high to implement a Transition per the FPRs. Group Selection was not chosen due to the presence of large redwood trees all throughout the Plan area as well as the desire to maintain aesthetics throughout and to not create more gaps beyond what exists in the pre-harvest stand.

The RPF weighed all possible silvicultural treatments and ultimately selected those that would best achieve long-term productivity, low environmental impact, and adherence with regulations. The RPF also used the best professional evaluation of the health of the timber, the condition of the regeneration, the age of the timber, the stocking condition and basal area of the timber, the site class of the area, the erosion hazard rating of the area, site stability, aesthetic issues, wildlife habitat concerns, and cumulative impacts when selecting the silvicultural treatments of the THP. The RPF has concluded that after considering the current stand configuration the proposed silvicultural treatments are the ones best suited for the project area.

Other Yarding Methods:

Various yarding methods were considered by the RPF during preparation of the THP -- tractor/ground-based, cable (ground and aerial), and helicopter. Tractor yarding was chosen as the least damaging alternative for removing logs, with additional areas utilizing tractor long-lining from main haul roads where yarding has been limited (See Yarding Methods Map).

Tractor yarding was chosen as an optimal yarding option due to the relatively flat/gentle topography within the THP area. Slopes are typically less than 35% and there is an existing network of stable skid trails that can be reused that feed into the existing road system. Protection measures for ground-based yarding required by the FPRs, including the ASP Rules, have been incorporated into the plan and ensure no significant adverse or cumulative effect on watershed resources. Long-lining from the main haul roads is a feasible option that was considered, due to the layout of the plan area and its close proximity to main haul roads. However, most of the THP area is located on gentle slopes, typically less than 35%, and contains a stable existing skid trail system. In areas where equipment use is limited such as the Selection area near R1, long-lining from main haul roads will be utilized.

Skyline cable (aerial) yarding is a feasible option but not necessary because the THP area is located on gentle ridgetop slopes less than 35%. This type of yarding is utilized on steeper slopes, generally slopes greater than 60%, to minimize ground damage in areas that have moderate erosion hazard ratings and to reduce soil disturbance on slopes that drain into Class I and II watercourses. Cable yarding is not needed in the steeper selection area in the north, as operations are limited to trees that can be long-lined from the new road and the existing jeep trail. Although the selection area could also be cable yarded, this alternative would be economically infeasible due to the low volume to be removed, and it would not preclude the need for the road construction. Tractor operations are proposed as an exception on steep slopes in only one location, which is the existing jeep trail that has SEPES T1-T3 in which heavy equipment would already need to use the trail to correct the sites, thereby having a net benefit to the environment. In addition, cable corridors through the stand that has a high occupancy of large diameter conifers with large emergent crowns would pose a risk to increased stand damages and would potentially require more felling of trees to accommodate the corridor which would be more of an impact than the project as proposed and would be against the landowner objectives of maintaining large healthy conifers.

Helicopter yarding is a feasible option. However, it would greatly increase noise levels at the yarding and landing sites. Small businesses and residences, including Odiyan Buddhist Temple, exist in proximity to the THP area, and numerous noise complaints would be expected to be received due to this type of operation. Helicopters require unusually large landings of up to one and a half acres for safely delivering and loading logs, which would increase the area affected by soil disturbance and reduce the shade canopy in the vicinity of the landings. Other impacts of helicopter yarding include those to safety of wildlife and their habitats. While most timber harvesting operations present dangers to workers harvesting trees, as well as to workers yarding and loading logs, helicopter yarding presents a markedly greater risk to human health and safety because of the high potential for falling debris. In addition, many of the dangers of helicopter yarding to workers – logs knocking into other trees and their branches while being picked up and carried, logs falling altogether while being carried, and the "blowdown" from helicopters taking off that disturbs the forest canopy and sends debris flying – potentially can harm birds and their nests and displace birds. Additionally, the trees targeted for removal are smaller than those that would be left and would be lifted through the canopies of residual trees which could result in unwanted stand damage. Moreover, and in any event, at present there are only a few known helicopter firms working in California or within the greater Pacific Northwest that would be available to log, and it is very difficult to find helicopter logging contractors that are willing to work on smaller total volume projects such as this one. The largest helicopters available would be needed to lift the larger Douglas-fir logs, and these contract helicopters are more difficult to find. In addition, many helicopter firms have stopped logging in favor of other more lucrative lift projects and fire suppression work. As a result, logger availability is becoming more of an issue with this harvest method.

Size Reduction of the Harvest Area:

The THP boundary includes ridgetop areas and areas on either side of the main haul road where slopes are generally less than 30%, with some edges near the break in slope less than 40%, and the area surrounding the proposed road, R1. Reduction of the harvest area, while possible, would not meet the objectives of the landowners, and would not necessarily further reduce potential adverse impacts or cumulative effects. The project is topographically advantageous for creating fire resilient stands and fuel/fire breaks, and the road area, while steeper, has limited yarding and allows for the correction of 3 SEPES and the construction of R1. R1 is proposed based on the landowners' objective of creating connectivity of safe mainline roads within the property to conduct forest management activities as well as allow for emergency access for firefighting or for planned prescribed burns that would benefit from additional access for fire engines. MP 13 is also located in this steeper area, and is proposed for removal to create an improved low water ford with restored fish passage. Size reduction of upslope harvest areas could be made, however, the positive effects of the fuelbreak thinning and treatments will be lessened and may not be as helpful in protecting other stands on the property with large second and old growth redwoods. The ridgetop areas are determined mostly by the topography, the location of roads, slope, and the location of watercourses. With proper implementation of the ASP Rules, there should be no measurable project or cumulative impacts to watershed, biological, or soil resources, regardless of harvest area size. The THP area has been specifically chosen to avoid potentially hazardous unstable areas, slopes over 40%, extremely steep slopes above Class I or II watercourses, and areas lacking ladder fuels to be treated. THPs are valid for five (5) years, with an available two-year extension. There is no measured difference in effects to resources of producing, for example, three 100-acre plans or one 300-acre plan over this time frame. Potential cumulative impacts are likely higher on numerous smaller plans because of the need to reopen the appurtenant haul roads every year for the smaller plans, rather than opening them once for the larger plans. In the meantime, the landowners, the agency, and the interested public benefits from the economy of scale afforded by a single plan versus three separate plans.

(4) Alternative Project Location:

This alternative would involve carrying out the harvesting proposed in the THP at a different location on the landowners' property.

Sustainable management of timberlands and the effective reduction of commercial fuels require locating harvests to where it is most biologically and economically effective for stand development, feasible operations, and to achieve the landowner's goals. Stands are chosen for harvest based on a variety of parameters including merchantability, fuel loading, stocking levels, current growth rate, access, and topographic strategy. Harvest entries are planned ahead of time and areas such as the proposed THP area have been selected for harvest because they are more suitable for harvest to achieve fire resiliency and wildlife habitat enhancement goals to benefit the rest of the property. Effects of timber operations in this THP area are not greater than impacts that may occur should planned timber operations be carried out at some alternative location on the property. In fact, due to the very low impact nature of the harvest in terms of canopy removal, slope, skidding distances, and ground disturbance, selective harvests including the proposed Fuelbreak Silviculture are among some of the lightest impact operations that could occur on this property. The areas not included in this THP are the steep slopes within the drainage area below the main ridges that often have merchantable conifer mixed with many large hardwoods and steep rocky terrain that is not suitable for low impact tractor logging, and cable logging is not feasible due to the low volume that would be thinned out and harvested in those areas. Some additional gentle ridges occur to the east of the plan, however other forest management projects are planned for those areas such as prescribed burning treatments.

Even if the landowners were able to reduce fuels by harvesting elsewhere on the property, the primary objectives of this THP cannot be met under the Alternative Project Location alternative any more than under the No Project alternative. Commercial timber management needed to reduce ladder fuels, hazardous and unhealthy large Douglas-firs, and to increase growth of large redwoods in these stands can only occur with a THP. Selection of the Alternative Project Location alternative would essentially mean that these lands and these timber stands would be taken out of production, and the strategic location of the this THP would be lost. For that reason, the Alternative Project Location is inconsistent with the primary objectives of this landowner in owning restored productive redwood stands and is inconsistent with the project area land use zoning (Timberland Production Zone).

CEQA recognizes that, particularly with projects involving natural resources, alternative locations may not be feasible. 14 CCR § 15126.6 (f)(2)(A)(B). Further, the key question in analyzing alternative locations is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion. The proposed THP area includes suitable MAMU habitat with unoccupied status, however in order to continue to protect that habitat, the location of the THP in a portion of this area would benefit and protect the stands. The THP also is adjacent to an NSO Activity Center and Core Area, but shifting the plan away from this area would not achieve the goals of building fire resiliency near the habitat. Any other sensitive resources that are encountered (i.e. cultural/historical resources, unstable areas, etc.) are avoided and/or are provided protections pursuant to the FPRs and ASP Rules. The landowner is willing to follow lawful and responsible management of its timberlands, including the area proposed in this THP. Indeed, the landowner must manage those timberlands for Maximum Sustained Production (MSP) (14 CCR § 913.11), as required by the Forest Practice Act and Forest Practice Rules, subject to the highly prescriptive constraints imposed by the Forest Practice Rules, and the WLPZ and ASP Rules in particular. Moreover, by harvesting elsewhere potential impacts associated with this THP would not be avoided but rather would merely be shifted to another area of the property. Some potential impacts would be exacerbated. Harvesting at other locations would require many of the same measures, or more, to avoid or substantially lessen such impacts to less-than-significant levels.

(5) Alternative Timing of the Project:

This alternative would involve carrying out the project as proposed, except at a future time. Delaying the project for a number of years, say 5 to 10 years, was examined as a potential alternative. This alternative would attain many of the landowner's objectives by allowing the landowner to manage the parcel for eventual fuel reduction, even though postponing the operations would delay the Landowner/RPF from protecting the stands from damaging fire and delay maximizing sustained production, as required by the Forest Practice Act and Forest Practice Rules. Such postponement would also delay implementation of the management techniques that will lead to a reduction in hazardous fuel loading adjacent to many property owners.

Altering the timing of operations such that some other area of the property is entered and harvested now, so that this area can be entered at a later point in time, would not have the effect of mitigating or avoiding potential significant adverse or cumulative impacts associated with harvesting the proposed stands. Rather, it might result in lowering the area's mean annual growth and reduce the property's overall growth to achieving MSP, contrary to the mandate of the Forest Practice Act and the Forest Practice Rules. Additionally, potential significant adverse impacts of proposed timber operations will not be eliminated but merely deferred to a later point in time. Accordingly, this alternative was not considered further because it is inconsistent with the requirement to maximize sustained productivity of timber stands and to reduce fuels while complying with all applicable laws and regulations, and meeting the purposes, needs and objectives of the THP.

Effectively managing timberland and reducing commercial fuels requires harvesting timber and implementing treatments when it is most effective to do so. Stands are chosen for harvest based on a variety of parameters including age, stocking levels, fuel levels, topography and slope, past silviculture and current growth rate. Harvest entries are planned ahead of time and areas, such as the proposed THP area, have been selected for harvest because they are more suitable for harvest at this time, in comparison to other areas of the property. Adverse impacts that may occur on this THP area, in connection with the proposed timber operations, are not materially distinguishable from impacts that may occur, should the planned timber operations be carried out at some alternative location on the property.

IV. COMPARISON OF PROJECT ALTERNATIVES

The project as described in the THP is preferred over the project alternatives for the following reasons:

No Project:

This alternative does eliminate all possible adverse impacts associated with timber harvesting. However, it is not consistent with the purpose of the project and does not address the need for the project. Additionally, not conducting the project as proposed is likely to result in significant adverse impacts, both environmental and economic, over time. This would most likely promote heavy fuel loading and slowed growth rates, as well as non-maintenance or poor maintenance of many of the road systems as roads for forest management would be unnecessary, possibly leading to adverse effects to the environment. Specifically, the No-Project Alternative would lead to deferred maintenance of logging roads and trails as well as delayed treatment of overstocked stands in a warming climate.

Alternative Harvest Approaches:
Other harvest approaches as discussed are neither feasible nor necessary given the THP's robust impact avoidance and compliance with the FPRs. The RPF has exercised professional judgment and has demonstrated proper justification for the silvicultural prescriptions chosen. The already highly restrictive Fuelbreak prescription will be utilized to reduce potential wildfire hazards and promote the health and resiliency of the residual stand on ~78% of the plan area. The remaining area of the plan area will use Single Tree Selection (~17%) and No Harvest (~6%). Helicopter and cable yarding would be cost prohibitive, present human and wildlife safety concerns, and may not be possible, because of the type of harvest, gentle slopes, and limited availability and/or the willingness of such companies to take on the work. The THP review process allows the agencies charged with protecting fish and wildlife and water quality to make recommendations about the proposed silviculture, yarding method, and plan size. The THP review process also allows the public the opportunity to comment on those same aspects of the proposed plan. In addition to the stand impacts already noted, a lack of harvest and only small diameter fuel treatments would not fulfill the intent of the FPRs and ASP Rules by creating a diverse forest structure and promoting the growth of the largest trees, as it would have little impact. Nor, for that matter, would it meet the requirements to manage timberlands for MSP. No other alternative harvest approaches than those chosen were shown to be superior or otherwise warranted and, therefore, the discussed alternative harvest approaches were rejected.

Alternative Project Location:
Because this THP has a strategic topographic location along the main gentle ridgetops within the property, relocating the project to an alternative location would not avoid possible significant adverse environmental impacts. Not operating on the THP area would require operations to occur elsewhere on the property where greater impacts would occur because of the presence of unstable features, steep slopes, and adjacency to more watercourses. In addition, operating in an alternative location would be less suitable for achieving MSP across the landowner's property.

Alternative Timing:
Though this alternative is feasible, delaying implementation of the project to a later point in time would neither avoid nor mitigate potential significant adverse environmental impacts, nor would it benefit the stands. Instead, delaying harvesting would simply push any potential environmental impacts into the future and would delay fuel reduction efforts which could exponentially worsen the current situation. Accordingly, this alternative is rejected because it is inconsistent with the project objectives of managing these areas to restore fire resiliency and protect the stands and the resources should a wildfire occur in the area.

Finding
Because the THP as proposed follows the restrictive FPR, WLPZ and ASP Rules for timber harvesting, utilizes existing road and skid trail infrastructure, proposes improvements to skid trail drainage, proposes fuel reduction treatments and slash treatments, it will not result in significant adverse environmental impacts, it is selected as the preferred project alternative. For the reasons detailed above, selection of a different project alternative is not necessary to serve CEQA's core purpose of avoiding or substantially lessening significant environmental impacts to less-than-significant.

SECTION II ITEMS- EXPLANATION AND JUSTIFICATION

ITEM 3, 4, and 5: TIMBERLAND OWNER, TIMBER OWNER, AND PLAN SUBMITTER

As Senior Land Stewardship Manager of Save the Redwoods League, Anthony Castaños is authorized to sign as plan submitter. As Director of Stewardship and Restoration of Save the Redwoods League, Ben Blom is authorized to sign as plan submitter.

ITEM 14. SILVICULTURE

Fuel Break/Defensible Space Silviculture

Fuel Break Stand Description as per 14 CCR 913.4(c)

The units proposed for the Fuel Break/Defensible Space silviculture in the proposed plan are expected to meet the standards of 14 CCR 912.7 (b)(2) immediately upon completion of operations.

Introduction

The proposed fuelbreak within the Harold Richardson Redwood Reserve covers approximately 102 acres, or 79% of the plan area, and will utilize tractor yarding methods on slopes generally less than 30% within well stocked and densely forested uneven aged stands dominated by large second growth coast redwood (*Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* and their associated hardwood species. Ladder fuels are dense and composed of both young conifer and hardwood. The fuelbreak is located on the two broad ridgetops that spur from the ridge on Tin Barn Road surrounding a large drainage that is tributary to Haupt Creek. Late-seral stage characteristics and suitable (but unoccupied) marbled murrelet habitat occur on the property to the east of the plan area near the McApin Tree and are occupied by large second growth redwoods with scattered old growth trees that are non-contiguous. Small portions of the late-seral stand overlap the proposed THP area, however the silvicultural prescriptions and fuels reduction treatments proposed will only serve to enhance and protect these late-seral stands. Multiple grasslands bisect the fuelbreak areas which creates edges with dying Douglas-fir conifer mixed with hardwoods and brush. Several small areas within the fuelbreak units have been heavily impacted by storm damage which resulted in increases of brush, hardwood regeneration, and downed woody material, all of which have greatly increased ladder fuels and their connectivity. Resources nearby the proposed fuelbreak that would benefit from added protections include PG&E powerlines, Tin Barn Road (a public county-maintained road), neighboring properties like Odiyan Buddhist retreat center, working ranches and industrial timberlands, Class I watercourses with anadromy, large diameter redwood stands, large grasslands, suitable marbled murrelet habitat, suitable northern spotted owl habitat, traditional lands of the Kashia Band of Pomo Indians, and the community of the Stewarts Point Rancheria. A letter was sent by the RPF to the LNU CAL FIRE Chief Matt Ryan; CAL FIRE responded and a site visit was conducted with CAL FIRE Forester Charlie Martin on 4/15/2026 and CAL FIRE's written concurrence regarding this prescription can be found in Section V of this THP.

Location and Topographic Setting

The fuelbreak units are positioned on two north/south trending ridges that form the near contiguous ring surrounding a large drainage that is tributary to an unnamed Class I watercourse that is tributary to Haupt Creek. Tin Barn Road serves as the southern boundary for the plan. The units range in elevation from approximately 1220 ft in the south along Tin Barn Road to approximately 800 ft in the north where the steeper Selection unit and R1 begins. The boundaries of the plan were designed to include slopes that are gentle and generally ≤30% with some instances of higher slope percentages ranging from 35-40% along the breaks of the ridges. Generally, and depending on slope, the boundaries of the fuelbreak do not exceed 350' from the mainline roads to reduce skidding distances and ground disturbance.

Pre-Harvest Stand and Fuel Conditions Description

The fuelbreak units have variable occupancy of redwood and Douglas-fir and support an unevenaged stand structure throughout, with an average conifer basal area of 222 ft^2 per acre and a hardwood basal area of 60 ft^2 per acre, and total basal areas ranging from 100 to 520 ft^2 per acre. The overstory canopy consists of many large dominant and codominant mature second-growth redwoods with some DBHs exceeding 60", as well as scattered old growth, however most old growth trees on the property are out of the plan wither near the McApin Tree along the eastern ridge or within the NSO core along the western ridge. Large DBH Douglas-fir exceeding 40" also make up the overstory, but to a lesser extent than the large

redwoods, and often occur in patches and adjacent to grasslands. Large tanoak (*Notholithocarpus densiflorus*), Pacific Madrone (*Arbutus menziesii*), bay laurel (*Umbellularia californica*), and live oak (*Quercus spp.)* trees exist as scattered codominants within the majority conifer stands. The intermediate and suppressed canopy is occupied by Douglas-fir and redwood regeneration ranging from 1-24" DBH, as well as hardwoods such as tanoak, bay laurel, madrone, and live oak. The understory is comprised of brush ranging from sparse to very dense depending on location, and includes species such as huckleberry (*Vaccinium ovatum*) blackberry (*Rubus spp.*), manzanita, (*Arctostaphylos spp.),* French broom (*Genista monspessulana*), and poison oak (*Toxicodendron pubescens*), as well as saplings of all of the above mentioned tree species. The ground surface has a moderate amount of woody debris ranging from large buckskins and storm fallen firs and hardwoods to small branches and litter, and in a few instances, logging slash from previous entries.

In a fuel loading sense, the ground, surface, ladder, and crown fuels all present an overstocked condition that is conducive to high intensity wildfires. The volume of large diameter redwoods, however, contributes some fire resiliency, but are at risk for stand replacing crown fires with the amount of fuels present. Ground fuels in most areas are considered low, but are high within storm damaged areas. Live fuels in the understory are growing up into the dense intermediate and suppressed canopy layers, while those smaller trees are adjacent to and between the many large conifers and hardwoods in the stand, creating ladder fuels that are now connected to the codominant and dominant crown positions. Several Douglas-fir pockets have been heavily impacted by storm damage that has resulted in broken tops, wind snap, and uprooting, all of which have significantly contributed to increased fuel loading.

Nearby Resources

The proposed plan area contains a variety of natural as well as infrastructural resources. In addition to the unique and valuable old-growth and mature second growth trees and stands that support a variety of wildlife like suitable MAMU and NSO habitat on the property, powerlines, public roads, seasonal roads, and cultural resources are also present within and adjacent to the fuelbreak. PG&E powerlines are adjacent to Tin Barn Road and vegetation has been previously cleared under the lines where they cross the units. Additional trees have been recently assessed by PG&E contractors as well as the RPF for removal regarding the lines and their removal operations will coordinate with timber operations. The plan area is surrounded by privately owned industrial and nonindustrial timberlands as well as ranch, recreational, and agricultural lands. The southern boundary is adjacent to additional ranch and timberland owned by the Richardson family, and is less than 1 mile from lands managed by the Odiyan Buddhist retreat center.

Landowner Objectives and Justification

The creation of a fire resilient property throughout the Reserve, the protection of all its' resources, the promotion of late-seral stage qualities, and the promotion and maintenance of healthy wildlife habitat are the goals of the current landowner. The fuelbreak is an ideal prescription to protect the unique and valuable old-growth resources within the Reserve and the surrounding area while also accelerating late-seral stage forest conditions. Although the silviculture allows for a minimum basal area retention of 50 ft^2 per acre, the amount of large redwoods, hardwoods, and healthy large firs will result in a generally higher basal area retention. The resources at risk would benefit through a significant reduction in the likelihood of damaging wildfire by reducing fuels. Some fuels are commercial size, however large-scale commercial harvesting and economic return are not objectives of the landowner. The proposed silviculture will retain only the healthiest and most vigorous trees (including all healthy dominant and codominant redwoods, many of the large DBH Douglas-firs 44"+, and large DBH hardwoods 32"+), significantly reduce the non-commercial TPA (trees per acre), and treat existing and produced slash via mastication. The application of these treatments is expected to produce an effective Shaded Fuel Break, place the stands on a trajectory towards late seral stage conditions, and improve overall forest health and resiliency.

With the objectives of providing protection to the resources within the Reserve as well as accelerating the potential for late-seral stage conditions, the application of a fuelbreak is a logical silvicultural prescription. The removal of surface fuels, merchantable ladder fuels, non-merchantable trees, non-commercial species, and appropriate larger diameter trees (mainly unhealthy Douglas-fir) through the initial harvest and follow-up treatments would significantly reduce the risk of catastrophic wildfire, promote increased forest health and forest resiliency, and promote/maintain healthy wildlife habitat. The result of this silvicultural prescription would be an expansive ridgetop shaded fuelbreak that provides protection for the surrounding area. The overstory is expected to respond well to the removal of the suppressed, intermediate, and at times

codominant components throughout the stand and would theoretically increase in growth which would improve fire resistance. Future management of the stands could be completed through prescribed burning, a preferred management tool by the landowner, which would react well in a mechanically treated area versus a stand with no pre-fire treatments.

Proposed Treatments & Timing

The prescription for the fuelbreak units is to thin the stand from below, while retaining the most healthy and vigorous dominant and codominant trees at a stocking level of at least 50 square feet per acre. While 50 square feet is the minimum set forth in 14 CCR 912.7 (b)(2) it is anticipated that a higher stocking level will result through the retention of all large diameter redwoods over 30" DBH, many of the large Douglas-firs generally over 30" DBH, and the large diameter hardwoods that are not posing a risk to fuel loading. All harvest trees shall be marked by the RPF or supervised designee prior to operations. Non-mechanized small diameter fuels will also be thinned and all slash treatment shall be conducted prior to the completion of operations.

The objective of the prescription is to reduce fuel continuity, increase quadratic mean diameter and retain all large and healthy diameter redwoods in the residual stands. The overall fuelbreak area shall be thinned to achieve a general spacing of 17' x 17' or 150 TPA, while maintaining at least 50% canopy closure and the dominant and codominant trees. Certain open areas that have storm damaged trees and lower preharvest canopy where the stand would benefit from the removal of such trees may result in less than 50% canopy post-harvest and is expected in those areas. In all other areas of the silviculture where the pre-harvest stand is densely stocked with large dominant and codominant trees are expected to have at least 50% canopy. Areas dominated by smaller diameter trees shall be thinned to achieve the above stated basal area, spacing, and canopy, while retaining the most vigorous and healthy young trees that have the potential to become dominant or codominant. The spacing for old/second-growth should ideally not be uniform but rather clumped or random, which is what the stands current spatial composition currently exhibits. This spatial pattern is ideal for the restoration of late seral stage stand conditions (Dagley, 2009). Crowns of residual large trees may still be connected due to the current spacing pattern, however the management of all other fuel categories will still have a net positive effect on the stand and resources.

In addition to merchantable harvesting to reduce fuels, the THP also proposes that non-merchantable fuels (trees less than 10" DBH or small trees not suitable for lumber) are also treated to conclude the live fuel reduction. These fuels shall be reduced completely where the postharvest stand has 50% canopy or more. Where the canopy is less than 50% and the stand is dominated by small or non-merchantable trees the above spacing and TPA shall be applied.

The THP also proposes that all logging slash is treated in the fuelbreak silviculture to create low surface fuel loading in the post-harvest stand. There are requirements as per 14 CCR 917.2 for slash treatment within 100' of Tin Barn Road, however the entire stand shall be treated as well. All treatment options are proposed to provide the landowner and LTO with flexibility depending on access, equipment availability, slopes, and preferred aesthetics. Thes include Lopping for Fire Hazard Reduction, Piling and Burning, Chipping, Removal, Broadcast Burning, or Mastication. The WLPZ and other areas designated as EEZs on the Yarding Methods Map shall not conduct treatments that require equipment, and there shall be no burning of piles within the WLPZ. Large woody debris from storm damage may need to be reduced to achieve the goals of the prescription, however it is intended that scattered LWD such as all large buckskins (redwood) shall be retained in the post-harvest stand.

The THP is planned for operations upon approval and required wildlife surveys are completed. Portions of the fuelbreak may be harvested in 2026, however fuelbreak operations will continue into 2027 and potentially beyond throughout the life of the plan. Within the fuelbreak unit, initial operations will include felling marked trees, skidding, and long-lining trees or logs, and treatment of some of the logging slash. At the time of felling, the LTO or landowner may opt to also fall some of the intermediate or suppressed hardwoods at this time to skid the larger material out of the unit. Prior to the Winter Period, trails and landings will be treated as per Item 18 and Item 23; trails will likely be reopened after commercial harvest where mastication will be used to treat small trees and slash. Additional methods of non-merchantable fuel reduction to achieve the above prescription shall occur in all remaining areas within 1 year of operations. After all thinning operations are completed, final slash treatments shall occur to all fuelbreak areas prior to the completion of operations.

The estimated timber data below was obtained using inventory plots with a variable radius and a 20 BAF prism.

Silviculture: Shaded Fuel Break
Acres: **102**
Estimate of Pre- and Post-Harvest Basal Area/ Acre

Diameter Class	Redwood (pre)	Redwood (post)	Douglas-fir (pre)	Douglas-fir (post)	Hardwoods (pre)	Hardwoods (post)
(dbh, in.)	~~~

ITEM 21(b): GROUND BASED EQUIPTMENT ON SLOPES OVER 65%

Standard Rule: 14 CCR 914.2 (f) Tractor operations shall be subject to the following limitations:

(1) Heavy equipment shall be prohibited where any of the following conditions are present:
- (i) Slopes steeper than 65%
- (ii) Slopes steeper than 50% where the erosion hazard rating is high or extreme.
- (iii) Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake.

Explanation: There is one existing skid trail within the THP in which tractor operations are proposed where average slopes are over 65%. The EHR in this area is High. The skid trail is identified as "Exception Skid Trail" on the "Yarding Methods" map at the end of Section II. The skid trail proposed for use is flagged with yellow "skid trail" flagging, is existing, and is in stable condition. It has multiple Class III watercourse crossings where some are diverting down the trail and should be corrected.

Justification: Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to this portion of the THP that would otherwise be inaccessible, including the treatment of 3 SEPES (T1-T3). Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of road improvements and reduction of sediment delivery. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise. The trail shall be waterbarred to High EHR spacing standards.

ITEM 21(c): GROUND BASED EQUIPTMENT ON SLOPES BETWEEN 50-65% with HIGH or EXTREME EHR

Standard Rule: 14 CCR 914.2 (f) Tractor operations shall be subject to the following limitations:

(2) Heavy equipment shall be prohibited where any of the following conditions are present:
- (iv) Slopes steeper than 65%
- (v) Slopes steeper than 50% where the erosion hazard rating is high or extreme.
- (vi) Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake.

Explanation**:** There is one existing skid trail within the THP in which tractor operations are proposed where average slopes are over 65% (therefore over 50%) and the EHR in this area is High. The skid trail is identified as "Exception Skid Trail" on the "Yarding Methods" map at the end of Section II. The skid trail proposed for use is flagged with yellow "skid trail" flagging, is existing, and is in stable condition. It has multiple Class III watercourse crossings where some are diverting down the trail and should be corrected (SEPES T1-T3).

Justification: Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to this portion of the THP that would otherwise be inaccessible, including the treatment of 3 SEPES (T1-T3). Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of road improvements and reduction of sediment delivery. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise. The trail shall be waterbarred to High EHR spacing standards.

ITEM 24 (d) ROAD AND LANDING CONSTRUCTION- UNSTABLE AREAS

Standard Rule: 14 CCR 923.1 (d) Logging Roads and Landings shall be planned and located to avoid unstable areas and connected headwall swales. The Director may approve an exception if those areas are unavoidable and site specific measures

to minimize slope instability due to Logging Road or Landing construction or reconstruction are described and justified in the plan.

Explanation: According to Steinbuck (2026), R1, a 1,500' proposed seasonal road, is located across multiple dormant deep-seated landslides (G1, G2 and G3) and has multiple associated shallow-seated landslides throughout the road grade (MP8, MP 9, and MP 11). Please see the Geologic Report located in Section II and V. The road is needed to connect the existing eastern road system of the property to the existing western road system where a steep jeep trail currently makes the connection; In addition, the landowner's objectives include improving access to this steeper more remote portion of the property for land management practices including harvesting, biomass removal and thinning, site preparation, prescribed burning, wildfire control, and other restoration and management activities. The existing jeep trail segment traverses the southern flank of G1 with grades over 20%, has multiple Class III watercourse crossings that are diverted due to lack of proper crossing structures causing gully erosion (T1-T3), and is unsafe for vehicular traffic including off-road vehicles and fire engines. The location of R1 was planned and given great consideration to avoid unstable areas, steep slopes, watercourses and WLPZ areas, however, due to the limitations of property lines and topography, the location of R1 is unavoidable and utilizes the least impactful path to connect the road systems. The gentlest topography that allows for safe grades and switchbacks is located in this area. Within the entire topographically preferrable and feasible area, multiple routes were considered to avoid active unstable areas. All other alternatives explored resulted in too steep of grades, infeasible switchback turns, and the crossing of unstable areas in more impactful locations that would require substantial excavation. The location of R1 was designed in consultation with a Certified Engineering Geologist to ensure that the impacts of the location of the road were minimized or eliminated, and that the treatments at each site provided specific measures to reduce impacts beyond the standard practices for road construction. The CEG and RPF also explored more alternatives during their site evaluations and were not able to avoid the unstable areas MP 8, MP 9, and MP 11. Map points were added to the road as the CEG made specific recommendations to reduce the risk of slope instability and sediment delivery.

Justification: Without the proposed road passing through G1 and other associated unstable areas, there is no way to complete the connection of the eastern existing road network to the western existing road network. The road meets the objectives of the landowner by providing access for emergency vehicles, land management personnel, and log trucks in a limited capacity. The road was planned to avoid unstable areas, however with the limited options for road placement due to steepness of slopes, a lack of gentle ground for switchbacks, and property lines, the best placement for the road was in its proposed location within G1 and associated slides. Portions of the road were designed to avoid or minimize slope instability at the shallow-seated slides; At MP 8, the road is designed to cross above the head of the slide utilizing full-bench construction to unload that portion of the slide. At MP 9, the road was kept as high as possible and will utilize full-bench construction. At MP 11, the road utilizes an existing WLPZ skid trail that has a fillslope failure and narrowed road due to a lack of Class III crossing structure in which rock slope protection (RSP) will be constructed; widening above this failure is not feasible as there is a large 50"+ diameter redwood located at the cutslope and inboard edge of the road, and protection of this tree is aligned with the landowner's objectives of large redwood tree retention on the property.

The road was designed to be 12' wide to reduce the amount of cutting and filling needed through G1. Log trucks likely will not be able to make the downslope switchback turn due to the limited width of the road, however equipment, fire engines, and other vehicular traffic will make the turn. Log trucks may approach the switchback from either direction and can haul out the same route they came in. The road was also designed to have gentle and favorable grades. Due to the suspected instability on the entire hillslope, a Professional Geologist/CEG was hired to assess the stability at the site and to provide recommendations. Those recommendations have been incorporated into the THP in Section II.

ITEM 24 (f) ROAD AND LANDING CONSTRUCTION- WLPZ

Standard Rule: 14 CCR 923.1 (b) No Logging Roads or Landings shall be planned for construction (i) within 150 feet of the Class I Watercourse transition line, (ii) within 100 feet of the Class II Watercourse Transition Line on slopes greater than 30%, (iii) within Class I, II, III, or IV Watercourses or lakes, (iv) within a WLPZ, or (v) in marshes, or Wet Areas, Except at the following locations:

1. Existing logging road watercourse crossings.
2. Logging road watercourse crossings to be constructed or reconstructed that are approved as part of the fish and game code process (f&gc § 1600 et seq.).
3. Logging road watercourse crossings of class III watercourses that are dry at the time of use.

Explanation: R1, a proposed seasonal road, is partially located within 30-100' of a Class I tributary to Haupt Creek, within the WLPZ. This portion of the road is approximately 330 feet long and utilizes an existing and intact skid trail for the entire length it is located within the WLPZ that parallels the Class I. The trail is approximately 10 feet wide, and widening into the cutslope by 2 feet with spoils feathered out along the inboard edge of the road surface to create an outsloped road is proposed to gain the total 12' road width and is the extent of "road construction" within the WLPZ. This portion of the road is needed to connect the upper portion of R1 outside of the WLPZ to the existing road network on the western portion of the THP that begins at MP 13/L2 within the WLPZ. R1 is proposed and needed due to a limiting steep grade of the existing jeep trail that is unsafe for use and has 3 SEPES (T1-T3) that require corrective action due to lack of functional crossings and the steep grade.

Justification: Without the proposed road passing through the WLPZ, there is no way to complete the connection of the upper portion of R1 to the existing road network on the western portion of the THP. The WLPZ has been marked prior to the PHI, and numerous large redwood trees (13+) were retained to meet the large tree retention requirements and objectives of the landowner. It is the RPF's opinion that the canopy reduction created by the road will not have a significant effect on the overall canopy near the road since there are many large redwoods that would provide canopy, and because the trail itself already lacks canopy, therefore little to no canopy would be reduced. Disturbance to the ground will also not have a significant effect on sedimentation since there is no additional fill needed at the site, and all surfaces of the WLPZ road will be treated as per Item 18.
The following protection measures are equal to the standard rule and provide for the protection of the beneficial uses of water:

- Road construction or widening may not occur during the winter period (October 15 to May 1st) within the WLPZ.
- Trees to be removed for the road are already marked prior to the PHI; should additional trees be needed for removal for safe operations, the RPF shall be notified and shall approve and mark the removal based on safety concerns while upholding the protection measures required by 14 CCR 916.9. Stumps in the area should be considered for removal to create more space and safe operating areas prior to additional trees being cut.
- Prior to completion of operations and prior to the winter period, the entire surface of R1 located in the WLPZ and any other exposed soil within the WLPZ shall be treated as per **Item 18, Soil Stabilization Measures** (i.e rock, straw mulch, or slash packing).
- Construction shall be limited to dry rainless periods when soils are not saturated. The definition of saturated soils is as set forth in 14 CCR 895.1 and listed in Item #18.

ITEM 24 (g) ROAD AND LANDING CONSTRUCTION- SLOPES OVER 65% AND SLOPES OVER 50% WITHIN 100' OF WLPZ

Standard Rule: 14 CCR 923.2 (a)(7) Avoid crossing, or locations on, 100 feet or more of lineal distance over any slopes greater than 65 percent or within 100 feet of the boundary of a WLPZ on slopes greater than 50 percent that drain toward the zoned Watercourse or lake. Where Logging Road or Landing construction or reconstruction is proposed in these areas, specific measures to minimize movement of soil and the discharge of concentrated surface runoff shall be incorporated in the plan. The Director may waive inclusion of such measures where the RPF can show that slope depressions, drainage ways, and other natural retention and detention features are sufficient to control overland transport of eroded material.

14 CCR 923.4(n)

Explanation: R1, a proposed seasonal road, is located on slopes that exceed 65% in two locations. This portion of the road is needed to connect the eastern road where R1 begins to the existing skid trail in the WLPZ that connects to the western road system. Careful planning was conducted for R1 to avoid as many steep slope areas as possible, and the least impactful route is the one as proposed which has these two segments.

Justification: Without the proposed road passing through the steep ground, there is no way to meet the landowner's objectives and complete the connection of the east road network to the west road network as there would be even steeper ground that would require longer road lengths to connect the roads. Where the road construction is located on slopes over 65%, full bench construction shall be used, the road shall be 12' wide and outsloped, and shall be drained by frequent waterbreaks according to the EHR and grade. Where R1 is located within 100' of a WLPZ on slopes over 50%, the road utilizes an existing skid trail and is proposed for minor widening (2') with spoils feathered down the inboard edge of the road to create an outsloped road (no side-casting); Additionally at MP 10 a large fill is placed on 45% slopes, 170' upslope of a Class I in which the fillslope is to be compacted and stabilized as per the Geologic Report (Steinbuck, 2026), Section II & V, and Section II, Item 18. It is expected that with these measures and the requirements of the rules, that the proposed exception is equal to the standard rule and provide for the protection of the beneficial uses of water by reducing the cuts needed, eliminating fills on steep slopes, compacting fills where upslope of a Class I, and adequately draining the road in these vulnerable areas that could mobilize and deliver sediment.

ITEM 25(b): ASP WATERSHEDS

This THP proposes approximately 1,500 feet of seasonal road construction. Thes proposed logging roads and associated landings are located in an ASP watershed. Pursuant to the Forest Practice Rules, please see the following table for ASP related information.

ADDRESS THE FOLLOWING AS IT APPLIES TO ASP WATERSHEDS OR IMMEDIATELY UPSTREAM AND CONTIGUOUS TO, ANY WATERSHED WITH LISTED ANADROMOUS SALMONIDS
• When logging road(s) or landing(s) construction or reconstruction is proposed identify:
1) How the proposed operations will fit into the systematic layout pattern. Per 14 CCR 923.1 [943.1. 963.1](g) Proposed Seasonal Road construction will expand the existing road facilities in an area that can connect two road systems while fixing and avoiding the current jeep trail route that is steep and has watercourse crossings. This improved access to areas that will allow for management reduces the need to operate ground-based equipment on steep slopes and maintain difficult watercourse crossings.
2) What, if any, offsetting mitigation measures (including but not limited to, abandonment of logging road(s) and landing(s) are needed to minimize potential adverse impacts to watersheds from the road system. Per 14 CCR 923.1 [943.1. 963.1](g) The proposed seasonal road R1 is located partially within the WLPZ of a Class I tributary to Haupt Creek. This portion of the road utilizes an existing skid trail that requires minor widening (2') to create a 12' wide road, with spoils feathered down the road (no-side-casting). R1 is located 20-100 feet upslope and parallel to the Class I; this slope is occupied with dense mature redwood and grass and brush species. Slopes near the road are 30-65%. Please see Section III, Plan Addendum to Item 24(f) for an explanation and justification for this proposed practice, and the Geologic Report (Steinbuck, 2026) in Section II & V. Where the road construction is located on slopes over 65% full bench construction shall be used, the road shall be 12' wide and outsloped, and shall be drained by frequent waterbreaks according to the EHR and grade. Where R1 is located within 100' of a WLPZ on slopes over 50%, the road utilizes an existing skid trail and is proposed for minor widening with spoils feathered down the road (no side-casting), or at MP 10 a large fill is placed on 45% slopes, 170' upslope of a Class I in which the fillslope is to be compacted and stabilized as per the Geologic Report (Steinbuck, 2026), Section II & V.

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

3) On slopes, greater than 50% with access to a watercourse or lake.
Per 14 CCR 923.4 [943.4, 963.4](s)(1)

The proposed seasonal road R1 is located partially within the WLPZ of a Class I tributary to Haupt Creek. This portion of the road utilizes an existing skid trail that requires minor widening (2') to create a 12' wide road, with spoils feathered down the road (no-side-casting). R1 is located 20-100 feet upslope and parallel to the Class I; this slope is occupied with dense mature redwood and grass and brush species. Slopes near the road are 30-65%. Please see Section III, Plan Addendum to Item 24(f) for an explanation and justification for this proposed practice, and the Geologic Report (Steinbuck, 2026) in Section II & V. Where the road construction is located on slopes over 65% full bench construction shall be used, the road shall be 12' wide and outsloped, and shall be drained by frequent waterbreaks according to the EHR and grade. Where R1 is located within 100' of a WLPZ on slopes over 50%, the road utilizes an existing skid trail and is proposed for minor widening with spoils feathered down the road (no side-casting), or at MP 10 a large fill is placed on 45% slopes, 170' upslope of a Class I in which the fillslope is to be compacted and stabilized as per the Geologic Report (Steinbuck, 2026), Section II & V.

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

4) With a grade of 15% or greater which extends 500 feet or more.
Per 14 CCR 923.5 [943.5, 963.5](q)(2)

Erosion control measures shall follow Section II Item 18, and shall include the placement of slash and straw on the fillslope constructed at MP 10.

ITEM 26(E) NEW CDFW AGREEMENT:

There are proposed THP related instream activities that require a CDFW Agreement for operations to be conducted on this plan. The specific requirements of the approved agreement, specifically the Project Description and Conditions or PDC, shall be amended to the plan to govern operations at these locations prior to operations. This THP is being used as the CEQA review mechanism for the CDFW 1600 series agreement. Please see the form at the end of Section III.

ITEM 26(R) CLASS 1 WATERCOURSE CROSSINGS

(Pursuant to 14CCR 916.9(f)(1)(B) and (C):

The following permanent class I watercourse crossings (WC) are ownership wide, and only those associated with this THP are listed. These crossings will be used within the THP. The locations of the crossing is shown on the Roads and Features Map located in Section II of this THP. Unless otherwise noted in the description all listed crossings are in good condition, with no work required, and the use or presence of them will not hinder fish passage, during any life stage, either upstream or downstream.

THP Map Point #13: Tributary to Haupt Creek
Type: Plastic lined corrugated culvert
Material: metal and plastic lining
Size: 50 feet long / 72 inches diameter
General Usage: log hauling and equipment access to and from plan area
Description: Undersized for Q_{100} and may not pass all life stages of fish with current length and size under high flows. Plastic liner is shredding on culvert invert. Proposed for removal to restore fish passage with installation of improved rocked low water ford crossing.

ITEM 27(a) & (f): WLPZ FACILITIES- Roads, Landings, and Skid Trails.

Standard Rule: 14 CCR 936.3 Prohibits the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except at prepared tractor road crossings, crossings of Class III watercourses, which are dry at time of timber operations, at existing road crossings and at new tractor and road crossings approved by Department of Fish and Game. In lieu of that rule, one landing (L2) and one segment of skid trail are located within the WLPZ of a Class I tributary to Haupt Creek.

1. The proposed practices differ from the standard practice as portions of existing roads, landings and skid trails that are within the WLPZ of watercourses are proposed for use.
2. WLPZ skid trail use is proposed and is displayed on the Roads and Features Map and Yarding Methods Map at the end of Section II of this THP. This skid trail has been evaluated, flagged in the field, and mapped.
3. 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 per 14 CCR 936.1(a) is described below.

Explanation and Justification:

Abiding by the standard rule is not feasible because the *WLPZ landing*: (1) allow for access into areas and to sites that would be inaccessible if operations as proposed were not allowed, (2) allows for less ground disturbances as the timber operators will utilize the existing facility (3) cable yarding is not feasible in these locations due to poor deflection and blind leads. The protection provided in the THP is equal to the standard rule and provides for the protection of the beneficial uses of water.

L2: One existing and rocked landing is proposed for use within the WLPZ. L2 is located 30' from the Class I channel, has gentle slopes, and has been previously used for landing. A ditch that drains the diverted flows from an existing steep WLPZ skid trail is located along the backside of L2, and outlets at the Class I channel. The diverted flows are to be corrected at T3, and a sediment trap is proposed at the beginning of the ditch in the case that a short portion of the trail still needs to drain the ditch.

The following measures shall be applied to all "in-lieu" WLPZ landings described above. These measures will provide protection equal to the standard rule to the beneficial uses of water:

- Landings shall not exceed ¼ acre in size.
- Log decking and heavy equipment use or staging shall be confined to the landing area and shall be a minimum of 50' from the Class I channel.
- After T3 diversion is corrected, the trail leading to L2 will be waterbarred and slash packed; if the kickout and ditch near L2 are still needed to drain the short portion of skid trail, sediment traps using straw bales shall be installed in the ditch prior to the landing.
- Any exposed soil within the WLPZ shall be rocked, mulched, or slash packed as per **Item #18 Soil Stabilization Measures.**
- Operations on this landing shall be limited to dry rainless periods when soils are not saturated. The definition of saturated soils is as set forth in 14 CCR 895.1 and listed in Item #18.
- Operations on this landing shall not occur between November 15th – April 1st.

The existing WLPZ Skid Trail is located upslope of L2 for a short distance before leaving the WLPZ. This portion of the skid trail is steep (also an Exception Skid Trail) and in poor condition due to diverted flow at T3 causing gully erosion of the trail prism. The trail fillslopes are intact. Once operations are complete, exposed soil within the WLPZ shall be stabilized as per Item 18 Soil Stabilization Measures. No operations will occur on any WLPZ Skid Trail during thr winter period. Abiding by the standard rule is not feasible because the WLPZ tractor roads: 1) allow for access into areas that would be inaccessible if operations as proposed were not allowed, 2) allows for less ground disturbance as the timber operators will utilize the existing infrastructure (tractor road) and 3) cable yarding is not feasible at this location due to poor deflection, relatively small area, and blind leads. The protection provided in the THP is as follows and is equal to the standard rule and provides for the protection of the beneficial uses of water. The Yarding Methods Map, located at the end of Section II, depicts the location of the WLPZ Skid Trail.

- Operations on this landing shall be limited to dry rainless periods when soils are not saturated. The definition of saturated soils is as set forth in 14 CCR 895.1 and listed in Item #18.

- Operations on this landing shall not occur between November 15th – April 1st.
- To minimize soil disturbance within the WLPZ that could produce sediment runoff, once operations are completed and prior to the winter period, the trails shall be waterbarred per EHR spacing requirements. Waterbars shall be directed into vegetation when possible.
- To minimize soil disturbance within the WLPZ/ELZ that could produce sediment, the portion of the Skid Trail located within the WLPZ/ELZ shall be treated prior to the completion of operations as per **Item #18.**

Notification Information List Pursuant to Fish and Wildlife Code Section 1611

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

(THP) #: 1-26-00099-SON

(THP) Name: HRRR THP

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

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

1. **Basic data, including all the following:**
   a. **The name, address, and telephone number of the**
   Applicant: Save the Redwoods League
   220 Montgomery Street, Suite 350
   San Francisco, CA 94104
   (888) 836-0005
   Operator: Unknown, to be amended to the plan.
   Contractor: Unknown, to be amended to the plan
   Contact Person: Todd McMahon, RPF (NCRM, Inc)
   2501 North State Street
   Ukiah, CA 95482

   Property Owner(s): Save the Redwoods League
   220 Montgomery Street, Suite 350
   San Francisco, CA 94104
   (888) 836-0005

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

   Activities will occur at 16 sites. Sites within the plan area are all associated with watercourses which are tributaries to Haupt Creek.

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

Road Point	Feature	Tributary To	Legal; MDBM	Latitude	Longitude
1	Class III: Culvert	Haupt Creek	T09N R13W Section 16	38.623	-123.303
2	Class III: Culvert	Haupt Creek	T09N R13W Section 16	38.624	-123.302
3	Class III: Culvert	Haupt Creek	T09N R13W Section 15	38.624	-123.300
T4	Class II: Removal	Haupt Creek	T09N R13W Section 15	38.624	-123.300
6	Class III: Culvert	Haupt Creek	T09N R13W Section 10	38.632	-123.293
7	Wet Area: Culvert	Haupt Creek	T09N R13W Section 10	38.632	-123.294
T1	Class III: Removal	Haupt Creek	T09N R13W Section 10	38.634	-123.298
T2	Class III: Removal	Haupt Creek	T09N R13W Section 10	38.634	-123.298
T3	Class III: Removal	Haupt Creek	T09N R13W Section 10	38.634	-123.298
11	Class III: RAFC	Haupt Creek	T09N R13W Section 10	38.635	-123.297
12	Class III: RAFC	Haupt Creek	T09N R13W Section 10	38.634	-123.298
13	Class I: Low-Water Ford	Haupt Creek	T09N R13W Section 10	38.634	-123.298
13.1	Class III: RAFC	Haupt Creek	T09N R13W Section 10	38.636	-123.298
15	Class III: RAFC	Haupt Creek	T09N R13W Section 10	38.637	-123.298
WH-1	Rock pit Pond	N/A	T09N R13W Section 16	38.628	-123.311
WH-2	Drafting Pond	Haupt Creek	T09N R13W Section 9	38.635	-123.307

d. A single map or diagram clearly showing all of the following:
i. All lake and stream encroachments, with a number or other appropriate identifying label.
ii. All roads, with a number or other appropriate identifying label
ii. All watercourse classifications (i.e., Class I, II, or III).
iii. Access from a named public road.
iv. A north arrow and scale.
Refer to the THP Roads and Features Maps, and diagrams at the end of Section II.

e. A description of the types of lake or stream encroachments the applicant intends to construct, install, use or remove (e.g., a corrugated metal pipe, "Humboldt" crossing, impoundment for water diversion, water drafting sites, bank stabilization, rocked ford, bridge, etc.), and whether they will be temporary or permanent. If multiple lake or stream encroachments are proposed, the applicant should include a table that describes each type of encroachment (e.g., permanent culvert, temporary bridge, rock revetment, etc.), watercourse classification, culvert size and encroachment map reference number.
See the table in (c.) above and the road point table in Section II, Item 38.

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

The proposed activities are part of Timber Harvest Plan (THP), a document reviewed by those standards established within the Forest Practice Act – a process functionally equivalent to that of an EIR, with CalFire acting as the lead agency. Please refer to the THP Sections II and III, Item 32 for additional information concerning wildlife and botanical resource issues as well as the prepared reports located in Section V.

Fish that may be present during crossing removal at MP 13 are not expected to be impacted as coffer dams will be installed upstream of the culvert and flows will be diverted around the culvert.

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

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

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

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

See descriptions in the Road Points Table under Item #38 of THP.

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

It is expected the activities will be dry at time of operations and water diversions will not be necessary, with the exception of T4, MP13 and MP7, where if wet, the site shall be dewatered by installing a small coffer dam to divert seepage of the wet area during installation. The volume of water to be diverted around worksites is unpredictable due to seasonal streamflow variations but is expected to be minimal during the summer work period. Coffer dams will be installed, and water diverted either by gravity or pump with a screened intake if needed. Coffer dams may consist of clean sandbags, native material, or aquadams. Plastic tarps may be used when necessary. All coffer dams & associated materials shall be removed from the channel upon completion of the activity.

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

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

Water drafting is proposed at WH-1 and WH-2.

Per 14 CCR 923.7[943.7, 963.7](I)(2)(A)-(F) the description of water drafting site conditions and proposed water drafting activity shall include:
General description of proposed site: WH-1: Rock pit pond. This is a large pond (approximately 75' x 150') where drafting will be conducted directly by water truck. WH-2: Class IV Pond – This is a small man-made pond (approximately 80' x 25') created for wet area seepage where drafting will be conducted directly by water truck.
Watercourse Classification: WH-1: Class IV Off-stream rock pit pond WH-2: Class IV Pond at end of road
Drafting parameters including:

Month(s) of use - Water drafting is anticipated to occur between April 1 and November 15 in the years of operation.
Estimated volume needed per day – WH-1: Approximately 1-2 truck loads every day (2,000-5,000 gallons) WH-2: Approximately 1 truck load every few days (~3,000 gallons)
Estimated maximum instantaneous drafting rate and filling time – 300 gallons per minute
Other water drafting activities in same watershed – There are some ranches/residences up and down stream of the THP that may have drafting ponds.

Drainage area (acres) above point of diversion – WH-1: 0 acres WH-2: Less than 0.5 acres
Estimated:

Unimpeded stream flow – 50 gmp
Pumping rate – 5 gmp
Drafting duration – 24 hrs

A discussion of the effects on aquatic habitat downstream from the drafting site(s) of single pumping operations, or multiple operations at the same location, and at other locations in the same watershed: The effects on aquatic habitat downstream of the drafting site is expected to be minimal as the restrictions described here will maintain adequate flows: - To prevent the entrainment or impingement of all life stages of fish or amphibians during drafting operations, should drafting occur, the intake for drafting shall be screened by a 3/32 inch screen. It is not expected that the small flow reduction will impact the overall flow or downstream aquatic species (or species within the reservoir itself).

d. The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled. See the Road Point Table and diagrams in Section II, Item 38, as well as the ECP table in Section V.

e. Specify the type of equipment to be used.

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

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

April 1 through November 15.

g. The species composition and density of vegetation to be removed or disturbed as a result of lake or streambed alteration activities. Indicate if sensitive plant surveys have been completed within areas which will be affected by lake or stream

encroachments. Include any plans to restore the affected riparian or hydrophytic vegetation.

The small amounts of herbaceous and aquatic vegetation disturbed during operations will be limited to the vegetation within and around the specified crossings. Disturbance will be isolated to the various site locations. Conifer and hardwood trees, willows, annual grasses, forbs along with minor amounts of riparian vegetation may potentially be disturbed during operations. A floristic survey is included in Section V, with surveys completed in 2026 and no listed species were identified near crossing sites.

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

Direct disturbance will be limited to the project vicinity. Sediment production occurring at these sites will be the primary mode of impact to wildlife resources. Significant changes in flow, stream volume, bank stability, reduced riparian vegetation, canopy reduction and water temperature increase are not anticipated in association with the crossing upgrade activities. Water will be diverted with cofferdams that will allow for unimpeded and similar flows around the worksite and any fish present will still be connected to upstream habitat.

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

Crossing work will be conducted when there is no surface flow, with the exception of MP 7, MP 13 and T4 that may be wet year-round. If water is present, a temporary coffer dam will be constructed, and water diverted around the project site using a pump which will be removed prior to the winter period. Bare mineral soil will be stabilized as per Section II, Item 18 "Soil Stabilization Measure" of the THP. Crossing work at these 3 sites will be conducted at the driest time of the season to ensure flows are as low as possible.

Removal at MP 13 will transpire as follows: First, removal of most vegetation, rock armoring and fills around the culvert will be conducted while maintaining the culvert and keeping the inlet and outlet clear of debris and sediment deposition. This work can be conducted prior to the removal of the culvert which will maintain the current passage and will create space at watercourse grade next to the culvert on one side. A coffer dam will be installed beginning upstream of the culvert, with water diverted either by gravity or a pump with a screened intake if needed. Coffer dams may consist of clean sandbags, native material, or aquadams. Plastic tarps may be used when necessary. This structure shall continue along one side of the culvert where fills have been removed, which will push water around one side of the culvert in preparation for removal. Water will be flowing unimpeded against the coffer dam, but outside of the culvert and will be available for aquatic species to continue to use. Finally, the culvert will be taken out of the crossing (without disturbing the coffer dam), and any remaining fills will be excavated. The channel will be excavated to watercourse grade, and the proposed rocking will commence. The coffer dam and diverted flows may be shifted around the site during operations to best suit the removal activities and ensure sediment is not entering the water, as well as maintain proper unimpeded flows for any wildlife resources including fish. Shifting the coffer dam is anticipated for when the final fill removal and excavation to watercourse grade are made

after the culvert has been removed from the crossing. All coffer dams & associated materials shall be removed from the channel upon completion of the activity.

j. Calculations or other data used to size culverts.
Please see the attached tables (also located in Section V).

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

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

Refer to Road and Map Points Table in Section II for additional information.

HRRR THP Road Hydro Analysis

*Culverts are all reported in 0.67 HW/D

Site	Watercourse	Basin	Basin	Site	Ridge	Basin	Tc (min)	Rainfall	Mean Ann. Precip. (in) [PRISM]	Rational			USGS			CULVERT	Cafferata 2017 RAFC Nomograph					
ID #	Type	Area (ac)	Length (ft)	Elev. (ft)	Elev. (ft)	Slope (%)		Intensity (in/hr) [NOAA]		*Q100 (cfs)*	Culvert d (in) Projected	Culvert d (in) Mitered	*Q100 (cfs)*	Culvert d (in) Projected	Culvert d (in) Mitered	FINAL SELECTION	Q100 (cfs)	D50	Slope Incl	Thickness	Chute Width	Chute Depth
1	CIII	0.91	224	1200	1220	8.929	10.4647	3.12	53.38	***0.85176***	18	18	1.515	18	18	**24**	0.85176	-	-	-	-	-
2	CIII	2.64	140	1160	1220	42.86	4.93014	3.87	53.38	***3.06504***	18	18	3.812	18	18	**24**	3.06504	-	-	-	-	-
3	CIII	4.16	288	1160	1220	20.83	8.97157	3.87	53.38	***4.82976***	18	18	5.651	21	21	**24**	4.82976	-	-	-	-	-
6	CIII	3.3	269	760	1000	89.22	5.36522	3.87	53.38	***3.8313***	18	18	4.624	18	18	**24**	3.8313	-	-	-	-	-
7	Wet Area	2.9	67	800	1000	298.5	1.79748	3.87	53.38	***3.3669***	18	18	4.135	18	18	**24**	3.3669	-	-	-	-	-
11	CIII	1.9	155	400	680	180.6	3.22683	3.87	53.38	***2.2059***	18	18	2.867	18	18	**NA**	2.2059	**12**	**1.5:1**	**2**	**2**	**.5**
12	CIII	10.34	511	360	800	86.11	7.48191	3.87	53.38	***12.0047***	30	30	12.43	30	30	**NA**	12.00474	**18**	**2:1**	**3**	**3.5**	**1**
13	CI	349	4390	360	1220	19.59	35.7457	1.54	53.38	161.238	96	90	***261.9***	114	108	**NA**	261.8781025	-	-	-	-	-
13.1	CIII	1.8	198	360	880	262.6	3.22339	3.87	53.38	***2.0898***	18	18	2.736	18	18	**NA**	2.0898	**12**	**1.5:1**	**2**	**2**	**.5**
14	CII	10.12	648	400	880	74.07	8.85442	3.87	53.38	***11.7493***	30	27	12.2	30	30	**NA**	11.74932	-	-	-	-	-
15	CIII	1.3	312	400	880	153.8	4.82727	3.87	53.38	***1.5093***	18	18	2.064	18	18	**NA**	1.5093	**12**	**1.5:1**	**2**	**2**	**.5**
CI Q100 @ MP 11	C1	352	5330	360	1240	16.51	41.6742	1.54	53.38	162.624	96	90	***263.8***	114	108	**NA**	263.826437	-	-	-	-	-

ITEM #36 CULTURAL RESOURCE INFORMATION

1. **Training and Experience of Cultural Resources Surveyors**

   a. Name(s) of current cultural resources surveyor(s): Kate Cahill, Madeline Pusich, Jamie Pusich, Ryan Cooper, Gianna Covell
   b. ☐ **Yes** ☑ **No** Was the cultural resources survey conducted by professional archaeologist?
   c. ☑ **Yes** ☐ **No** Was the cultural resources survey conducted by person with current CAL FIRE cultural resources training?
   d. If **yes** to (c), then provide:
      a. CAL FIRE Cultural Resources Training Course #: #186R (Cahill), #183R (M.Pusich), #199R (J.Pusich) #204 (Cooper), #208(Covell)
      b. Date training course was completed: 2022 (Cahill), 2021 (M.Pusich), 2024 (J.Pusich), 2025 (Cooper), 2026 (Covell)

2. **Archaeological Records Check Information**

   a. Date of Records Check Conducted by Information Center: December 19, 2025 & April 6, 2026
   b. The Information Center File Number: 25-0886 & 25-1427

3. **Native American Notification Information**
   First Notification
   a. CAL FIRE Native American Contact List County and Division: Sonoma County
   b. Date of the CAL FIRE Native American Contact List used: 8/06/2025 & 2/02/2026
   c. Date notification was sent: December 1, 2025 & March 23, 2026

4. **Survey Methods and Procedures**

   a. Survey Strategy: Survey methods and techniques employed to achieve adequate coverage varied based upon a variety of factors. These include (but are not limited to), the physical characteristics of the property, especially topographic and other environmental attributes, and other information gathered during the records check, any response to the Native American information request, and/or other pre-field research, as well as the results of archaeological inventories in areas with a similar cultural and natural setting. Survey methodology employed in the plan were:
      i. ☑ **Cursory:** A cursory reconnaissance is one in which the surveyor gives areas of low sensitivity a quick field inspection rather than intensive coverage.
      ii. ☑ **Intuitive:** Detailed inspection was given to specific localities that exhibit previously identified characteristics that may be associated with the location of archaeological properties.
      iii. ☐ **General:** A general reconnaissance is one in which an attempt is made to systematically cover an area as in a complete reconnaissance but with wider transect intervals.
      iv. ☑ **Complete:** Intensive examination of high probability areas.

   b. Date(s) the survey was conducted: Many days in between October 2025 and March 2026

5. **Survey Results**
   Survey results are contained in the THP's Confidential Archaeological Addendum. Cultural resources are nonrenewable and their scientific, cultural, and aesthetic values can be significantly impaired by disturbance. To deter vandalism and other activities that can damage cultural resources, the location of cultural resources should be kept confidential. The legal authority to restrict cultural resource information can be found in California Government Code sections 6254.10 and 6254(r); California Code of Regulations Section 15120(d); the Archaeological Resource Protection Act Section 9(a) and Section 304 of the National Historic Preservation Act of 1966.