SECTION III

GENERAL DESCRIPTION OF PLAN AREA

PROJECT LOCATION:
The THP is located approximately 1.5 air miles southeast of the town of Gualala in Sonoma County, California. The plan is located east of California State Route 1 and the Pacific Ocean, and west and southwest of the Gualala River. To access the plan area, one would travel south, through the town of Gualala and after crossing the Sonoma-Mendocino County line, use the roads to the east of SR 1 that lead to various access points within the THP, after passing through the Sea Ranch Community. The THP is located behind locked gates on private ownership with private roads not open to the public. The proposed operations are located in the German Land Grant, Mount Diablo Base and Meridian. The following watercourses receive drainage from the proposed timber harvest plan: The Pacific Ocean, Gualala River, South Fork Gualala River and unnamed tributaries.

SOILS AND TOPOGRAPHY:
The plan area contains variable topography with slopes facing various aspects but the THP is primarily located on the hillslope that faces west and leads to the Pacific Ocean. Drainages are mainly flowing from east to west, therefore the side slopes of the larger Class II watercourses have north and south aspects. Elevations within the plan area range from 100 feet to 640 feet above sea level. Slopes range from 5 to 80% with the average slope on the plan area being approximately 35%. There is a large broad trending ridge along the eastern edge of the THP. There is one unit that lies on the east side of this ridge (facing the South Fork Gualala River) in the northeast portion of the THP. The project area is underlain by the sedimentary German Rancho Formation, a marine sandstone and mudstone. The San Andreas Fault is located in the South Fork Gualala River east of the plan area and has contributed to the deformation of the Pacific Plate adjacent to the fault (project area). This deformation, faulting and proximity to the ocean may contribute to the higher water table in this area as evidenced by seasonal wetlands and wet areas.

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

NoD - Noyo coarse sandy loam, 0-15% slopes
JoG - Josephine loam, 50-75% slopes
HhF - Hugo loam, 30-50% slopes (gentle areas)
MmF - Mendocino sandy clay loam, 30-50% slopes
CaF - Caspar sandy loam, 30-50% slopes
HeF - Hely silt loam, 30-50% slopes
EmF - Empire loam, 30-50% slopes
CaE - Caspar sandy loam, 15-30% slopes
KnD - Kneeland loam, 9-15% slopes
RrD - Rohnerville loam, 9-15% slopes
HhF - Hugo loam, 30-50% slopes (steep slopes)

The **Noyo coarse sandy loam (0-15% slopes)** is moderately deep to bedrock, well drained and has a moderate to slow rate of permeability. The soil is derived from sandstone and is found on western facing slopes and is vegetated mostly with grasses, pine, and understory species. Both surface runoff rates and the hazard of erosion is slow to medium. The soil is used for limited grazing where grassy openings exist.

The **Josephine loam (50-75% slopes)** is found on steep long, and potentially concave slopes in mountainous coastal ranges. Permeability is moderate and the rate of runoff is very rapid. Water erosion hazards is very high and depth to bedrock is shallow to moderate. The soil is used for timber production and supports Douglas-fir, black oak, and madrone.

The **Hugo loam (30-50% slopes)** is derived from sandstone and is moderately deep to bedrock. Permeability is moderate, surface runoff is rapid, and the hazard of erosion is high. In certain areas, up to 5 percent of the soil surface contains rock outcrops. The soil is used for timber production and supports conifer species, but when cleared can be used for limited grazing.

The **Mendocino sandy clay loam (30-50% slopes)** is found on mountainous uplands with smooth rolling slopes. The soil is derived from sandstone and shale and is deep to bedrock. Permeability is moderate, surface runoff is rapid, and the hazard of erosion is high. The soil is used for timber production and supports conifer species, but when cleared can be used for limited grazing.

The **Caspar sandy loam (30-50% slopes)** is found on short, steep slopes at about 300 feet of elevation. The soil is derived from sandstone and is deep to bedrock. Surface runoff is rapid, and the hazard of erosion is high. The soil is used for timber production and supports redwood and Douglas-fir.

The **Hely silt loam (30-50% slopes)** is found on mountainous uplands with smooth rolling slopes. The soil is derived from sandstone and is moderately shallow to bedrock. Permeability is moderate, surface runoff is rapid, and the hazard of erosion is moderate. The soil is used for timber production and supports conifer species, but when cleared can be used for limited grazing.

The **Empire loam (30-50% slopes)** is found on ridgetops, terraces, and uplands. The soil is derived from sandstone and is moderately deep to bedrock. Permeability is moderate, surface runoff is rapid, and the hazard of erosion is high. The soil is used for timber production and supports conifer species or for limited grazing.

The **Caspar sandy loam (15-30% slopes)** is found on short, abrupt slopes at about 300 feet of elevation. The soil is derived from sandstone and is deep to bedrock. Permeability is moderate, surface runoff is medium to rapid, and the hazard of erosion is moderate to high. The soil is used for timber production and supports redwood and Douglas-fir.

The **Kneeland loam (9-15% slopes)** is found on moderate slopes at about 500 feet of elevation. The soil is derived from sandstone and is moderately shallow to bedrock. Permeability is moderate, surface runoff is medium, and the hazard of erosion is moderate. The soil is used for livestock grazing, hay production, or for growing row crops.

The **Rohnerville loam (9-15% slopes)** is found on gently sloping hillsides adjacent to abrupt changes in slope. The soil is derived from sandstone and is moderately deep to bedrock. Permeability is moderately slow, surface runoff is medium, and the hazard of erosion is moderate. The soil is primarily used for livestock grazing.

Soil Name, and Timber Site Index (where applicable)	Acreage	Percent Area
Noyo coarse sandy loam (0-15% slopes)	6	> 1%
Josephine loam (50-75% slopes) Site Index: RW 110 (IV), DF 110 – 130 (IV)	47	6%
Hugo loam (30-50% slopes) Site Index: RW 110 (IV), DF 126 (IV)	273	33%
Mendocino sandy clay loam (30-50% slopes) Site Index: RW 110 (IV), DF 120 – 140 (III/IV)	7	> 1%
Caspar sandy loam (30-50% slopes) Site Index: RW 110 (IV), DF 126 (IV)	126	15%
Hely silt loam (30-50% slopes) Site Index: RW 110 (IV), DF 120 – 140 (III/IV)	134	16%
Empire loam (30-50% slopes) Site Index: RW 110 (IV), DF 120 – 140 (III/IV)	43	5%
Caspar sandy loam (15-30% slopes Site Index: RW 110 (IV), DF 126 (IV)	139	17%
Kneeland loam (9-15% slopes)	6	> 1%
Rohnerville loam (9-15% slopes)	43	5%
Total	824	100%

The erosion hazard rating for the plan area is Moderate, and there are no operations proposed on slopes over 65%. An Estimated Surface Erosion Hazard form is included in Section V.

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The timber site productivity of these soils on the plan area is moderate. The majority of the plan area is classified as Site III Timberland with small portions of poorer site productivity where it is classified as Site IV Timberland. Although there is a presence of Site IV timberland, the THP still follows the stocking standards for Site II/ III timberland.

WATERSHED AND STREAM CONDITIONS:

The plan area is located within the Big Pepperwood Creek (1113.850201), Mouth of Gualala River (1113.850202) and Black Point (1113.850304) planning watersheds. The Gualala River and The South Fork Gualala River are adjacent to the plan and are within the Big Pepperwood Creek and Mouth of Gualala watersheds (both ASP), and receive drainage from the plan area, which constitutes the ASP watershed portion of the THP. The majority of the THP is located within the Black Point Watershed and drains to Class II and III watercourses that drain directly to the Pacific Ocean. The watercourses on the plan area were ground-truthed, classified and assessed for erosion, channel stability, canopy cover, LWD and aquatic habitat. The watercourse conditions within the plan area are generally healthy with ample streamside vegetation, stable channels with some, but not excessive sedimentation or downcutting. There are some unstable bank mass wasting events within watercourse drainages, but multiple drainages adjacent to the plan identified as inner gorge by CGS are excluded from the THP boundary. Some of these are related to historic skidding and logging practices, but most are related to long term geologic processes and sea level rise and fall. These channels naturally experience erosion but may experience more than average due to the tectonic activity occurring on-site. Most of the plan area and drainages are located within the Black Point Watershed, which drains directly to the Pacific Ocean. There are no cumulative significant adverse watershed or stream conditions within the THP or Watershed Assessment Area discussed in Section IV of this THP.

The Gualala River watershed was listed on the 2001 303(d) list by the State of California as required by Section 303(d) of the Clean Water Act. 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 River watershed, the listing was the result of water quality problems related to elevated sedimentation throughout the watershed.

The primary adverse impacts associated with excessive sediment in the Gualala River pertain to the anadromous salmonid fishery. The salmonid populations present in the Gualala River are in severe decline. The populations of steelhead trout (*O. mykiss*) in this watershed are listed as threatened under the federal Endangered Species Act. Coho salmon (*Oncorhynchus kisutch*) are listed as endangered under the federal Endangered Species Act.

The Gualala River TMDL is based on the Gualala River Watershed Technical Support Document for the Sediment (TSD), (California Regional Water Quality Control Board, August 2001). The beneficial uses and water quality objectives for the Gualala River are contained in the *Water Quality Control Plan for the North Coast Region* (Basin Plan) as amended in 1996 (Regional Water Board 1996). The beneficial uses impaired by excessive sediment in the Gualala River are primarily those associated with the Gualala River's salmonid fishery, specifically: Commercial or Sport Fishing (COMM); Cold Freshwater Habitat (COLD); Estuarine Habitat (EST); Migration of Aquatic Organisms (MIGR); and Spawning, Reproduction, and/or Early Development (SPWN).

Management-related activities have contributed to an increase in sediment delivery to the Gualala River watershed above acceptable background levels. Existing salmonid habitat is limited by various erosion-influenced factors, including infrequent and shallow pools, few backwater pools and other overwintering habitat, embedded cobble, and elevated fines in potential spawning gravels. In addition, the limited availability of large woody debris and the lack of other forms of shelter (particularly from high winter flows) in the channels of the Gualala River watershed contribute to the problems associated with sedimentation.
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).

In addition to water quality objectives, the Basin Plan includes two prohibitions that are specific to logging, construction, and other nonpoint source activities. These prohibitions are as follows:

1. *The discharge of soil, silt, bark, and sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited; and*
2. *The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities which could be deleterious to fish, wildlife, or other beneficial uses is prohibited.*

These prohibitions are observed and practiced as per the Forest Practice Rules best management practices for the protection of the beneficial uses of water during Timber Harvest Plan layout and implementation, including logging and hauling operations.

VEGETATION AND STAND CONDITION:

Vegetation on site consists of mainly Redwood (*Sequoia sempervirens),* Douglas-fir (*Psuedostuga menziesii)*, Monterey pine (*Pinus radiata*), bishop pine (Pinus muricata), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*) tanoak *(Notholithocarpus densifloris)*, California bay-laurel (*Umbellularia californica*) and madrone (*Arbutus menziesii)*, with coyote brush, white-thorn ceanothus, blackberry, blue-blossom ceanothus, salal, and seasonal and perennial grasses also present. The exact species composition of a given stand depends on elevation, aspect, soils, stand history, and proximity to watercourses.

The area currently exhibits a mosaic of stand types which have been managed under a variety of silvicultures in the past. The upper slopes of the THP near the broad flat ridge have been primarily managed via clear-cutting and selection. These areas are heavy to Bishop pine and have lower merchantable species stocking overall. The lower slope where most of the THP resides has been managed in the past under primarily selection silviculture. Redwood generally dominates the stands, with certain areas heavier to fir species. Most stands exhibit a generally unbalanced and uneven aged stand structure, while others have been historically managed under an evenaged regime or have not been managed in the last 30-50 years. Stands are variable with trees in a range of ages and diameters. Current stocking levels are generally consistent and high. There are also patchy stands of conifer interspersed with varying levels of hardwood species in the proposed variable retention unit, as well as other smaller areas that were not broken out into their own silviculture. Timber site class III dominates the plan area, with many smaller areas of Site Class IV or borderline III/IV areas.

Timber quality and form are highly variable depending upon microsite. The timber growing in the swales and draws shows better height growth and form as compared to the timber growing on the ridge tops or hillslopes directly exposed to the ocean winds. Timber near ridge tops exhibit thin crowns, are shorter, and commonly have dead tops or many reiterated tops.

A principle 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 within and 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, including 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 for specific impacts and cumulative effects identified during THP preparation (Wildfire Risk and Hazard Impacts and Noise Impacts). 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.

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.

1. PROJECT DESCRIPTION, PURPOSE(S), NEED(S), AND OBJECTIVE(S)

The project is described in Sections I, II, and III of the THP. 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 lands included in the THP are TPZ lands which have timber production as the primary use.

Purpose(s). The landowner's purposes in undertaking the project are:

(1) Access, harvest and regenerate the forested area delineated in the THP.
(2) Maximize sustained production of high-quality timber products.
(3) Maintain a forest products industry in the local community.
(4) Maintain or improve existing wildlife habitat.
(5) Maintain or improve existing cold water fisheries.
(6) To earn an economic return by operating the property, including the plan area, as commercial timberland per its present zoning and intended land use.
(7) To reduce the risk of wildfire hazard within the area delineated in the THP.

Need(s). The needs for the project from the perspective of the landowner are:

(1) To meet certain fixed costs of ownership including, but not limited to, taxes, insurance and debt service payments on loans, and meeting Maximum Sustained Production (MSP) as required by the Forest Practice Act and the Forest Practice Rules.
(2) To maintain the flow of high-quality timber products to the economy, sustain a forest products industry, and provide a source of employment in the local community.
(3) To protect the property and the timber assets of the property

Log deliveries to the landowner's own mills are being supported in part by transported logs from other counties, and in the past even from other countries (New Zealand), to enable local mills to continue to operate. Supplying logs from outside the local geographic area is undesirable for many reasons. Transportation impacts to the environment (including air pollution and Green House Gas (GHG) emissions) are greater. Moreover, other states and countries from which logs have to be imported may have far more lenient forestry regulations than California. Supplying local sawmills with logs from local timberlands is a far more efficient use of resources and has less environmental impacts than importing logs from other states and countries. The THP area is part of a 29,000-acre holding owned by Gualala Redwood Timber, LLC (GRT). GRT is part of an integrated group of companies affiliated with Pacific States Industries DBA Redwood Empire Sawmills that processes redwood logs into a variety of finished and landscape material products. GRT and Redwood Empire are owned by a family that has been doing business in Mendocino County for fifty years, and now is in its second generation of family members active in the operations. The founder of the company lives in Sonoma County. Logs generated from this THP create employment for foresters, loggers and truckers who deliver logs to the Redwood Empire Sawmills located in Cloverdale and Asti, California. These sawmills generate products that are sold into local retail yards or are sold to redwood remanufacturing plants in Sonoma and Mendocino County, and each step of this lumber production adds value to the products and creates economic revenue for the company, jobs for local workers and companies, and tax revenues for local communities and for Mendocino County. Businesses that use products generated from the Redwood Empire affiliated timberlands include Reuser Inc. in Cloverdale (producers of landscape products from redwood bark and shavings), Friedman's Home Improvement, Mead Clark Lumber Company, Burgess Lumber, Healdsburg Lumber, Lowes, NuForest redwood remanufacturing plant, and other local lumber suppliers. Timber yield taxes from the THP go directly to Sonoma County for maintenance and improvement of infrastructure, roads, and public safety and security services. Additional tax revenues that benefit County residents are generated from sales tax, lumber products assessment tax, and property taxes. The logs harvested from the THP generate income for many ancillary local businesses where the timber and sawmill workers spend their earnings for food, gas, clothing, home maintenance and repairs, and other living necessities. The timber generated on a sustainable basis from this THP and from these lands significantly adds to the well-being of the residents of the Gualala area and to residents and businesses in Sonoma and Mendocino Counties.

Objective(s). The project objectives are:

(1) To grow and harvest timber in a long-term sustainable manner and reduce dependence on purchasing logs from the open market. The landowner has made significant investments in its milling infrastructure, which needs to remain working in order to recover facility improvement and maintenance costs, while at the same time remain a viable business with the capacity to produce a reasonable profit.
(2) To manage overstocked and hardwood dominated stands for the promotion of conifer growth while maximizing timber stand growth and production over time for forest products -- i.e., maintain or increase Maximum Sustained Production (MSP).
(3) To plan and implement the timber operation to contribute to restoration of properly functioning salmonid habitat. This entails using the individual tree silviculture as prescribed by the Anadromous Salmonid Protection (ASP) Rules within WLPZ areas in ASP watersheds with the goal of increasing the proportion of large trees for large wood recruitment to benefit salmonids. Additional requirements of the ASP Rules are to retain higher basal area of conifers, provide additional shading, develop vertical structural diversity, and support a diversity of plant, shrub, and tree species for

nutrient input. The ASP Rules assure protection and enhancement of public trust resources (fisheries, water quality, wildlife).

(4) In addition, it is an objective of this THP to upgrade existing forest roads and watercourse crossings which will in turn reduce soil erosion and reduce the amount of sediment being introduced into the watershed. By upgrading watercourse crossings, waterbarring, sloping and correctly draining roads and skid trails overall sediment yields will be reduced.

The project is to be carried out in accordance with the California Forest Practice Act, Forest Practice Rules, and other applicable agency Rules and regulations. Potential impacts specifically identified are mitigated to less-than-significant levels by additional measures other than what is prescribed in the Forest Practice Rules.

II. ALTERNATIVES CONSIDERED IN THE ANALYSIS

The RPF considered seven alternatives for inclusion in the THP:

(1) The project as proposed.
(2) No project.
(3) Alternative harvest approaches.
(4) Alternative project location.
(5) Conservation easement or public land purchase.
(6) Alternative land uses.
(7) Alternative timing of project.

III. ALTERNATIVES SELECTED FOR DETAILED EXAMINATION

(1) Project as Proposed:

The 736-acre project as proposed, which includes 550 acres of single-tree Selection (65 acres of WLPZ single-tree selection and 485 acres of single-tree selection), 33 acres of aggregate style Variable Retention, 2 acres of no harvest (unstable areas), and 151 acres of Coastal Commission Zone STAs (three separate STAs within the THP footprint), meets the purposes, needs and objectives set forth above.

All WLPZ areas included in the plan will be harvested under single tree selection silviculture, and both ASP and non-ASP watersheds exist within and downstream of the THP. The areas proposed for selection silviculture are well-stocked with multiple age classes present, and a selective harvest will create scattered gaps in the canopy so that a new cohort/age class of conifers may establish. All unstable areas mapped are no-harvest and equipment exclusion zones. Inner gorges identified by CGS are excluded from the THP footprint.
The plan area consists of 95% single-tree selection including the WLPZ and STAs. The STAs that are pre-existing within the THP will follow the outlined operations for selection in the Coastal Zone STAs. Variable retention was chosen as the optimal prescription for approximately 4.5% of the plan area in an effort to improve timberland production and forest health where conifer is inundated with tanoak and huckleberry. Variable retention emulates natural disturbance regimes by replacing portions of a stand and allocating retention areas to optimize forest health.

These silvicultures were selected by the RPF to best achieve long-term productivity, low environmental impact, and adherence with regulations while using their 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. The RPF has concluded that after considering the current stand configuration the proposed silvicultural treatments are the ones best suited for the project area.

Forest roads, skid roads, and landings are located to minimize the amount of sediment generation that could impact watercourses. The harvests in all units will occur on slopes ranging from 5-65%. The plan's silvicultural prescriptions are designed to improve forest stocking and health over time, while protecting and restoring salmonid habitat within the watercourse protection zones. The timber harvest will generate income for the company and supply raw materials to local mills. Operations in accordance with the provisions of THP will not result in significant effects to environmental resources.

This parcel is zoned for timber production (TPZ). TPZ lands are exclusively dedicated to the growing and harvesting of timber for commercial purposes and compatible uses. Under 14 CCR 897(a), there is a legal presumption that "timber harvesting is expected to and will occur on such lands". Moreover 14 CCR 898, which has the force of law, provides that on TPZ lands the harvesting of

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trees per se shall not be presumed to have adverse impacts. Ownership of such lands involves a long-term commitment to timber growing, requiring many years for the "crop" to mature before harvest.

(2) No Project Alternative:

As explained above, this parcel is zones 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 and Mendocino Counties 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 would avoid potential environmental impacts that might occur in connection with the proposed timber operations. This alternative would indefinitely delay or preclude the landowner from improving forest growth and health in the THP area. It would neither improve stocking, nor achieve maximum sustained production of forest products. The no project alternative would leave a stand dominated by hardwoods and characterized by low conifer production areas. California is currently experiencing its worst drought on record, with the North Coast receiving less than half of its usual precipitation in 2021. 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. Forests dominated by hardwoods 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.

Alternative Even aged Silvicultures and Special- Prescriptions

Even aged silvicultures such as shelterwood/seed tree 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 presence of unstable areas, moderate and high EHR ratings, locations of past and recent clear cuts and the objectives of the THP, clearcutting was deemed to be a suboptimal silviculture in this stand.

Shelterwood/seed tree systems are generally prescribed for mature stands that contain healthy overstory conifers that will act as good seed sources for a new cohort in the understory. Overstory trees provide soil stability and protection for young trees that establish after the harvest. The forester has control over what seed trees are left after the harvest, giving them the opportunity to engineer a vigorous forest in the long term. While this system was considered for the Steam Donkey THP, the species composition, lack of understory regeneration, current stand structure and overall understocking of conifers within the plan boundary means that this silviculture would not fit long term management objectives.

Special prescription silvicultures such as rehabilitation of understocked areas and fuelbreak/defensible space prescriptions were considered for this project but were ultimately determined to not meet the landowner's objectives for management of this THP at this point in time.

Rehabilitation of understocked areas (rehab) is an alternative silviculture that was 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). While this condition exists in small portions of the THP area, the majority of the harvest plan meets minimum stocking standards. Therefore the RPF decided to treat areas of low stocking using the variable retention method. Due to

the variability in stand conditions and the level of stand stocking across the proposed project area, rehab was deemed to be a suboptimal silviculture for this THP.

The Fuelbreak/defensible space silvicultural treatment is an alternative that was considered for this harvest plan. Fuelbreak treatments result in the removal of some trees and vegetation to create or maintain a shaded fuelbreak or defensible space in an area to reduce the potential for wildfires and the damage that they could cause. The residual stocking using this silviculture is lower than the standards for selection, which could lead to more light hitting the forest floor, resulting in more understory brush growth and heightened ladder fuel loading over time. While this treatment type could be beneficial in some portions of the plan area, the RPF has chosen to utilize other silvicultural prescriptions combined with enhanced slash treatments within 100 feet of the property line shared by the Sea Ranch.

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 her 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.

Tractor yarding was chosen as an optimal yarding option in areas of the THP that have relatively gentle slopes and moderate EHR. Most of the skid trails are located on slopes less than 40%. There is an existing network of stable skid trails that can be reused that feed into the existing road system. Operational limitations 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.

Cable yarding for the entire THP was considered, however due to the topography of the THP (flat broad ridges) and the fact that most of the THP is on a slope facing the Pacific Ocean with possibly no tail holds with proper deflection, cable yarding was not chosen as the main yarding method for the THP.

Helicopter yarding is a feasible option. However, it would greatly increase noise levels at the yarding and landing sites. Many residences exist adjacent 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 all 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. 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 second growth 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:

This is a feasible alternative, but it would not further reduce potential adverse impacts or cumulative effects. With proper implementation of the CA Forest Practice Rules, there should be no measurable project or cumulative impacts to watershed, biological, or soil resources, regardless of harvest area size. Additionally, roughly 195 acres of the THP area fall within ASP watersheds, meaning these acres are subject to ASP Rules which have increased watercourse protections and retention standards for riparian buffer zones. Furthermore, the proposed THP area is smaller than the landowner's parcel. The THP area has been specifically chosen to avoid potentially hazardous unstable areas, and will retain valuable biological resources. 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 landowner, the agency, and the interested public benefits from the economy of scale afforded by a single plan versus three separate plans. Any reduction in the harvest area within the ASP watersheds would slow the recovery of the stands in reaching the ASP Rule goal of a restored forest stand and structure that benefits anadromous salmonids. Size reduction of upslope harvest areas could be made, but that would only result in different upslope areas being harvested sooner pursuant to other THPs. The sizes of upslope areas are determined mostly by the topography, the location of roads, and the location of watercourses.

(4) Alternative Project Location:

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

Sustainable management of timberlands requires timing harvests to when it is most biologically and economically effective for stand development. Stands are chosen for harvest based on a variety of parameters including age, stocking levels, and current growth rate. Harvest entries are planned ahead of time and areas such as the proposed THP area have been selected for harvest and rehabilitation treatments because they are more suitable for harvest at this time. Other areas within the property boundary which may have been harvested more recently and are re-growing to full site capacity. Adverse impacts 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. The very low impact nature of the harvest in terms of removal of valuable biological resources and ground disturbance, means this harvest will only improve stand health and increase the biological value of the entire property. WLPZ Rules and the ASP Rules reflect the relatively more ecologically sensitive character of areas surrounding watercourses, those areas that present more potential impacts for water quality and salmonids. The point remains that there would be no reduction or "savings" in environmental impacts by carrying out this long-planned harvest elsewhere on the timberlands; the environmental impacts of the THP are less than significant, both individually (i.e., as a "project") and cumulatively. Continued dislocation and delay of timber harvesting not only frustrates proper (indeed, legally required) management of lands zoned exclusively for timber production, but delays and disrupts restoration of riparian areas pursuant to the ASP Rules for the benefit of salmonids.

The timing of harvests on upslope areas is determined mostly by homogenous vegetation types, slope stability, existing infrastructure condition and layout, and the age and/or health of the stands.

The landowner purchased the timberland for the sole purpose of managing the property for timber production, while at the same time giving full consideration to protection of other resources and the environment. Each stand is at different stages in growth and production, and each THP area and watershed present different challenges in terms of protecting the resources and the environment. Over the years, each THP involves a further investment in the long-term growth and productivity of the particular timber stands within the THP area, as well as producing timber products to generate income and finance initiatives to stabilize roads, improve conifer stocking, improve watercourse crossings and outdated road infrastructure, and enhance fish and wildlife habitat.

Even if the landowner were able to generate income by harvesting elsewhere on the property, the primary objectives of this THP can no more be met under the Alternative Project Location alternative than under the No Project alternative. Commercial timber management needed to properly maintain production from 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. For that reason, the Alternative Project Location is inconsistent with the primary objectives of this landowner in owning timber lands 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. This THP does not have any unique potential impacts outside of the typical impacts of a timber harvest. The landscape within the project area is zoned as a Timberland Production Zone, and was zoned when the landowner purchased the timberlands on this THP area in 2017. As a result, the lands commanded a purchase price commensurate with that zoning designation and its highest and best use; viz., timber production. The landowner will continue to participate in lawful and responsible management of its timberlands. 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. Proposed management activities will benefit the surrounding community (wildfire hazard reduction and reduced sediment delivery into streams). By harvesting elsewhere potential impacts associated with this THP would not be avoided, but rather would merely be shifted to another area of the timberlands. Some potential impacts would be

exacerbated. Harvesting at other locations would require many of the same measures to avoid or substantially lessen such impacts to less-than-significant levels.

(5) Conservation Easement or Public Land Purchase:

This alternative would involve limitations on management activities through public purchase of the subject property or donation or sale of conservation easements. If the property were covered by a conservation easement such that no timber harvesting could be conducted, then any potential impacts associated with this THP could be avoided through this alternative. If the public purchased the property, it is possible that some management of the land for timber could continue, in which case any potential impacts may not be lessened or altogether avoided. Currently many Non-Governmental Organizations or NGOs (e.g. Sempervirens Fund, The Save the Redwoods League, The Conservation Fund, the Redwood Forest Foundation, The Nature Conservancy) own redwood forestlands in California and are managing those lands to restore them, which requires reducing stand density with commercial logging. Redwood National Park is engaged in similar management efforts under the Redwood Rising Initiative, where it is currently harvesting thousands of acres of second growth parklands to speed restoration of redwood forests to an old forest condition. Given the missions and goals of such NGOs, their obligations to their donors and funders, and their current management approaches, it seems likely that an NGO (or a responsible state or federal agency) that succeeded to the land area covered by this THP would also manage it through restoration thinning, not unlike the selective harvesting management methods proposed in the THP.

The analysis of these two project alternatives (Conservation Easement or Public Land Purchase) is combined because each alternative presents the same basic issues. The landowner is not planning on selling or donating any part of the THP and, consistent with Sonoma County's zoning for the land, considers its highest and best use to be producing timber under the proposed THP. Land that is zoned Timberland Production Zone (TPZ) includes a significant part of the total value of the property in the timber value, as this zoning designation strictly limits residential, vineyard, commercial development, and other uses. The TPZ zoning also has significant regulatory and tax consequences under California law. Cal. Govt. Code 51110 et seq; Cal. Govt. Code 51140 et seq.; Cal. Rev. & Tax Code 434 et seq. Indeed, TPZ land is considered "enforceably restricted." All this makes a sale of the Steam Donkey THP area as a non-timber producing use highly speculative.

The landowner is optimistic about the future value of this project area as timberland and is not currently considering selling at current fair market value related only to the present stumpage value. The landowner has an economic interest in the affiliate Redwood Empire Sawmills which generates added revenue from the sale of lumber, and this added value must be added to the stumpage value to arrive at the actual total value of the THP area to the landowner. NGOs typically will use public funds to purchase conservation lands, and those funds are typically justified based on fair market values of land and timber that rely on stumpage values only and do not take into account added values of lumber sales. It would be unlikely for an NGO to obtain an appraised value for the THP area based on current stumpage that is as high as the value that the landowner can generate based on stumpage value plus the added sales value of the redwood lumber from the sawmill. Also, sales of land to NGOs can take years due to the need to conduct multiple appraisals and then access and get approvals for public funding sources, and that delayed timing is inconsistent with the landowner's need to service debt. Another factor affecting a possible conservation sale is that the parcel includes the main haul route on the property that logging trucks and equipment must use to access the remainder of the property. A sale of this area for public use would cause significant conflict between the recreationists and timber harvesting contractors, including issues from noise, dust impacts, tree falling hazards, and could also lead to significant traffic safety risks between fast-moving loaded logging trucks and users of the public area.

Given the fact that this property is zoned for timber production as its highest and best use, the landowner intends to implement the harvest of this area as planned and ensure this area remains in timber production.

Applying the "rule of reason," as set forth in 14 CCR §15126.6(f), project alternatives whose implementation is remote and speculative need not be given extensive consideration. Because the Conservation Easement and Public Land Purchase alternatives

are remote and speculative and would not meet any of the primary or most of the secondary project objectives, they were rejected for further consideration.

(6) Alternative Land Uses:

The timberlands proposed for harvest are zoned Timberland Production (TP) or Coastal Zone Timberland Production (CC TP) per Sonoma County Municipal Code and also carry a Timberland Production Zone (TPZ) designation. These zoning designations establish the presumption that timber harvesting is expected to and will occur on such lands as the primary use.

The following information was obtained from the Sonoma County Municipal Code:
Article VII. - TP- –Timberland Production District.
Sec. 26C-70A. - Purpose.
To provide for timberland zoning, a yield tax imposed at the time of harvest, and the conservation and protection of land capable of producing timber and forest products. The compatible uses specified in this section will be included in this zone and are consistent with the Forest Taxation Reform Act of 1976.
In section 2.7 Natural Resource Land Use Policy, the General Plan states "The purpose of natural resource land use policy is to protect lands used for timber, geothermal, and mineral resource production…The intent is that natural resource areas be managed and conserved and that production activities avoid depletion and promote replenishment of natural resources." Furthermore, the General plan aims to "Protect timberlands needed for commercial timber production under the California Timberland Productivity Act." appropriately retained for the growing, harvesting and production of timber and timber related products.

Principal Permitted Uses on Forest Lands Designated Timber Production Zone:
Management of lands and forests for the primary use of commercial production and harvest of trees, including controlled burns; removal of timber and fuelwood; recreational and educational uses; management of land for watershed (fish and wildlife habitats); the erection, construction, or maintenance of gas, electric, or water generating and transmission facilities; equipment storage; the production and harvesting of compatible forest products, one single family dwelling; occasional cultural events; small and large family day care; small residential community care facility; beekeeping; commercial telecommunications facility; small wind energy systems; and one junior accessory dwelling unit per lot.

Conditional Permitted Uses on Forest Lands Designated Timberland Production (TP) District by Sonoma County:
Additional detached single family dwelling units; saw mills; development and utilization of natural resources with appurtenant structure; aircraft landing facilities; permanently located campgrounds; equipment storage for off site growing and harvesting of forest products; commercial wood yards; exploration and development of low temperature geothermal resources; minor public service uses or facilities; small wind energy systems; and major timberland conversions.

While the number of possible uses for any parcel of land zoned TP is not insubstantial, the touchstone for any and all uses that are not strictly timber production is that they do not interfere with or derogate from sustainable management for commercial timber production. The landowner could apply to the Sonoma County Planning Commission for a rezone, initiate the process to subdivide the parcels, and attempt to market and sell individual lots. However, such a scenario is entirely speculative, not only because the landowner only purchased the timberlands for the purpose of supplying logs for its associated sawmills, but also because of the difficulty of obtaining the permits and approvals that would be required from County, State and Federal agencies, including the Planning Commission, to rezone and eventually convert the timberlands to a non-timber use. These include, but are not limited to, taking the land out of TPZ zoning, filing for a Timberland Conversion Permit, showing the requisite domestic water supply availability and leach field capacity for human uses, obtaining a Conditional Use Permit or Permits, and complying with CEQA. The County would not likely be interested in permitting zoning of the THP area due to the soil types and surface water. This alternative would likely result in significant adverse environmental impacts when compared to the expected insignificant impacts of the THP. The infrastructure for such development would have to provide for the increased needs of the developed lands. This would likely entail much greater (and permanent) land disturbance than timber harvesting, limiting wildlife habitat and use, and hardening permanent road and parking surfaces that reduce stormwater infiltration and attenuation. Wastewater disposal would need to be engineered, and could lead to detrimental environmental effects, especially in the event of flooding. Land uses that would increase human population would most likely lead to a decrease in native animal populations within the THP area. For these reasons this alternative, although feasible, is highly unlikely to come to fruition unless economic, social, and environmental conditions in Sonoma County change radically.

(7) 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 timber production, even though postponing the operations would delay the Forest Manager/RPF from maximizing the productivity of the stands in the THP area, as required by the Forest Practice Act and Forest Practice Rules, as well as allow for the risks of wildfire starting off property to be increased by a lack of action and

time. Such postponement would also delay implementation of the management techniques that will lead to a reduction in hazardous fuel loading, and a reduction in the total sediment deliveries to downstream resources.

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 addressing current issues regarding both roads and forest stand conditions. 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. Accordingly, this alternative was not considered further because it is inconsistent with the requirement to maximize sustained productivity of timber stands while complying with all applicable laws and regulations, and meeting the purposes, needs and objectives of the THP.

IV. COMPARISON OF PROJECT ALTERNATIVES

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

No Project:
The owner of the parcel upon which the Steam Donkey THP is proposed is affiliated with Redwood Empire Sawmills which owns and operates local sawmills inland from the Gualala holdings, and has made significant investments in that milling infrastructure, which needs to remain working in order to recover facility improvement and maintenance costs. The landowner acquired the land that constitutes the Steam Donkey THP area for the exclusive purpose of growing and harvesting timber to achieve MSP (as *required* by the Forest Practice Act and Forest Practice Rules) and reducing dependence on purchasing logs in the open market; such purchases result not only in foregone economic benefits for the local community, but also greater environmental impacts. Such adverse impacts include, but are not limited to, the transportation/import externalities (e.g., increased GHG emissions from trucks) and the less stringent environmental regulation of timber harvesting in Oregon, Washington, and all states other than California. This project – which will "locally source" timber -- is one of many needed to allow the landowner to operate a viable business that benefits Mendocino and Sonoma Counties and their North Coast communities and, that, at the same time, provides the revenue needed to continually provide for the stewardship and maintenance of timberlands – and their sustained productivity -- as mandated by the Forest Practice Act and Forest Practice Rules, as well.

Alternative Harvest Approaches:
Other harvest approaches as discussed are neither feasible nor necessary given the THP's robust impact avoidance and compliance with the CA Forest Practice Rules. The RPF has exercised professional judgment and has demonstrated proper justification for the silvicultural prescriptions chosen.

Single-tree selection in various forms and retentions cover essentially 95% of the THP, which for the landowner and the THP area is a better option than many of the other alternatives. Maintaining unevenaged silviculture throughout the property where stands are already exhibiting 3 age classes and have suitable conifer stocking levels, and are productive areas makes more sense for the landowner than converting to evenaged stands on a rotation. There are other parts of the property and THP that make more sense to treat as an even aged or special prescription due to the fact that there are not enough age classes present, the area is not productive and has lower conifer stocking. The variable retention silvicultural method is suitable for stands that have desirable ecosystem characteristics that can be retained, in this case using aggregated retention. An even lesser intensity of harvest would not be financially viable and would not allow productive restoration of the stand. Helicopter yarding would be cost prohibitive, present human safety concerns, and may not be possible, in any event, because of the 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 to protect valuable resources within a sustainable and productive harvest. The THP review process also allows the public the opportunity to comment on those same aspects of the proposed plan. In addition to the financial impacts already noted, a lighter harvest than that proposed would not fulfill the intent of the ASP Rules to restore habitat for anadromous salmonids by creating a diverse forest structure and promoting the growth of the largest trees. 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's potential impacts are being avoided or addressed by requirements of the CA Forest Practice Rules, such that impacts are less-than-significant, 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 private residences. In addition, operating on an alternative location would be less suitable for achieving MSP across the GRT property.

Public Acquisition (conservation easement or public purchase):
This would avoid any potential impacts of this THP (as noted above, any potential impacts of the THP have been addressed by requirements of the CA Forest Practice Rules such that impacts are less-than-significant). However, it is not feasible because the likelihood of either occurring in the near or even distant future is remote and speculative. It is very unlikely that an agreement on

purchase price could be reached. The landowner is not a willing seller at this time for the reasons provided in the discussion of the "No Project Alternative," above. Public acquisition is further complicated by the location of the THP area. The four haul roads associated with the THP represent the only access routes to the THP that do not encroach within properties not owned by Gualala Redwood Timber LLC. Opening this area to public access would be highly likely to present safety hazards associated with conflicts between public recreational use and the operation of logging equipment and log truck traffic.

Alternative Land Uses:
Some of the alternative land uses described above are feasible, but not environmentally superior to the project as described in the THP; indeed, they are environmentally inferior. If implemented, these alternative uses would likely result in significant adverse environmental impacts that exceed any potential impacts of the proposed timber operations as described in the THP. Given the intended use of timberlands zoned TPZ, the proposed project best fits both the intended use for timber production and the landowner's objectives set forth in the THP.

Timber harvesting is the expected and required activity on the parcels that the THP overlays and is compatible with the surrounding land use zoning. The proposed THP is consistent with the Sonoma County Municipal Code and the current zoning. Because other allowed alternative land use(s) or change(s) in zoning would not meet any of the basic objectives of the landowner, and the environmental impacts from the development activities for those other land uses would exceed any potential impacts of the proposed timber operations as described in the THP, this alternative was rejected.

Alternative Timing:
Though this alternative is feasible, delaying implementation of the project to a later point in time would not address current issues and conditions within the project area. Delaying this harvest will prevent rehabilitation efforts from taking place, resulting in more years of the stand remaining unhealthy. Operations elsewhere will result in further delays to the harvest and planned reentry sequence of these areas, which does not align with the requirement of Maximum Sustained Production within the ownership boundary. Accordingly, this alternative is rejected because it is inconsistent with the project objectives of managing these areas on a periodic re-entry basis.

Finding
Because the prescription and harvesting plans rely entirely on silvicultural systems that are well suited to the stand type and environmental conditions, they will not result in significant adverse environmental impacts. Therefore, the proposed plan has been 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.

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SECTION II ITEMS

ITEM 14 (B) – SILVICULTURAL METHODS
The silvicultural prescriptions for this THP include *Coastal Commission Special Treatment Area, Variable Retention, Single Tree Selection* and *WLPZ-Selection.* The current stand conditions and post-harvest stocking levels for the Variable retention unit are described below.

Variable Retention

Harvest with variable retention is intended for one unit totaling 35 acres with approximately 5.25 acres of retention. The proposed variable retention area is dominated by small to medium sized tanoak with scattered larger and mid-sized conifers such as redwood, Douglas-fir and Bishop pine. Ages of the dominant and co-dominant conifer overstory component are generally 40-60+ years old. Generally, trees of all merchantable DBH sizes are targeted for removal outside of the aggregate units. Within the aggregates, trees of all size classes present in the pre-harvest stand will remain. The timber stand, which has developed since the last harvest and is characterized primarily by an irregular aged stand with scattered large and medium-sized redwood and fir, and light scattered pine species, with heavily stocked tanoak of varying sizes.

Unit	Acres	Minimum Retention
VR 1	33	15% Aggregate – 4.95 acres

Objectives of Aggregated Variable Retention

- maintain patches of undisturbed forest and hydrologic habitat into the new stand.
- contribute to maintenance of geologic slope stability.
- avoid operational problems by retaining problem trees and areas.
- retention of trees adjacent to wet areas and Class III's
- maintain trees with high biologic value.

Stand elements to be retained to meet objectives identified above:

The plan proposes to use aggregate retention in Unit 1, retaining intact forest patches. No harvest of trees within the aggregated retention areas is proposed during the initial entry unless a tree needs to be felled for safety reasons. The aggregate patches are "No-harvest" and will be flagged with pink "Do Not Cut" flagging, however aggregates may be used for skidding and/or equipment ingress and egress if needed to properly operate the unit. MSP will be met pursuant to 14 CCR 913.11(c).

Below is a table for the pre and post-harvest basal area by species within the unit; the second table breaks these basal areas down into diameter classes by species. These estimates are based on inventory and ocular estimates.

Unit 1

Acreage:	33 acres			
Unit:	1	Silviculture:	Variable Retention-Aggregate	
Species	Species Composition (%)	Pre-Harvest Basal Area (ft²/ac.)	Desired Post-Harvest Basal Area (ft²/ac.)	Approximate Basal Area Removed (ft²/ac.)

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Redwood	35%	20	10	10
Douglas-fir	10%	20	5	15
Pine	5%	5	5	0
Hardwoods	50%	60	15	45
Total	100%	105	35	70

Estimate of Pre- and Post-Harvest Basal Area/ Acre

Diameter Class (dbh, in.)	Redwood (pre)	Redwood (post)	Douglas-fir (pre)	Douglas-fir (post)	Pine (pre)	Pine (post)	Hardwoods (pre)	Hardwoods (post)
	(ft²/ac.)							
2-6	2	1	1	1	1	1	10	1
8-12	4	3	4	1	2	2	20	6
14-18	6	2	7	1	1	1	20	4
20-24	3	2	4	1	1	1	7	2
26-30	2	1	1	0	0	0	2	1
32-36	3	1	2	1	0	0	1	1
38-42	0	0	1	0	0	0	0	0
44-46	0	0	0	0	0	0	0	0
46+	0	0	0	0	0	0	0	0
Total	20	10	20	5	5	5	60	15

Regeneration Plan:

Site Preparation

Tanoaks and other small to medium sized hardwoods may be either cut, removed and piled for burning, cut and left within the unit, or treated with herbicides or some combination of these treatments in order to ensure that group B species do not occupy more area than group A species post-harvest, as compared to pre-harvest conditions, as well as to ensure the stand is prepared for regeneration of conifer species. Planting of conifer post-harvest will also ensure Group A occupancy.

Method of Regeneration

Conifer tree seedlings (redwood and Douglas-fir) shall be hand planted (13'x13') the first or second winter season following completion of timber operations in these units, where natural regeneration is not present or sufficient. In-growth through natural regeneration is also anticipated from nearby aggregates, and by the sprouting of redwood stumps.

ADDITIONAL ITEM 14 (B) POST-HARVEST STOCKING REGARDING VR UNITS

Standard Rule: 913.4 (d)(1): In the plan, the RPF shall describe in sufficient detail to provide for review and evaluation: the trees and elements retained, the objectives intended to be achieved by retention, the distribution and quantity of retained trees, the intended time period of retention, and any potential future conditions or events the RPF believes would allow harvest of retained trees. The RPF may explain and justify, and the Director may approve a plan which **indicates up to 50% of retained trees are intended for harvest during future Intermediate Treatments** of the regenerated portion of the harvest area where such harvest(s) are consistent with stated Variable Retention objectives.

Standard Rule 913.4 (d)(3)(k):

(3) The following retention standards shall be met:

(K) Trees shall be retained for at least 50 years unless a shorter period of time is described in the plan, explained and justified by the RPF, and approved by the Director.

Explanation: Aggregate retention groups shall be at least ¼ acre and larger. These groups shall be located and distributed throughout the units protecting topographic features such as headwall swales, rock outcrops, as well as intact forest patches and Class III watercourse ELZs. Aggregates may also be located around unique habitat features of the unit such as springs/seeps, old growth trees, nest trees, large woody debris and/or snags, where present. Aggregates shall be flagged prior to operations. Aggregates are not to be entered during this harvest, but it is proposed that during the time of intermediate treatment of the logged portion of the VR, up to 50% of the trees in the retained patches may be harvested, if VR is to be used in the future.

Justification: The area inside of aggregate patches may, at the time of intermediate treatments of the regenerated portion, may be entered and up to 50% of the retained trees within the patches may be harvested or treated to reduce fire hazard and fuel loading

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where present. Reforestation work in subsequent entries and sustainable harvesting methods being implemented as outlined in the THP. The stocking standards of 14 CCR 912.7 (b)(1) will be met within five years following completion of operations. All retained trees/patches will be protected to the extent feasible during timber operations consistent with 14 CCR 913.4 (d)(6). Harvests outside of retention are intended to regenerate and restore conifer growth, and reduced fire hazard and fuel loading. While aggregate units will currently contribute to slope stability and provide ground cover, these areas still tend to be overstocked with smaller hardwoods/ tanoak and are currently inhibiting conifer growth and reducing stand health. If no treatments were to occur for another 50 years, it is likely that many conifers and conifer establishment within some of the aggregates will be outcompeted by hardwoods and limited regeneration will occur.

ITEM 27(a) & (f): WLPZ FACILITIES- Roads, Landings, and Skid Trails.
Standard Rule: 14 CCR 916.3 (c) 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, existing landings and skid trails that are within the WLPZ of Class II-S and Class II watercourses are proposed for use.

Explanation: There is one landing located along a road partially within the WLPZ of a Class II (non-ASP) watercourse, there is one Class III tractor crossing (T2) that may be wet during operations located inside of the WLPZ of a Class II-S watercourse and wet area, and 2 segments of WLPZ skid trails near T1. Map point T1 is a Class III watercourse tractor crossing within the WLPZ, and has associated skid trails proposed for use (see Section II, Item 27 In-Lieu Practices Table.). The landing and crossing for Item 27(a) and (f) are labeled as map points **L2 and T2** in the Road Point Table in Section II Item 24.

The landing is on an existing seasonal road, in good condition and does not have any significant existing associated erosion issues. T2 is an existing tractor crossing on a Class III watercourse, within the WLPZ of a Class II-S, with a wet area located above the trail crossing. Because of the wet area located above the trail, the crossing may be wet during the time of operations. In the case that it is wet, a minimum 4" culvert shall be used at the crossing, as stated in Item 26. This crossing is stable and in good condition and would benefit from being restored to natural channel gradient after operations. WLPZ landings, roads and skid trails are shown on the THP Roads and Features Maps and Yarding Methods Maps in Section II.

Justification: The proposed practices differ from the standard practice as portions of existing roads, landings and skid trails that are within the WLPZ of wet areas, Class II-S (ASP) and Class II (non ASP) watercourses are proposed for use. The landings and associated skid trails described above as **map points L2, T2 and trails** are existing facilities that have been used in previous operations. These facilities have all been examined and show little to no adverse impacts from this past use.
The following measures will provide protection equal to the standard rule to the beneficial uses of water:

* Operations on these trails and landings 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 these trails shall not occur between November 15th – April 1st.

* To minimize soil disturbance within the WLPZ that could produce sediment runoff, the trails shall be water barred to high erosion hazard rating standards and the water bars shall be directed into clumps of vegetation when possible.

* To minimize soil disturbance within the WLPZ that could produce sediment, these portions of WLPZ landings shall be seeded and/or mulched and drained with rolling dips and/or waterbars.

* T2 tractor crossing, whether a culvert is needed during operations or not, shall be removed prior to the winter period of use by excavating the channel to watercourse grade, laying back the banks 1.5H:1V, and treating the exposed soil as per Item 18.

Section III: Steam Donkey THP Supporting Documentation – ITEM #36 Cultural Resource Information

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

   a. Name(s) of current cultural resources surveyor(s): **Dylan Roberts, Madeline Green, Kate Cahill, Jamie Pusich**
   b. ☐ **Yes** X **No** Was the cultural resources survey conducted by professional archaeologist?
   c. X **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 #: **188, 183R, 186R, 169R**
      b. Date training course was completed: **10/14/22, 11/10/21, 5/4/2022, 3/2019**

2. **Archaeological Records Check Information**

   a. Date of Records Check Conducted by Information Center: **8/15/22**
   b. The Information Center File Number: **22-0271**

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: **1/1/2023**
   c. Date notification was sent: **4/18/2023**

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. X **Cursory:** A cursory reconnaissance is one in which the surveyor gives areas of low sensitivity a quick field inspection rather than intensive coverage.
      ii. X **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. X **Complete:** Intensive examination of high probability areas.

   b. Date(s) the survey was conducted: September 7, 16, 21, 22 & 28, 2022 (Cursory), November 7, 2022 (Intuitive), November 3 & &, 2022 (Complete).

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.

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