

SECTION III

GENERAL DESCRIPTION OF PLAN AREA

PROJECT LOCATION:

The THP is located approximately 0.75 miles south of the town of Guerneville in Sonoma County, California. The plan is located West of Mays Canyon Road and to the north of Neely Road, just outside the town of Guerneville, CA. The proposed operations are located in portions of: Sections 31 and 32, Township 8 North, Range 10 West, and Section 5, Township 7 North, Range 10 West, Mount Diablo Base and Meridian. The following watercourses receive drainage from the proposed timber harvest plan: Mays Canyon Creek and the Russian River.

SOILS AND TOPOGRAPHY:

The plan area contains highly variable topography with slopes facing various aspects, the plan is situated on the south side of the Russian River and the east side of Mays Canyon Creek. Elevations within the plan area range from 40 feet to 760 feet above sea level. Slopes range from 0 to 85% with the average slope on the plan area being approximately 45%.

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

HkG: Hugo very gravely loam, 50-75% Slopes
HIG: Hugo-Atwell complex, 50-75% Slopes
HnG: Hugo-Josephine complex, 50-75% Slopes
YIA: Yolo sandy loam, 0-2% Slopes

The **Hugo very gravely loam** is a well-drained, very gravely loam that has a sandy clay loam subsoil. At a depth of 30-60 inches the soil is underlain by weathered, fine-grained sandstone and shale. This soil typically exists on mountainous uplands. The vegetation on this type of soil is mainly Douglas-fir, redwood, and California bay-laurel, with an understory of associated hardwood species.

The **Hugo-Atwell complex** is made up of 75 percent Hugo soils, 20 percent Atwell soils, and about 5 percent Hely soils. The Hugo soils have a profile similar to the Hugo very gravely loam, and the Atwell soils have a profile similar to the Atwell clay loam. With steep slopes runoff tends to be rapid for both soil types. This soil is mainly used for timber production.

The **Hugo-Josephine complex** is made up of 60 percent Hugo very gravely loam, and 40 percent Josephine loam. The Hugo soils have a profile similar to the Hugo very gravely loam, and the Josephine loam has a profile similar to the Josephine loam. With steep slopes runoff tends to be rapid for both soil types. This soil is mainly used for timber production, specifically Douglas-fir and redwood.

The **Yolo sandy loam** is a well-drained loamy soil that is underlain by recent alluvium from sandstone and shale. This soil exists primarily on the alluvial fan and flood plains. They are mainly in the Valley areas of Sonoma County along the Russian River, Dry Creek, and other major drainages. Where not cultivated the vegetation is mainly annual and perennial grasses, forbs, shrubs, wild berry vines, and scattered oak trees. These soils are mainly used for orchards, vineyards, row crops, and truck crops.

The erosion hazard ratings for the plan area are moderate and high. An Estimated Surface Erosion Hazard form is included in Section V.

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. The 39-acre alluvial flat adjacent to the Russian River is considered Type II Timberland.

WATERSHED AND STREAM CONDITIONS:

The plan area is located within the Pocket Canyon (1114.110301), Hulbert Creek (1114.110302), and Dutch Bill Creek (1114.110303) planning watersheds. The plan is located adjacent to the Russian River and Mays Canyon Creek, both Class I watercourses. Mays Canyon Creek is a tributary to the Russian River and receives drainage from the plan area. There are numerous Class II and Class III watercourses within and adjacent to the plan area. There is also on Class IV watercourse. The watercourses on the plan area were walked, classed and checked for erosion, channel stability, canopy cover, LWD and aquatic habitat.

The Russian River watershed was listed on the 1998 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 Russian River watershed, the listing was the result of water quality problems related to sedimentation and temperature throughout the watershed.

The primary adverse impacts associated with excessive sediment in the Russian River pertain to the anadromous salmonid fishery. The water quality conditions do not adequately support several anadromous salmonid species present in the Russian River and its tributaries, which has contributed to severe population declines. The populations of chinook salmon (*O. tshawytscha*), and 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 beneficial uses and water quality objectives for the Russian River are contained in the *Water Quality Control Plan for the North Coast Region* (Basin Plan) as amended in 1996 (NCRWQCB 1996). The beneficial uses impaired by excessive sediment in the Russian River are primarily those associated with the Russian 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 Russian 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 Russian 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).

VEGETATION AND STAND CONDITION:

Vegetation on site consists of mainly Redwood (*Sequoia semiprevens*), Douglas-Fir (*Pseudotsuga menziesii*), Tan-oak (*Lithocarpus densifloris*), California Bay-laurel (*Umbellularia californica*) and Madrone (*Arbutus menziesii*), with Coyote brush, white thorn, black berry, blue blossom, salal, and seasonal and perennial grasses also present. Exact species composition of a given stand depends on elevation, aspect, soils, stand history, and proximity to watercourses.

The area currently exhibits a generally unbalanced and uneven aged stand structure. Stands are highly variable with trees in a wide range of ages and diameters. Current stocking levels are also highly variable with generally overstocked, patchy stands of conifer interspersed with varying levels of hardwood species in the proposed selection and transition silvicultures. Timber site class III exists throughout the plan area. Site II timberland is present in the 39-acre alluvial flat adjacent to the Russian River.

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. When located near openings (grasslands), large wolfy limbs are common. Fire related defect is evident in the older trees.

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 (*Phaeolous 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.

A portion of the plan area was harvested in 2002 under the "Mays Canyon" THP (1-02-179 SON) using Selection and Seed Tree Removal silvicultures. Another portion of the plan area was harvested in 2001 under the "Neely Hill" THP (1-01-012 SON) using Selection and Alternative Prescription silvicultures focused on thinning redwood clumps. The last small portion of the plan was harvested in 1998 under the "Silver Estates" THP (1-98-253 SON) using Shelterwood Removal and Shelterwood Prep silvicultures.

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 those applicable to flood prone areas in 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(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.

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.

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 owned by Roger and Michelle Burch, or their Successors, of the RMB Revocable Family Trust, Dated February 1999. Roger and Michelle Burch own timberland throughout Sonoma and Mendocino counties as a 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. Redwood Empire has been doing business in Sonoma 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 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 Sonoma 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 Guerneville 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 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 flood prone areas 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).
- (3) To manage the flood prone areas to meet the intent of the ASP Rules, while also maximizing timber stand growth and production over time for forest products -- i.e., maintain or increase Maximum Sustained Production (MSP).
- (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 are mitigated to less-than-significant levels by the methods prescribed in the Forest Practice Rules, and by inclusion of other site-specific measures identified by the RPF and recommended in the multi-agency, interdisciplinary, review team process.

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 project as proposed, which includes 51 acres of single-tree selection logging, 33 acres of group selection silviculture and 140 acres of transition silviculture (within the THP footprint), 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 single tree selection and group selection areas is very "light" and operations will occur primarily on flat and gentle ground with moderate erosion hazard or moderately steep ground with high erosion hazard. 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.

(2) No Project Alternative:

The No Project Alternative on these timberlands, although feasible, would not achieve any of the purposes, needs or objectives set forth above. 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 reduce both the local employment base and revenues to the State and Sonoma County generated by the yield taxes. It would not decrease the need for forest products, but could negatively impact the supply. This could potentially be offset by relying on timber harvest from areas outside of California, where significant environmental effects are not required to be mitigated. Although this alternative is clearly inconsistent with the project objectives, the CEQA guidelines nevertheless require that the No Project Alternative be evaluated. 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). The No Project Alternative would avoid potential environmental impacts that might occur in connection with the proposed timber operations. For example, any individual or cumulative impacts on fish and wildlife, water quality, or stand health and vigor would not occur if the THP were not carried out. The No Project Alternative would lead to non-operation on a portion of the ownership that is capable of producing long-term forest values. Because at least one fifth (51 acres) of this plan is in areas that are the most productive areas (single tree selection on Timber Site Class II/III) on the landowner's holdings, the overall productivity of those holdings would be reduced. This would place additional pressure to harvest on steeper, potentially more erosive and less productive timberlands within the landowner's holdings.

The No Project Alternative is inconsistent with the purposes of the project and addresses neither its needs nor objectives. The No Project Alternative is not environmentally superior to the Project as Proposed in the THP. If implemented on this THP, the No Project Alternative would result in significant adverse economic impacts and would slow the recovery of the flood prone forest stands in reaching the ASP Rules' intended goal of a restored forest stand and structure that benefits anadromous salmonids. Furthermore, the No Project Alternative would not provide an opportunity for the Plan Submitter to correct existing environmental problems related to sediment (Section II, Item 38 details specific treatments).

As has been previously stated, 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 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. Landowners are taxed at rates consistent with this idea, and are expected to harvest timber in order to maintain that zoning. 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. Therefore, the No Project Alternative is inconsistent with the zoning of the land.

(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.

Single Tree Selection (Flood Prone Area):

Per the objectives of the ASP Rules, “[a]ny timber operation or silvicultural prescription within any watercourse or lake protection zone shall have protection, maintenance, or restoration of the beneficial uses of water, and properly functioning salmonid habitat and listed aquatic or riparian-associated species as significant objectives.” 14 CCR § 916.9(c). There is a prescribed 30-foot no cut zone from the top of the watercourse channel vegetation transition zone (from the edge of the Channel Migration Zone to the adjacent flat). Inner Zone A is flagged/delineated at 150 feet from the Watercourse Transition Line, and consists of the area between the Core Zone and 150 feet. Inner Zone B represents the edge of the flood prone area. The width of this area is variable and is determined by the extent of the flood prone area. The ASP Rules specify that for the next 70 to 120 feet, “harvesting prescriptions in inner flood zones (Inner Zone A) should focus on practices that use ‘thinning from below’ and silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection.” 80 percent canopy must be retained post-harvest. When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand. 14 CCR § 916.9 (f)(3)(C). If an inner Zone B is present (from the end of Inner Zone A to the toe of the slope where it starts to rise off the floodplain) the silvicultural prescription is also limited to commercial thinning and selection. The thirteen (13) largest trees per acre must be retained in both Inner Zone A and Inner Zone B. With canopy retention of 80 percent or more in Inner Zone A and canopy retention of 50 percent or more in Inner Zone B, these requirements amount to leaving a majority of the trees in a dominant stand position that are present upon each harvest entry. The intent of these related requirements is to provide for the recruitment of large woody debris to streams and canopy cover to maintain cooler stream temperatures, over the long term. As those conditions become more prevalent, intermediate, smaller understory (suppressed trees) and brush will correspondingly decrease due to shading, thereby lessening fire risk.

Thus, there are no alternative silvicultural prescriptions for operations conducted in a flood prone area other than an even “lighter” harvest (decreasing harvest to less than 20% canopy retention in Inner Zone A and less than 50% canopy retention in Zone B), which would leave even more dominant, co-dominant, intermediate and suppressed trees per acre. However, the volumes removed in harvesting less would be so low that harvest would not be economically justifiable. Moreover, using an alternative that employs an even lighter harvest than provided for by the ASP Rules would hamper the large tree growth that thinning from below promotes.

Group Selection:

Several upslope areas of the plan are being harvested using group selection silviculture in consideration of the proximity to Neely Road, and some sprinkler systems associated with the Russian River County Sanitation District Water Treatment Plant. Furthermore, certain stand characteristics and density of mostly redwood and Douglas-fir that lend themselves to group selection silviculture; because of the healthy multi-age stands that exist, other silvicultural options such as clearcutting, variable retention, or other even-age type prescriptions would remove the vigorous younger trees and not meet the goals of 14 CCR § 913.11 for Maximum Sustained Production of High Quality Timber Products (MSP).

Transition Silviculture:

Several upslope areas have been designated for transition silviculture because of their unbalanced irregular or evenaged structure. Implementation of the transition silviculture in these types of stands allows an evenaged stand to “transition” into an unevenaged stand. Unevenaged management attributes include the establishment and/or maintenance of a multi-aged, balanced stand structure, promotion of growth on leave trees throughout a broad range of diameter classes, and encouragement of natural reproduction.

Special Treatment Zones:

Several special treatment zones have been identified by a Professional Geologist and overlay the single tree selection, group selection, and transition silvicultural prescriptions. The recommendation for each STZ can be found in Item 14, however in general they provide for higher basal area retention.

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.

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 and cable yarding (ground and aerial) were chosen as the least damaging alternative for removing logs.

Tractor yarding within the flood prone area is an in-lieu practice to 14 CCR § 916.4(d) Watercourse and Lake Protection but is allowed by the FPR if explained and justified. Tractor yarding was chosen for this THP based on the flat topography of the flood prone areas, the relatively gentle slopes in the remainder of the THP area (with the few exception skid trails identified, explained,

and justified) and the existing stable access infrastructure (skid trail and roads). The RPF expects surface erosion would be very minimal in the ground-based tractor units. Operations in the Flood Prone area of the plan follow the Preferred Management Practices in the Inner Zones A and B of flood prone areas specified by the FPR (14 CCR § 916.9 (f)(3)(E)) and explained and justified in Section III Item 27(a) and (f) of the THP. The existing landings with associated skid trails located a Class I watercourse (Russian River) WLPZ flood prone area. These existing landings and skid trail systems have been used in previous operations. The trails have been examined and they show little to no adverse impacts from previous use. Operations on these trails shall be limited to dry, rainless periods, shall be water barred to high erosion hazard rating standards, shall be slashed, and have been flagged in the field by the RPF. All mitigation measures can be found in Section III, explanation and justification for Item 27(a) and (f). Equipment will keep the blade raised during skidding to reduce soil movement.

Other portions of the plan with permissive slope gradients will be harvested using tractors, as there is an existing network of stable skid trails that can be reused that feed into the existing road system. A Professional Geologist has evaluated the THP area and has made recommendations (in Section V of this THP) concerning the use of heavy equipment on unstable areas. NO significant adverse impacts are expected to occur due to operating ground-based equipment on unstable areas. In some cases It is not feasible to cable log these steeper upslope areas without building a new road system in one location and also because of the lack of tailholds in the other location. Installation of a new road system would result in significant environmental impacts. Mitigations 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 ground-based long-lining from the main haul roads in the flood prone area is a feasible option that was considered. This yarding method would entail pulling a cable out from a skidder placed on the main haul road and dragging logs to the road along the ground. This yarding method is inferior to use of tractors as it creates more disturbance. Cable long-lining from the main haul road will likely create more exposed soils within the flood prone areas because logs would have to be dragged over greater distances creating troughs and potentially pulling logs through sensitive low lying areas. Also, cable long-lining will result in more damage to the residual forest stand from logs rubbing against and/or bouncing off the boles of the residual stand and tearing bark off the trees as logs will need to be pulled in a straight line to existing roads over longer distances than would be the case with tractor skidding.

Skyline cable (aerial) yarding was also considered, and was determined to be the best yarding method for retrieving trees from the steeper slopes above Mays Canyon road, and the slope north of the flood prone zone and adjacent flat. The location of the roads, and the steep topography allows for good deflection and little to no ground disturbance. Furthermore, the slope above Mays Canyon road has many Class II and Class III watercourses traversing it. Using the cable yarding method will eliminate the need for heavy equipment (i.e. skidders) to cross these watercourses, which is always desirable.

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 within the floodplain 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 ASP Rules in the flood prone areas, there should be no measurable project or cumulative impacts to watershed, biological, or soil resources, regardless of harvest area size. 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, extremely steep slopes, and areas of low conifer stocking. 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. 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 because they are more suitable for harvest at this time, in comparison to other areas of the property 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. In fact, due to the very low impact nature of the harvest in terms of canopy removal and ground disturbance, selective harvests, are among some of the lightest impact operations on the entire property. Furthermore, the silvicultural prescriptions and operational impact avoidance and mitigation requirements are especially restrictive for timber harvesting in flood prone areas because of the WLPZ Rules and the ASP Rules, reflecting the relatively more ecologically sensitive character of those areas for impacts to water quality and salmonids. Nonetheless, 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. Moreover, and in any event, 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 flood prone 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. In this case, because some of the THP is on lands in a flood prone area adjacent to the Russian River it has potential impacts that would not be potential impacts in areas that are not flood prone. However, because floodplains comprise a high percentage of the landowner's holdings in both Sonoma and Mendocino counties and are the landowner's most productive timberlands, at some point harvesting will occur at these locations. The only way to avoid the potential impacts of harvesting in flood prone areas would be to forgo timber harvesting in any of them. However, as noted, the lands are zoned Timberland Production Zone. They were so 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 is not willing to refrain from lawful and responsible management of its timberlands, including flood prone areas. 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. The remainder of the THP, located in upslope areas, while not determined to have negative cumulative impacts due to management has grabbed the attention of many residents of Guerneville due to its close proximity. Harvesting elsewhere is not an option in these areas, because the landowner has purchased and has made a commitment to actively manage timberlands both in rural and more residential settings. The landowner is not willing to refrain from lawful and responsible management of its timberlands, including areas that are surrounded by a denser human population, especially when the proposed management activities will in fact benefit the surrounding community (wildfire hazard reduction and reduced sediment delivery into streams). 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 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. The Conservation Fund has recently thinned 71 acres of its flood plain lands in the Big River drainage under THP 1-10-030 MEN (the Picolotti THP), pursuant to the same WLPZ and ASP Rules authorizing, and governing timber operations proposed in a portion of this THP. 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 unwilling at this time to consider 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 Silver Estates 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 presently unwilling to consider 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 portions of the plan are located within the Russian River Sanitation District's easement grant. Any change in ownership would likely affect the agreement that has been made between the Sanitation District and the landowner regarding the use of the flood prone zone (adjacent to the Russian River) to dispose of effluent during the summer months. This is a critical component of the Sanitation District's operations and any changes in property ownership has the potential to jeopardize the lease agreement. Furthermore, public acquisition of the area could be controversial and potentially dangerous from a human health standpoint, unless proper remediation efforts are made.

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) per Sonoma County General Plan 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 General Plan

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 Use on Forest Lands Designated Timberland Production (TP) District by Sonoma County:

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 permit a development in a flood prone area due to the safety hazards associated with flooding. The new, authorized use/development would need to avoid and mitigate possible significant adverse environmental impacts as a condition of a zoning change and of the new use. However, 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 flood attenuation. Wastewater disposal would need to be engineered in the flood plain areas, 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. 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, 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 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 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 Silver Estates THP is proposed also owns and operates local sawmills inland from the Guerneville 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 Silver Estates 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 mitigation measures. The RPF has exercised professional judgment and has demonstrated proper justification for the silvicultural prescriptions chosen. The already highly-restrictive single tree selection and group selection silvicultural prescriptions governing 38% of the plan is made all the more so by the retention standards of the WLPZ/ASP Rules and additional recommendations made by the Professional Geologist. The Transition silvicultural method is another form of selective harvest in which an evenaged stand is transitioned to a multi-aged stand with complex structure and several age classes. An even lesser intensity of harvest would not be financially viable. 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. 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 mitigated to 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 landowner’s 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 mitigated to 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 and the lease/easement agreement that has been made between the landowner and the Russian River Sanitation District.

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 General Plan 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 neither avoid nor mitigate potential significant adverse environmental impacts. Instead, delaying harvesting would simply push any potential environmental impacts into the future. Operations elsewhere, if outside of the flood prone areas, will result in further delays to the harvest and planned reentry sequence of these areas. Accordingly, this alternative is rejected because it is inconsistent with the project objectives of managing these areas on a periodic re-entry basis. It would also frustrate management of the landowner's timberlands for MSP and restoration of stands in flood prone areas to benefit salmonids.

Finding

Because the majority of the THP as proposed follows the restrictive WLPZ and ASP Rules for timber harvesting within a flood prone area, relies entirely on selective and unevenaged silvicultural systems, 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

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

Redwood Empire Sawmills is authorized by Roger A. Burch, Trustee of The RMB Revocable Family Trust, Dated February, 1999, to submit THPs for the Trust. As Resource Manager of Redwood Empire Sawmills, Nick Kent is authorized to sign as plan submitter.

ITEM 21(b): CABLE WITH TRACTOR EXCEPTION

Item 21(b): Tractors may be used on existing skid trails, in good condition within cable areas, to swing long corners, blind leads, and in areas of poor deflection. Tractors may also be used for guyline anchors. Tractors used in these areas will be limited to <50% when EHR is high and <65% where EHR is low and moderate. Any tractor operations in areas on >50% slope, shall be limited to existing skid trails that do not require reconstruction or ridge-top areas that require no cut/fill construction. A Redwood Empire representative must approve all instances, prior to use, in which tractors may be used as described above.

Explanation: It is proposed to allow for limited tractor operations in the cable yarding area under the scope of this plan. 14 CCR 914.3(e) disallows this practice unless the RPF explains and justifies the practice. 914.3(e) also spells out the limitations regarding this practice. Section II, item #20 of the THP itemizes said limitations.

Justification: To protect residual timber and riparian zone vegetation and minimize breakage of harvested timber it is necessary on occasion to use tractors in conjunction with the cable yarder to pull trees or logs directionally or guide material during operations. Where ground and stand conditions are present, tractors can be very beneficial, the final results preferable to solely cable yarding in these circumstances. Where deflection is low, tractors can be beneficial to the prevention of unnecessary soil displacement and the protection of residual timber through bunching and swing yarding. The overall effect in such cases will be to minimize overall ground disturbance while leaving the post-harvest stand in better condition.

Mitigation: Waterbars on these designated skid trails shall be spaced and constructed to meet the guidelines for the extreme erosion hazard rating.

ITEM 21(G): GROUND BASED EQUIPMENT ON UNSTABLE AREAS

Standard Rule: 14 CCR 914.2 (d) Heavy equipment shall not operate on unstable areas. If such areas are unavoidable, the RPF shall develop specific measures to minimize the effect of operations on slope instability. These measures shall be explained and justified in the plan and must meet the requirements of 14 CCR 914 [934, 954].

Explanation: An exception is being requested to 914.2(d) - Heavy equipment on unstable areas. This THP was reviewed by a licensed geologist whose recommendations have been made available in Section V. The areas where heavy equipment will be operating on an unstable areas has been identified in the Geologic Report at G1, G2, G3, G6, G10, and G12.

Justification: No significant adverse impacts are expected to occur due to operating on unstable areas. A licensed geologist (Timothy Best, Engineering Geologist # 1682) has evaluated these proposed operations and does not feel as though allowing tractor operations would lead to significant adverse impacts.

Tractor Operations in the Exception Tractor Area of STZ- 3 (Debris Slide Slope G12) shall be confined to existing mapped skid trails which can be seen on the Yarding Methods Map located at the end of Section II of this THP. There shall be no side casting of material when re-opening skid trails. Skid trails shall be water barred to extreme EHR standards following the completion of Timber Operations.

ITEM 21(h): GROUND BASED EQUIPMENT ON SLOPES OVER 65%

Item 21(h): There are areas within the THP in which tractor operations are proposed on skid trails where slopes are over 65%. The EHR in these areas is Moderate. The skid trails in these areas are identified as "Tractor Exception Trails" on the "Yarding Methods" maps at the end of Section II. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification.

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 are areas within the THP in which tractor operations are proposed on skid trails where slopes are over 65%. All of the exception skid trails that are to be used have been flagged and mapped for PHI. The areas were assessed for possible cable yarding and were determined to be unsuitable for cable yarding due to inadequate deflection and or blind leads. The existing skid trail network has been used in the past with no significant adverse effects. The tractor roads proposed for use with this harvest can be used in their current condition or with minor surface blading. Impacts will be minimized by using existing stable tractor roads with an emphasis on skidding away from watercourses and minimizing overall tractor road density. Water break spacing along these trail segments will be no greater than 50 feet. The skid trails in this area are identified as "Exception Skid Trails" on the "Yarding Methods" maps at the end of Section II.

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 certain areas of the THP that would otherwise be inaccessible. Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of maximum sustained production of high-quality timber products. 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.

Mitigation: Water bars on these designated skid trails shall be spaced and constructed to meet the guidelines for the extreme erosion hazard rating.

ITEM 21(j): GROUND BASED EQUIPMENT ON SLOPES BETWEEN 50-65% with MODERATE EHR

Explanation: There are areas within the THP in which tractor operations are proposed on skid trails where slopes are between 50% - 65%. The EHR in these areas is Moderate. The skid trails in these areas are identified as "Tractor Exception Trails" on the "Yarding Methods" maps at the end of Section II. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification

Justification: Cable yarding operations are not feasible in these areas due to poor deflection, property boundary constraints, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of maximum sustained production of high-quality timber products. 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.

Mitigation: Waterbars on these designated skid trails shall be spaced and constructed to meet the guidelines for the extreme erosion hazard rating.

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

14 CCR 916.3 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, existing landings and skid trails that are within the WLPZ of a Class I watercourse (Russian River and Mays Canyon Creek) are proposed for use.

1. These areas are explained and described in Section II under item 24 as map points **L1, L2, L3, and L4**.
2. The proposed practices differ from the standard practice as portions of existing roads, landings and skid trails that are within the WLPZ of I watercourses are proposed for use.

3. These areas are shown on the THP Roads and Features Map and WLPZ Operations Map in Section II.

4. 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 916 (936, 956).1(a) is described below and provided in Section II.

Explanation and Justification: The flood prone area adjacent to the Russian River is currently being utilized by the Russian River Water Treatment Center to dispose of effluent during the summer months. The stand of redwood has become heavily stocked and growth is stagnant. The stand has also created a thick closed canopy that limits the amount of evaporation which is important for the proper reduction of the effluent. The landings and skid trails described above are associated with map point L1, L2, and L3. L4 is an existing WLPZ landing adjacent to a Class I watercourse (Mays Canyon Creek) (See on Yarding Methods Map). L4 is a large rocked landing that is partially (Approx. 50 ft) within the WLPZ of Mays Canyon Creek. These are existing landings with associated skid trails located within a Class I watercourse (Russian River and Mays Canyon Creek) WLPZ flood prone area. These existing landings and skid trail systems have been used in previous operations. The trails have been examined and they show little to no adverse impacts from previous use. Alternatives to using these landings and trails would be to utilize helicopter or cable yarding methods. The relatively small volume of timber to be harvested prevents the use of helicopter yarding and the topography and lack of cable yarder settings prevents cable yarding.

The landings and associated skid trails described above as **map points L1, L2, L3, and L4** 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 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 trail 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.

Preferred Management Practices in the Inner Zone A and B of Flood Prone Areas:

1. **Minimize Yarding and Skidding-** Existing skid roads proposed for use within the WLPZ shall be flagged prior to the pre-harvest inspection, or before the start of operations if a PHI is not required. Skid roads were specifically selected for reuse to minimize the number of skid roads while protecting the hydrologic functions of the floodplain. Skid roads have been limited to the amount feasible.
2. **Minimize Soil Erosion and Prevent Discharge-** The running surface of skid roads on slopes greater than 10% shall be treated with straw or slash. Operations shall be conducted only when soil conditions are dry and stable. Avoid disturbance of vegetation not intended for harvest that could increase the likelihood of erosion or damages the reinforcing root network on the channel banks, including any secondary overflow channels. Roads shall be watered concurrent with operations in order to keep dust production to a minimum. Equipment used for skidding logs will operate with the blade raised to minimize soil disturbance.
3. **Avoid Road and Landing Use-** No new roads are proposed and use of existing roads and landings have been minimized to the greatest extent feasible.
4. **Avoid Slash Concentration and Site Preparation-** Logging slash shall not be disposed of or concentrated into side channels. When slash is treated within the flood prone areas, scatter slash and avoid piling or other concentrations that may obstruct flows within side channels. When possible/feasible concentrate slash and mulch in skid roads. No mechanical site preparation, broadcast burning shall occur in the flood prone area.
5. **Delineate Zone on the Ground-** This segment of the Russian River is classified as a Wide Flood Prone Area. The edge of the flood prone area, or “Inner Zone B” shall be flagged with WLPZ flagging. The width of this zone is determined by the extent of the flood prone area. The Core Zone (Channel Migration Zone edge to 30’) is not flagged on the ground, however, no trees are marked for harvest within the Core Zone. “Inner Zone A” is flagged with Solid Glo-Orange flagging at 150’ from the WTL, and consists of the area between the Core Zone and 150’. “Inner Zone A” has been

marked prior to the PHI to 80% overstory retention. "Inner Zone B" has been marked to retain 50% overstory prior to the PHI. The 13 largest trees per acre within Inner Zone A and Inner Zone B combined shall be retained.

6. **Avoid Use of Water Drafting Sites (in the flood prone area)-** Water drafting from inside the flood prone area shall not occur. Water for the purposes of dust abatement shall be procured from the Russian River County Sanitation Treatment Center adjacent to the Timber Harvest Plan.
7. **Avoid Disturbance to Critical Flood Prone Area Habitat-** No abandoned meanders, oxbow lakes, or other features that provide off habitat for fish during flood flows will be affected by the THP since they have been given protection zones and all skid trails have been flagged. No activities that increase the potential for diversion or avulsion of stream flow out of existing channel, including breaching or lowering the elevation of natural levees will occur. No large woody debris in the flood prone area will be harvested. Areas with concentrations of aquatic plants and obligate wetland plants are avoided and will not be filled.

ITEM 27 (j) ADDITIONAL IN-LIEU PRACTICES

(1) Trees may be felled, where necessary, to accommodate cable yarding corridors

Standard Rule: 14 CCR 916.5(e)(D) To ensure retention of shade canopy filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR § 916.4(b) [936.4(b), 956.4(b)], residual or harvest trees shall be marked, including a base mark below the cut-line within the WLPZ by the RPF, or supervised designee. In watersheds with [listed anadromous salmonids], trees shall be marked in advance of the preharvest inspection.

Explanation: As discussed in Section II, Item #27 (j); trees may need to be harvested in the WLPZ of Class I and Large or Standard Class II watercourses to accommodate cable yarding. These trees will not be marked prior to the preharvest inspection as the locations of the cable corridors will not be known until after this inspection. The exact location and requirements for cable corridors is dependent on equipment size, type and capability (i.e. running vs. standing skyline). The standard rule (14 CCR 916.5 (e) (D)) states "To ensure retention of shade canopy, filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR 916.4 (b), [936.4 (b), 956.4 (b)], residual or harvest trees shall be marked, including a base mark below the cut-line within the WLPZ by the RPF, or supervised designee. Outside of watersheds with threatened or impaired values, sample marking prior to the preharvest inspection is satisfactory in those cases where the Director determines it is adequate for plan evaluation. When sample marking has been used, the remaining WLPZ shall be marked in advanced of falling operations by the RPF, or supervised designee. In watersheds with threatened or impaired values, trees shall be marked in advance of the preharvest inspection..."

Justification: Due to the limited number of trees removed for this purpose, no significant adverse effects to beneficial uses of water are expected. Many corridors will likely retain all conifers in the WLPZ due to scattered overstory canopies or small tree sizes such that cables can be pulled through the existing canopy. As discussed in Section II, any trees felled for this purpose will comply with the canopy requirements in the FPR's. If trees are felled within the Class I Core Zone (0-30 feet), Large Class II Core Zone (0-30 feet) or Small Class II Core Zone (0-15 feet) they shall be left for large woody debris recruitment. This requirement is a disincentive for the LTO to fall any trees in these zones for this purpose, except those absolutely needed for safe cable yarding operations. The Class I Inner Zone B (150' to the edge of the Flood Prone Area), Large Class II inner zone (30-100 feet), and Small Class II inner zone (15-75 or 100 feet) shall have at least 50% overstory canopy retained post-harvest.

Removing the occasional hazard tree will result in greater protection to upslope soil resources through improved deflection and will provide for a safer work environment by removing those trees that could hang up cables during active yarding operations. The RPF or his supervised designee during the course of routine harvest inspections shall evaluate those corridors where trees are cut in the Class 1 WLPZ to ensure the canopy restrictions and other requirements discussed above are adhered to.

(2) In-Lieu practice for skid tail soil stabilization measures located within the WLPZ

Description of Proposed Operation: WLPZ skid trails and landings that are under 10% slope will not require stabilization measures such as straw mulching or slashpacking. WLPZ skid trails that are on slopes under 30% that are more than 150' from a Class I or II watercourse will not require stabilization measures such as straw mulching or slashpacking.

Standard Rule: 14 CCR 916.9 (n) states within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent the scharge of sediment into watercourses or lakes in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be described in the plan as follows.

- (1) Soil Stabilization is required for the following areas:

(A) Areas exceeding 100 contiguous square feet where timber operations have exposed bare soil.

Explanation and Justification: 916.9(n)(7) states that- where the natural ability of ground cover is inadequate to protect the beneficial used of water by minimizing soil erosion or by filtering sediment the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion. All of the skid trails in the WLPZ in question (FPA of Russian River) are on flat ground and are covered by a thick leaf litter that is replenished annually the thick overstory canopy. All Landings have a wide buffer of flat ground between them and a watercourse. To require mulching these skid trails and landings would introduce a great deal of non-native material into areas near watercourses without any benefit since soil movement off of these areas is very unlikely. Alternately, to require slash packing these trails would require a piece of equipment to grab slash from the surrounding are which is also part of the WLPZ and would result in more soil disturbance and compaction compared to leaving the skid trails to be covered by the inevitable natural leaf litter. In this area, the natural ability for the stand to provide ground cover adequately protects the beneficial uses of water.

Mitigation: All skid trails in the WLPZ have been flagged and the LTO will only be allowed to use flagged skid trails. Any WLPZ skid trail that traverses a slope greater than 10% or traverses a slope greater than 30% and is within 150' of a Class I or II watercourse will be slashed packed (to the standards in Item 18 Soil Stabilization Measures) and will be waterbarred. Any landing that is on slopes greater than 10% or is within 150' of a Class I or II watercourse will be slash packed (to the standards in Item 18 Soil Stabilization Measures) and waterbarred.