

**Initial Study – Project Memorandum and Notice of Exemption  
For the proposed  
Ruth Lake /Mad River Reforestation Project Trinity County, California  
State Clearinghouse Number**



The project area is located 1 mile from Ruth, CA, 70 miles east of Fortuna, CA and 52 miles west of Hayfork, CA in Trinity California at an elevation of 2,500'-3,800' feet. Location data is as follows: USGS 7.5-minute Quadrangle, Sections 19, 29, 30, 31, 32, 33 of T1S, R7E, HB&M Sections 2; 3, 4, 5, 9, 11, 12, 13, 14, 24 of T2S, R7E, HB&M,



Prepared for: Humboldt Bay Municipal Water District- Lead Agency

Prepared by:

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**December  
2022**

## Contents

Summary of Findings	3
INITIAL STUDY-	3
Project Description	4
Reforestation	5
Fuels Reduction Treatments	5
Surrounding Land Uses and Setting	8
Other Public Agency Approvals	8
DETERMINATION	10
EVALUATION OF ENVIRONMENTAL IMPACTS	10
References and Information Sources Consulted.....	61
Appendix A Project Best Management Practices and Monitoring Guidance.....	62
Appendix B Project Area Photos.....	73
Appendix C Project Maps.....	76
Appendix D Other Attachments.....	93

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## Summary of Findings

This Initial Study (IS) has been prepared to assess the project's potential effects on the environment and an appraisal of the significance of those effects. Based on this IS, it has been determined that the proposed project will not have any significant effects on the environment after implementation of the project description and Best Management Practices (BMP's). This conclusion is supported by the following findings:

1. The proposed project will have no impact related to energy, land use planning, mineral resources, population and housing, public services, transportation and traffic, utilities and service systems and wildfire.
2. The proposed project will have a less than significant impact on aesthetics, agriculture and forestry resources, air quality, geology, recreation and soils, greenhouse gas emissions, hydrology and water quality, hazards, hazardous materials, and noise.
3. The proposed project will have a less than significant impact on biological, hydrological, cultural resources and tribal cultural resources.

This Initial Study revealed that no significant environmental effects are expected to result from the proposed project as described with project description specifications and BMP's adhered to. The Humboldt Bay Municipal Water District has found, in consideration of the entire record, that there is no substantial evidence that the proposed project, as currently proposed, would result in a significant effect upon the environment. This IS provides the appropriate environmental documentation for the project for CEQA compliance.

### INITIAL STUDY-

<b>1. Project Title</b>	Ruth Lake /Mad River Reforestation Project
<b>2. Lead agency name and address:</b>	Humboldt Bay Municipal Water District
<b>3. Contact person and phone number:</b>	John Friedenbach, General Manager (707) 443-5018
<b>4. Project Location:</b>	The project area is located 1 mile from Ruth, CA, 70 miles east of Fortuna, CA and 52 miles west of Hayfork, CA in Trinity County California at an elevation of 2,500'-3,800' feet. Location data is as follows: Ruth, Shannon Butte and Forest Glen USGS 7.5-minute Quadrangle(s), Section(s) 19, 29, 30, 31, 32, 33 of T1S, R7E, HB&M Sections 2; 3, 4, 5, 9, 11, 12, 13, 14, 24 of T2S, R7E, MDB&M,  GPS Coordinates: <u>123°23'17.636"W 39°42'13.409"N</u>
<b>5. Project sponsor's name and address:</b>	Humboldt Bay Municipal Water District PO 95 Eureka, CA 95502-0095
<b>6. County General plan description:</b>	Agriculture General Timber; Agriculture Exclusive; Public
<b>7. Zoning:</b>	Timber Production Zone; Unclassified, Public Lands

Non-Federal Lands Cal Watershed units ID : 1109.400302 Hetton Creek

1109.400202 Deep Hollow Creek  
1109.400105 Armstrong Creek

This Initial Study- has been prepared to evaluate potential environmental effects of the proposed Ruth Lake/ Mad River Reforestation Project near the community of Ruth, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.).

### **Project Description**

The project implements post fire recovery and forest health treatments on 1,000 acres of HBMWD land, 1,030 acres of adjacent private lands and 750 acres of federal lands within the upper Mad River watershed that drains to Ruth Lake. Ruth Lake is a source water system for 94,000 municipal customers in Humboldt County.

**Description of Nature, Purpose, and Beneficiaries of Project:** The overall project objectives is to reforest burned timberlands and return forests and wildland habitat to a more natural, fire resilient condition and to ensure that the exposure of human assets and communities to wildfire risk has been reduced. The proposed Project will provide post- fire recovery by reforesting forest areas that burned in the lightning caused August Complex wildfire in 2020. Pre-planting site preparation work includes chipping, hand piling and burning, mastication, and biomass removal of competing vegetation (mostly brush and small diameter standing dead trees). Most of the non-federal land project area has had recent salvage logging and biomass removal operations conducted. The reforestation mechanical and slash pile burning treatments to reduce fuel loads will prepare forests for long-term stewardship. Additionally oak woodland restoration will include: post-fire oak sprout saplings thinning to one or two dominant sprout stems, replanting native oaks in areas of high mortality, removal of some dead stems for local firewood use and invasive plant hand removal in oak woodland habitat types. These treatments will reduce wildfire risks to local resources, protect water quality for a water services district drinking water source, promote native plant and wildlife species, and improve forest resiliency.

The Humboldt Bay Municipal Water District is serving as lead agency for a project that includes lands owned by the District, two adjacent private property ownerships and federal lands upstream from Ruth Lake on the Six Rivers National Forest. The primary goal of this CAL FIRE Forest Health grant funded project is to reforest Mad River watershed areas burned during the 2020 August Complex wildfire

A total of 1,032,648 acres burned in the August Complex, with approximately 118,053 acres on private lands, 612,634 acres on the Mendocino National Forest (MNF), 162,201 acres on the Six Rivers National Forest (SRF), and 139,760 acres on the Shasta-Trinity National Forest (SHF).

Areas burned on HBMWD lands within the Mad River watershed include the entire range of burn severity (low, moderate, high severity) with most affected acres within the moderate severity category.

### **Project Components**

Restoring the ecosystem health within the various project sites will re-establish forestlands that were significantly impacted by fire, and post-fire pests. This project will prevent conversion of forests to shrub and non-native invasives and increase carbon storage capacity. Pre-fire vegetation throughout the project area consisted of mixed conifer forest stands and oak woodlands along with a few grassy glades. The understory was a mix of conifer, oak and brush species.

Vegetation was burned, some areas so severely that the original vegetation seed sources were lost. Without any treatment, the post-fire pioneering brush species will continue to establish a significantly increased risk of fire ignition, fire spread, and continuing negative impacts to diverse and balanced vegetation, water quality and other habitat and landscape components.

Pos- fire organic debris will be removed by chipping, piling and burning and mastication. Some areas will also require invasive plant removal and impacted oak woodland areas will be restored.

Treatments: slashing dead material, hand-piling portions of slashed material, burning of hand-piles, hand-planting of native mixed-conifer species, and hand-release (grubbing) as needed to promote seedling survival and to remove invasive plants.

### **Reforestation and Site Preparation**

Conifer seedlings from the appropriate seed zone 340 will be planted generally at a rate of approximately 175-225 trees per acre. Planting density will be highest in stands within drainages and riparian areas, then decrease in those on midslope and become lowest in those near and on ridge tops. Tree density in all three slope positions would be higher in the northeast compared to southwest aspects. They would be higher on gentle slopes and more open on steep slopes as much as feasible with common management activities. Tree densities would be managed to provide resilience to drought, desired tree vigor, and desired levels of bark beetle and other density dependent mortality. Planting spots generally will require a hand scalp of sod and weeds 18" in diameter to bare mineral soil. Approximately 240 acres of the HBMWD and private lands has had initial reforestation planting done on post-fire salvage units. Follow-up planting on these sites is expected during the project implementation period. Some areas that will be reforested have not had post wildfire timber salvage operations and are not located where vehicle access can allow for burned material to be treated by piling, burning or mastication. Those areas will be reforested by hand crews within the burned standing timber.

### **Fuels Reduction and Site Preparation Treatments**

**Mastication:** Masticators are typically low ground pressure tracked vehicles, such as a skid steer with a forward mounted drum-like attachment with external masticating teeth, used to cut and shred woody material and live vegetation. Excavators may also be employed, utilizing a smaller masticating head (drum or rotary), which attaches to the boom. Limited mastication within some treatment units would occur on slopes less than ~50 percent and where previous salvage logging has occurred. Cutting brush and small trees within road prisms cut and fill slopes greater than 35 percent may be accomplished by an excavator masticator (while positioned in the road) in lieu of cutting and chipping. Dead standing vegetation generally less than 12-inch dbh may be masticated to reduce ladder fuel and achieve desired tree spacing. Similarly, mastication may be applied to treat re-sprouting brush, regrowth and fallen debris to maintain desired conditions.

**Chipping:** Roadside mechanical cutting and shredding of existing surface fuels and slash created from tree felling and yarding. Existing surface fuels, thinning and pruning residue, and cut brush would be pulled to forest roads and chipped into small pieces using a chipper. Chipping residue would be distributed back into the treatment unit, utilized for biomass, or utilized as a cover to reduce the risk of invasive plant establishment at landings and roads.

**Hand pile:** Down fuel accumulations and concentrations are physically broken up (with chainsaws and hand labor) and manually piled in concentrations of 3 to 7 feet in diameter. Excessive existing forest debris, along with woody debris (slash) from dead tree felling and shrub cutting, would be manually gathered into small piles.

**Pile Burning:** Hand and machine/tractor/grapple piles are typically covered with paper to allow woody debris to remain dry prior to ignition, promoting rapid consumption of debris to meet resource objectives and minimize smoke production. Piles are usually burned after the area has received sufficient rainfall so that fire does not spread independently beyond the heat influence of individual piles. Pile burning operations occur when site conditions including, onsite fuel moisture levels, current and forecasted weather elements, meet specific prescription parameters set forth in an appropriate agency approved burn plan and

smoke management plan. Burning would only be conducted on days approved by the North Coast Unified Air Quality Management District (NCUAQMD) in compliance with the Clean Air Act.

Fuel reduction treatments will be accomplished according to following guidelines:

All slash produced (branches, limbs, and treatment debris less than four inches in diameter) will be treated using one of the following methods:

- Chip or masticate adjacent to roads, landings, building pads and other accessible portions of the treatment areas. Equipment includes power chippers whereby material would be hand fed and chips would be blown onto the ground. Chippers have little or no potential to impact cultural resources. Mastication involves reducing the size of residual down and dead material by grinding shredding or chopping material and leaving it on-site as mulch.
- Pile and burn: slash piles for burning should be located away from residual trees and structures. Pile and burn operations would occur where vehicle access is available along existing public and private roads and seasonal logging roads. Roads utilizing existing openings and compacted ground as feasible. Piles will be created using hand crews.
- Lop and scatter: lopping is the severing and spreading of slash so that no part of it remains more than 18 inches above the ground. Lop and scatter will be implemented by hand crews on steeper slopes and areas with limited access where chipping, mastication, and burning piles is not feasible..
- The project is within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection for sudden oak death (SOD) pursuant to Public Resources Code § 4716. SOD host material (Douglas-fir (*Pseudotsuga menziesii*), bay laurel (*Umbellularia californica*), huckleberry (*Vaccinium ovatum*), big leaf maple (*Acer macrophyllum*)), will not be removed from the regulated area unless appropriate state and federal permits are obtained.

### **Hand Piling and Burning Specifications**

Piling is placing, laying, heaping or stacking of slash into piles for later burning during appropriate wet season conditions. This is a high use recreation area, all piles need to stay out of paths, trails, road ways, camp sites, and any other place that may hinder visitor use of recreation areas.

- All piles need to stay within the boundaries of the treatment units and out of roadways (including the edge of the road) to avoid disruption to travelers.
- Slash to be piled generally constitutes material from 1" diameter up to and including 10" in diameter.
- All piles must be kept outside the drip line of desired leave trees unless unavoidable.
- No piles will be placed within 15 feet of control areas.
- No piles will be placed within 15 feet of standing snags.
- No piles will be placed within 15 feet of downed logs greater than 20 inches in diameter.
- No piles will be placed within 15 feet of the private property boundaries.
- No piles will be placed underneath or within 20 feet of power lines.
- No piles will be constructed in stream exclusion zones.
- Cover at least 3/4 of each pile with District provided waxed paper tarps Kraft\* slash paper. Tarps will be placed on top of the pile and readily visible. Kraft paper tarps must be sufficiently anchored with some slash or brush so that it will not blow off in high winds. This should be just enough to anchor the paper tarps and should not bury it in the pile.
- All piles shall be built and compacted by laying limbs, stems, cut boles, and other slash so there are minimal air spaces.
- All material will be contained within the general contour of the pile and any material protruding out 2 feet or more will be sawed off and placed back on the pile.
- The minimum distance between piles will be one and a half times the pile height.
- The Kraft paper tarps shall cover a minimum of 1/3 of the pile surface area. Covering with tarps will be done at the time of piling.

- Power/Phone Lines: Power or phone lines may exist within or adjacent to units. Avoid cutting any trees that may pose a risk to contacting any phone or power lines.

### **Control Areas**

Botanical (noxious weeds): Noxious weeds will be flagged with orange “noxious weed” flagging. There will be no driving, parking, cutting, piling, or any other physical disturbance within these areas. Botanical (sensitive plants): Sensitive plants will be flagged in yellow and black flagging. There will be no thinning, piling or other physical disturbance within these areas.

Sensitive Resources: Known sites with sensitive resources will be flagged in “Special Treatment Area” labeled flagging care will be taken to limit physical disturbance within these areas.

The environmental analysis for this project focused primarily on physical changes in the environment including but not limited to:

- Cutting dead trees, brush, limbs.
- Hand planting native conifer seedlings and native riparian tree species using hand tools such as hoedads.
- Using heavy equipment off-road.
- Creating dust, smoke or noise.
- Exposing mineral soil.
- Pile burning and hand fire line construction.
- Disturbing species or reducing habitat.
- Changing aesthetics.
- Nuisance smoke.

A large portion of the project area was evaluated under a CEQA equivalent process for timber harvest operations under CAL FIRE Emergency Notices per PRC § 4592 and 14 CCR §§ 1052- 1052.3 including salvage logging, skidding, slash disposal in 2020 and 2021 and no significant changes have occurred to the landscape since that analysis was completed.

The project description incorporates project design parameters that include project Best Management Practices that are listed under Appendix A in this document.

**Reasons why project is exempt:** The project involves, minor alteration of vegetation, including reforestation of areas burned in the 2020 August Complex wildfire, follow-up fuel management activities to reduce the volume of flammable post-wildfire biomass and follow up hand-crew brush control treatments. No healthy, mature, scenic trees will be removed as part of this project. An environmental review was completed concluding that project implementation as designed could not have a significant effect on the environment. Areas to be reforested were evaluated under CEQA for timber harvest operations under filed Emergency Notices including logging, skidding and slash disposal in 2021 and no significant changes have occurred to the landscape since that analysis was completed. The activities do not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. There will be no impact to historic or cultural resources due to minimal ground disturbance and or avoidance and protection measures for cultural sites has been developed during the CAL FIRE Emergency Notice filing with guidance from the project Archaeologist and are consistent with Best Management Practices of the industry.

Statutory Exemption Public Resources Code Section 4799.05(d)(1). The California Environmental Quality Act does not apply to prescribed fire, thinning, or fuel reduction projects undertaken on federal lands to reduce the risk of high-severity wildfire that have been reviewed under the National Environmental Policy Act (NEPA) if the primary role of a state or local agency is providing funding or staffing for those projects. On February 7, 2020, the Secretary of the California Natural Resources Agency certified that the exemption in Public Resources Code Section 4799.05 should remain in effect. The HBMWD will provide funding for reforestation and fuel reduction on 750 acres of federal land within the Six Rivers National

Forest upstream from Ruth Lake. The proposed federal land activities are being reviewed in their entirety under NEPA in the Mad River August Complex Restoration Project Environmental Assessment (EA) and Finding of No Significant Impacts (FONSI). The final Decision Notice and Finding of No Significant Impact for the EA/FONSI project documents was approved on January 5, 2023. Once the US Forest Service reviews the NEPA documents and certifies that the NEPA analysis adequately addresses current site conditions and the environmental impacts of the project as currently proposed.

### **Surrounding Land Uses and Setting**

Surrounding land uses include USFS lands, large private ranchlands and private smaller timberlands in some cases hosting residential structures. Much of the landscape is steep and bisected by watercourses. Elevations range from 2,500' to 3,400'.

Sawyer, Keeler-Wolf and Evans (2009) describe the mixed coniferous forest community as the *Pseudotsuga menziesii* Forest Alliance, which exhibits greater than 50% relative cover of Douglas-fir in the tree canopy. Other commonly encountered species consistent to the mixed coniferous forest community type are tanoak, canyon live oak, and Pacific madrone.

Riparian areas can be found along the margins of Hetton Creek, Mad River, Hobart Creek, Deep Hollow Creek and upper Mad River on the USFS lands within the proposed action project area. Conifer tree species in riparian forest include Douglas-fir, ponderosa pine and incense cedar and Pacific yew (*Taxus brevifolia*). Hardwood species include black oak, white oak, red alder, Oregon ash, big leaf maple and *Salix spp.* Understory species indicative of more mesic conditions are thimbleberry (*Rubus parviflorus*), coltsfoot (*Petasites frigidus*), coastal brookfoam (*Boykinia occidentalis*), giant chainfern (*Woodwardia fimbriata*), Whipplevine (*Whipplea modesta*) and horsetail fern (*Equisetum spp.*)

CAL FIRE is concurrently conducting a Ruth Lake Fire Reduction Project (SCH # 2022060469) that involves approximately 1,400 acres of HBMWD property. This project is primarily in the unburned areas of the ownership, but there is overlap in some areas.

This project is described by CAL FIRE:

*“The project will create a fire safe community reducing fire hazard through removal of excess vegetation in the Wildland Urban Interface around Ruth Lake, California. With the recent drought years in California, communities like Ruth Lake, have numerous dead hazard trees throughout their area. There are summer cabins and roadways with hazard trees that pose a fire and safety threat to the summer cabins on property owned by the Humboldt Bay Municipal Water District. The dead trees identified as a hazard tree around structures and roadways will be felled by a professional tree falling contractor to assure no damage will be done to the cabins and infrastructure. None of the material from the treated trees or brush species will be used for commercial purposes. The larger trees will be limbed and bucked with the material chipped or left on site. The cut brush will be chipped on-site and spread over the ground to help prevent erosion in the future. Vegetation along roads will be treated using a masticator head affixed to an excavator. This equipment will only operate on existing road prisms to assure no ground disturbance will occur. These fuel management activities will reduce the volume of flammable vegetation in the area surrounding Ruth Lake thereby reducing the chance for wildfire spread into communities around the lake or for a fire within the communities to spread to adjacent wildlands while also providing safer ingress/egress for fire crews and control features to aid in firefighting efforts”.*

### **Other Public Agency Approvals**

Other agencies with jurisdiction over the project include California Department of Fish and Wildlife, and the State Water Quality Control Board. On areas not covered by the approved CAL FIRE Emergency Notices, a Categorical Waiver of Waste Discharge Requirements (Order No. RI-2014-0011 Category F) may be required from the Regional Water Quality Control Board North Coast Region. The waiver will be obtained prior to commencement of operations that were not previously covered on the CAL FIRE Emergency Notices, and the project will adhere to all of the stipulations in the waiver including implementation of an erosion control plan.



**Categorical Waiver F:** Applies to Non-federal lands in the project. The General and Specific Conditions of this Categorical Waiver limit the scope of impacts from Timber Harvest Plans approved by CAL FIRE and other CEQA compliant timber harvesting activities so that the threatened discharges of waste will be minimized. Further, Regional Water Board staff participation in the CEQA functional equivalent THP review process ensures site-specific mitigation and appropriate project planning to protect water quality. As such, projects that meet the eligibility criteria for Category F are not expected to pose a significant threat to water quality, and therefore, it is appropriate to conditionally waive Waste Discharge Requirements.

Order No. R1-2015-0029 Waiver of Waste Discharge Requirements for Nonpoint Source Discharges Related to Certain Federal Land Management Activities on National Forest System Lands. Order No. R1-2015-0029 Fire Recovery: Fire recovery operations include various management measures including timber harvesting, vegetation management and restoration activities

A CDFW 1600 Agreement is not required for this project as no project elements affect a bed, bank or channel of a watercourse. Appropriate Air District burn permits will need to be renewed and updated from the North Coast Unified Air Quality Management District.

By implementing all permit requirements, and standard best management practices (BMPs), the project will not conflict with applicable local, federal, or state plans, policies, or regulations, and therefore impacts will be less than significant.

The proposed federal lands activities are being reviewed in their entirety under NEPA in the Mad River August Complex Restoration Project Environmental Assessment (EA) and Finding of No Significant Impacts (FONSI). The final Decision Notice and Finding of No Significant Impact for the EA/FONSI project was approved on January 5, 2023.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project

<input checked="" type="checkbox"/>	Aesthetics	<input checked="" type="checkbox"/>	Agriculture and Forestry	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input checked="" type="checkbox"/>	Geology/Soils	<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials
<input checked="" type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources
<input checked="" type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input checked="" type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation/Traffic	<input checked="" type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Wildfire	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

**DETERMINATION**

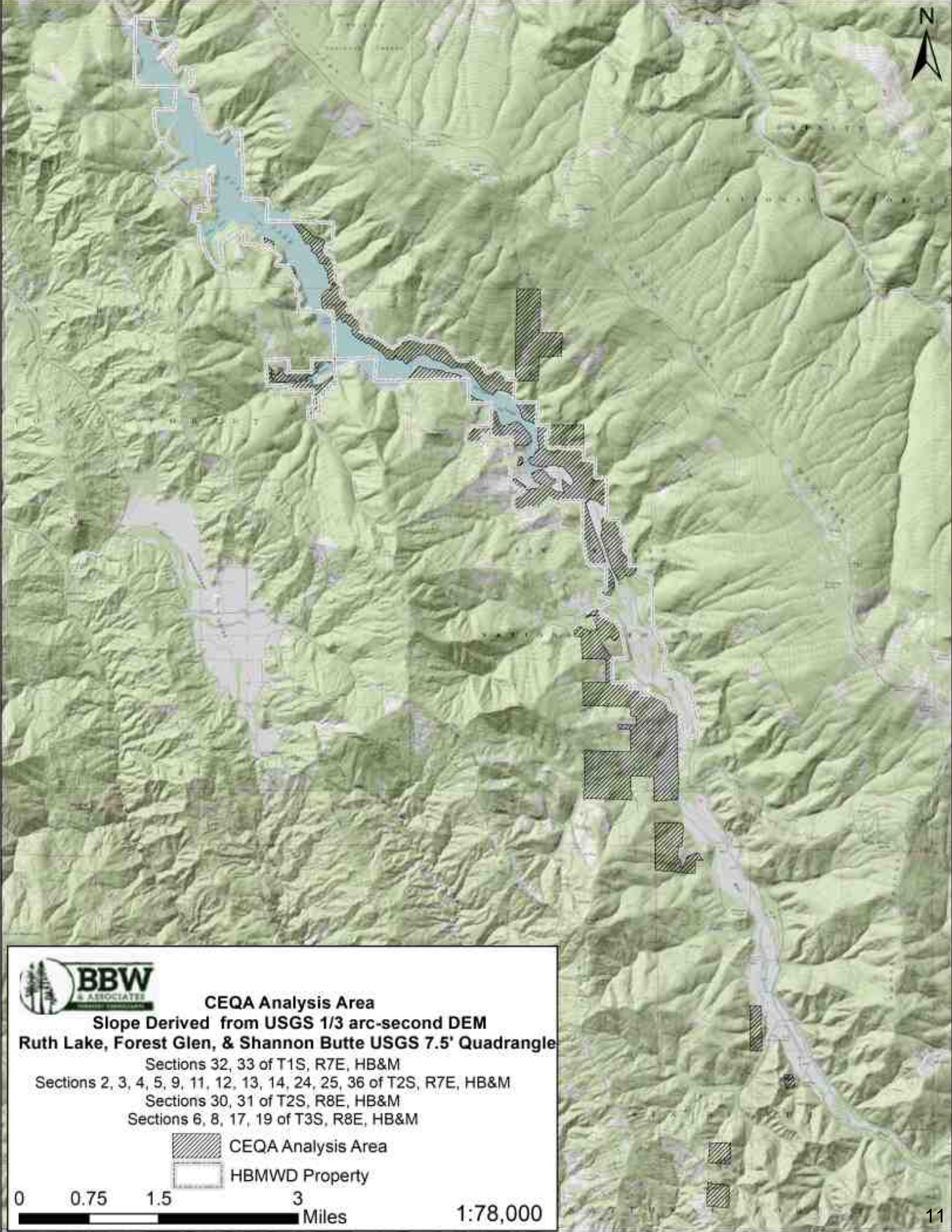
On the basis of this initial evaluation:

<input checked="" type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and is exempt from environmental review pursuant to statutory and categorical exemptions.
<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required
<b>Signature:</b>	<i>John Friedenbach, General Manager</i>
<b>Printed Name:</b> John Friedenbach- General Manager	<b>Date:</b> 1-18-23
	<b>For:</b> HBMWD

### EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each questions. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The analysis of each issue should identify:
  - a) the significance criteria or threshold used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significant.



**CEQA Analysis Area**

**Slope Derived from USGS 1/3 arc-second DEM**


**Ruth Lake, Forest Glen, & Shannon Butte USGS 7.5' Quadrangle**


Sections 32, 33 of T1S, R7E, HB&M

Sections 2, 3, 4, 5, 9, 11, 12, 13, 14, 24, 25, 36 of T2S, R7E, HB&M

Sections 30, 31 of T2S, R8E, HB&M

Sections 6, 8, 17, 19 of T3S, R8E, HB&M

 CEQA Analysis Area

 HBMWD Property



1:78,000



I. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point).				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

I. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista?				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				

a-c) **Less than Significant Impact.** The project will not cause a long-term alteration or not result in a permanent adverse change to physical, vegetative, or scenic resources.

Reforestation efforts will lead to long term improvement of views and it is unlikely that any project work will substantially affect views or degrade the existing visible character and quality of the project site and its surroundings.

d) **No Impact.** The project will not create a new source of substantial light or glare. The proposed project will be completed during daylight hours, does not require lighting or the use of reflective materials, and will not contribute to night lighting or glare.

II. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AGRICULTURE AND FOREST RESOURCES:</b> Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?				X

a, e) **No Impact.** The Farmland Mapping and Monitoring Program has not mapped Trinity County. Thus, there will be no conversion of “Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland),” as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Farmlands of Statewide Importance are defined by the California General Plan Glossary as, “Land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops within the last three years.” The project is located on a Timberland Production Zone and Agricultural Exclusive and public lands that in part are currently grazed, however are not irrigated. As such, it is not considered Farmland of Statewide Importance. “Unique Farmland” is defined as land that is currently used for the production of specific high economic value crops which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. The project is also not located on a parcel considered Unique Farmland. Therefore, there will be no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

b) **No Impact.** Because the project activities are allowable uses within the zoned area and do not involve a change to the land use or zoning designation, it will not conflict with the existing zoning for agricultural use. The project is not within a property that is under a Williamson Act contract and therefore will not be in conflict. As such, there will be no impact.

c, d) **No Impact.** Project work would not change land use within the project area or on surrounding lands and thus would not conflict with existing zoning for agricultural activities or Williamson Act contracts. The project will not result in the loss of forest land or conversion of forest land to non-forest use.

e) **No Impact** The project does not involve changes to the environment that could result in a conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use.

## References

California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. Accessed July 1, 2022 at <https://www.conservation.ca.gov/dlrp/fmmp>.

California Department of Food and Agriculture (CDFA). 2012. *California County Agricultural Commissioner’s Reports*. 2012.

III. Air Quality Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AIR QUALITY:</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct Implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

a-b) **Less than Significant Impact.** The North Coast Unified Air Quality Management District's (NCUAQMD) attainment plan established goals to reduce PM-10 emissions and eliminate the number of days in which standards are exceeded. The plan includes three areas of recommended control strategies to meet these goals: transportation, land use, and burning. Control measures for these areas are included in the attainment plan and have also been incorporated in the Trinity County General Plan.

Particulate matter less than 10 microns in size (PM10 and PM2.5) is the pollutant of greatest concern with respect to construction activities. PM10 and PM2.5 emissions can result from a variety of construction activities, including excavation, grading, vehicle travel on paved and unpaved roads, and vehicle and equipment exhaust. Particulate emissions can lead to adverse health effects as well as nuisance concerns, such as reduced visibility and soiling of exposed surfaces. Construction-related dust emissions typically vary from day to day, depending on the level and type of activity, silt content of construction site soil, and weather conditions. Larger dust particles settle out of the atmosphere close to the construction site resulting in a potential soiling nuisance for adjacent uses.

The NCUAQMD's Regulation 1 prohibits nuisance dust generation, such as that generated by road construction activity. Although the NCUAQMD is in nonattainment for PM10, the temporary nature (approximately three months) of project activities combined with implementation of standard dust reduction measures during activities (e.g., watering of access roads, landing sites, etc.) would avoid significant impacts. Biomass burning will be done in conformance with local and state air district standards and should not conflict with air quality plans. The proposed project would not obstruct implementation of the NCUAQMD Particulate Matter Attainment Plan, violate air quality standards, or contribute substantially to an existing or projected air quality violation. Therefore, operation of the proposed project will not violate any air quality standard or contribute to an existing or projected air quality violation nor result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c-d) **Less than Significant Impact.** The Air District will be consulted on pile burns before the expected burn date.

All implementation would comply with Occupational Safety and Health Administration regulations, Forest Service direction, regional air quality standards, Clean Air Act, and other applicable laws and guidance.

While short-term impacts to air quality from prescribed burning may occur, these effects will be minimized by burning under appropriate climatic conditions approved by NCUAQMD.

Sensitive receptors are typically defined as the segment of the population most susceptible to air quality effects including children, the elderly, and the sick, as well as land uses such as schools, hospitals, parks, and residential communities. There are no schools or hospitals located adjacent to the sites. During project activities there will be localized air emissions of criteria constituents from heavy equipment, chain saws, vehicles and equipment powered by internal combustion engines. With air movement common to the area, project-related emissions should disperse quickly and avoid concentrations or still-air pools. Therefore, activities will not expose sensitive receptors to substantial pollutant concentrations. The work will not create new exposure to any sensitive receptors located in the immediate area.

Execution of project work will result in minor releases of diesel smoke related to equipment operation as well as from smoke released from the limited amount of burning to occur. Due to the fact that project operations will occur in a very remote location, any odors or minor pollutants generated in connection with project work will not affect substantial numbers of people.

**BMP Air-1**

*To minimize dust during treatment activities, the project proponent shall implement the following measures: Limit the speed of vehicles and equipment traveling on unpaved areas to 20 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board Fugitive Dust protocol. If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board. The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. Remove visible dust, silt, or mud tracked-out onto public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113, suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may “cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property,” per Health and Safety Code Section 41700*

**References**

North Coast Unified Air Quality Management District (NCUAQMD). 2019. Accessed on line on June 4, 2022, at <http://www.ncuaqmd.org/index.php?page=district.info>

IV. Biological Resources  Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>BIOLOGICAL RESOURCES:</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in				



local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

**General**

All project activities would occur in previously disturbed areas ( moderate to high intensity wildfire and salvage logging) that do not contain suitable habitat for most listed species. Pre-project surveys were limited because the project activities would occur on previously disturbed ground and not involve habitat disturbing actions.

**a & b) Less than Significant.** Although short term impacts may occur during project activities , these impacts will be minimized through implementation of BMPs, and adherence to regulatory permit requirements. While temporary project impacts may affect habitat usage, they will not interfere substantially with the movement of any native resident or migratory fish or wildlife species; have a substantial adverse effect on riparian habitat; with established native resident or migratory wildlife corridors; or impede the use of native wildlife nursery sites. Such attributes are important for wildlife species and can provide for needs such as forage and cover. It is also reasonable to expect an increase in the quality and quantity of browse availability following project activities. Due to the light intensity of the post fire slash treatments and the restorative reforestation focus of the proposed project, project BMPs and the fact that the project area for the most part had recently burned and been salvaged logged under CAL FIRE Emergency Notices, it is not expected that any candidate, sensitive, or special status species would be significantly impacted by this project.

A HBMWD representative, registered professional forester or their designee will be sufficiently present onsite during operations to evaluate the presence of biological resources and ensure biological resource protection through avoidance. If any wildlife is encountered during project activities, said wildlife will be allowed to leave the area unharmed and if any listed wildlife is encountered and cannot leave the project site on its own the registered professional forester or project manager should contact California Department of Fish and Wildlife immediately consult regarding species relocation protocol.

**Scoping**

Scoping for potential presence of special status animal species, plant species and communities was undertaken in order to determine whether the proposed project could have significant negative impacts on those species and communities. After reviewing several reference data sources, a list was compiled for

species whose ranges include the project and surrounding area. California Department of Fish and Wildlife Natural Diversity DataBase (CNDDDB) was consulted (March and Feb. 2022 utilizing the following search parameters: 1) nine-quad search centered on the Ruth Lake, Shannon Butte and Forest Glen 7.5' quadrangles.

A general habitat assessment was made for the project area, and nearby unique habitats (e.g. late-seral forest stands, large streams, lakes, rock outcroppings, meadows, unique soil types such as serpentine, etc.) were noted based upon aerial photo interpretation, familiarity with the area, and consultation with adjacent or nearby projects. Also, specific habitat and range information was obtained by using previously published listings of endangered, threatened or rare species by the Six Rivers National Forest several past Timber Harvest Plans on adjacent private lands in the area.

The CNDDDB and CNPS queries found one occurrence for a special status plant community, the Upland Douglas-fir Forest, mapped near the northeastern part of the project area. Since no live trees >10" DBH will be removed from the proposed project, the treatments will likely have no adverse effects on the Upland Douglas-fir Forest associated with this project. The removal of post wildfire of biomass and reforestation efforts will likely benefit this nearby special status community.

### **Plants**

The non-federal portions of the project area were traversed by field botanists with a focus on ecotones and habitat types likely to host special status species listed in the Natural Diversity Database query. (\*See BMP Bio-2) The USFS conducted a complete botanical survey of the federal portion of the project area.

### **Rare Plant Survey Results**

The SRNF Forest Botanist determined that federal land areas that burned at high severity within the August Fire Complex are not considered suitable habitat for Survey and Manage species. Fire severity was determined using Geographic Information System (GIS) and Rapid Assessment of Vegetation Condition after Wildfire (RAVG) data. Areas not identified as high severity via RAVG mapping were field visited on March 26, 2021 and no additional habitat was found to be suitable due to being burned at high severity or they were no mid to late seral stands which represents suitable habitat. According to USFS Botanist Hoh McRae, two existing Survey and Manage lichen locations of *Dendrocollybia racemosa* were consumed by fire and are no longer considered to be known locations or suitable for the species. The mountain lady's slipper orchid (*Cypripedium montanum*) is a category C Survey and Manage and a Forest Service Sensitive plant species found within the USFS project area but not known to be present in areas proposed for commercial salvage harvest or hazard tree removal and suitable habitat is not present where actions are proposed as a result of severe fire effects. A subpopulation of Tracy's sanicle, *Sanicula tracyi*, which is a Forest Service Sensitive plant species and protected by the Tracy's sanicle Conservation Strategy, occurs adjacent to 27N34. The sub-population burned at high severity and as a result the species has been extirpated from this location and the habitat is no longer suitable.

The project is not expected to result in a significant adverse effect to botanical resources.

### **Tracy's sanicle (*Sanicula tracyi*)**

Rare Plant Rank: 1B.2

CA Rank 4.2

Global Rank G4

State Rank S4

USFS Sensitive

Elevation 330 - 5200 feet

Blooms: April – July

Habitat is primarily white oak woodlands but also black oak "patches" nested in Douglas-fir-Black oak stands. Individuals grow in the spaces between clumps of California fescue. Plants are observed on previously disturbed ground (i.e., road banks, old skid trails). Habitat is not overly specific nor fragile.

This species is documented on the CNDDDB pre wildfire in one location close to the County Rd at Ruth

Reservoir, and on the USFS portion of the project area. If the Ruth Location can be relocated, it will be protected from project related activities. Surveys of known locations of Tracy's sanicle within the project area, in areas of light to moderate burn severity, will avoid pile and burn and mastication on known plant locations.

**White-Flowered Rein Orchid** (*Piperia candida*)

Rare Plant Rank: 1B.2

Elevation: 0-1200 m

Blooms: May – September

The white-flowered rein orchid is a perennial herb in the orchid family (Orchidaceae). It grows in broadleaved upland forests, lower montane and north coast coniferous forests with an affinity to serpentine soil. Within these habitats it can be found growing in the forest duff, mossy banks, rock outcrops and muskeg.

This species was documented pre-fire within one location near the Mad River Road inside of the project boundaries. This location has been mapped and will be surveyed prior to work and if detections are located a 50' buffer from ground disturbing activities will be implemented to ensure that impacts to the plants are avoided.



*Sanicula tracyi*

**Mountain lady's slipper (*Cypripedium montanum*)**

Habitat is extremely variable. Populations most often occur in open mixed conifer or mixed conifer hardwood forests but are also documented in forest openings, shrub thickets and alpine meadows. Moisture regimes vary from dry to moist. Elevation ranges from approximately 500 to 2100 meters (1600 to 6900 feet). Associated tree species include Douglas-fir (*Pseudotsuga menziesii*), various species of fir (*Abies*), lodgepole pine (*Pinus contorta*), Ponderosa pine (*Pinus ponderosa*), quaking aspen (*Populus tremuloides*) and oak (*Quercus* spp.). The mountain lady's slipper orchid is a USFS category C Survey and Manage and a Forest Service Sensitive plant species found within the USFS project area but not known to be present in areas proposed for commercial salvage harvest, reforestation or hazard tree removal and suitable habitat is not present where actions are proposed as a result of severe fire effects. This species is not likely to occur in the project area due to wildfire impacts. Project work will not affect this species.

**Long beard lichen (*Usnea longissima*)**, a CNPS List 4 and USFS Sensitive species. Long beard lichen is a pendulant, fruticose lichen whose main branches are up to 3 meters long. It occurs in old-growth and late-successional conifer stands, hardwood stands, and riparian areas, particularly in coastal climates or on fog-

swept mountains where humidity is high (USDI 2006). This species is not likely to occur in the project area due to wildfire impacts. Project work will not affect this species.

## **Animals**

### **Occupied Nest Site Protection**

In review of CDFW range maps, and existing habitat within the project area, the following Board of Forestry Sensitive Species have the potential to occur within the project area. Bald Eagle, Northern Goshawk, Osprey, and Peregrine Falcon. In the instance an active or occupied nest site is documented within 0.25 mile of the project area or if any occupied nest sites of a listed bird species are detected during the preparation or implementation of the project, the Department of Fish & Wildlife and per California Fish and Game Code (Section 3503), and appropriate protection will be provided. This requirement applies to active nests (breeding effort within the last 2-5 years, depending on the species), and not just "occupied nests".

#### **Cooper's Hawk (*Accipiter cooperii*)**

Listing Status: California Department of Fish and Wildlife 'Watch List'

Reported in Project area: No

Habitat: Cismontane woodland, riparian forest, riparian woodland & upper montane coniferous forest. Woodland, chiefly of open, interrupted or marginal type.

The Cooper's hawk is an uncommon resident, breeding sparingly throughout the region. No nests were located during fieldwork and no Cooper's hawks were observed. If a Cooper's hawk nest is identified, operations shall be suspended within 100 feet of the nest tree and the contractors/operators shall immediately notify the California Department of Fish and Wildlife to determine species-specific protection measures. \* **See BMP Bio-10.** Significant impacts to Cooper's hawk are not expected as a result of this project.

#### **Golden Eagle (*Aquila chrysaetos*)**

Listing Status: California Department of Fish and Wildlife 'Fully Protected' & 'Watch List'

Reported in Project area: No

Habitat: Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland & scrub, upper & lower montane coniferous forest, pinon & juniper woodlands, and valley & foothill grassland habitats. General habitat includes rolling foothills, mountain areas, sage-juniper flats and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.

The golden eagle is a large bird (30" to 41" tall) that lives primarily in mountain forest and open grasslands. The golden eagle preys mainly on medium-sized birds and mammals but will also feed on carrion. Nests are built on rock ledges or in tall trees. Golden eagles require large openings and large trees in open areas as habitat.

This species was detected at Marshall Rock 2,500' feet horizontal distance from any portion of the project area. During the preparatory stages, the project area was surveyed for nest structures; none were found. The surrounding forests could provide possible structure for roosting and nesting and the grasslands located adjacent to the project area could be used for foraging. Since the project does not involve any significant alterations to habitat and the historic bald eagle nest site at Marshall Rock is ½ mile from potential project noise generation, no significant impacts to eagles are expected as a result of this project. This species is typically afforded a ¼ mile radius buffer.

#### **Peregrine Falcon (*Falco peregrinus anatum*)**

Listing Status: State Delisted & 'Fully Protected', Federal Delisted in 1999.

Reported on CNDDDB in the project: No

Range: Most of the state except a portion of southeastern California.

Habitat: Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.

Uncommon, breeds mostly in wooded, forest, and coastal habitats. Decline associated with DDT contamination. Swoops from flight into flying prey, chases in flight, and rarely hunts from perches. Preys on a number of birds occasionally taking mammals, insects and fish. Requires protected cliffs and ledges for cover. Nests in a scarp on a depression or ledge in an open site. Will nest on human-made structures, and occasionally uses tree or snag cavities or old nests of other raptors. The plan amendment area is within the range of the peregrine falcon. No sightings have been reported to the CNDDDB for the project. No nests were observed within the project area. This project will not have a significant negative impact on peregrine falcons.

#### **Northern Goshawk (*Accipiter gentilis*)**

Goshawks appear to select habitat by forest structure rather than by tree species (Greenwald et al. 2005). Goshawks prefer mature and old-growth forests that are at middle to high elevations, have relatively dense canopy closures (>40%), have usually little understory vegetation, are in close proximity to riparian corridors, and have flat or moderately sloping terrain (Crocker-Bedford and Chaney 1988; Moore and Henny 1983; Saunders 1982; Zeiner et al. 1990). Adequate canopy cover appears to be critical for occupancy and productivity of nest sites. Canopy cover is likely used to protect chicks from predation and for thermoregulation. Goshawks are known to use mature forest habitats for nesting and foraging. Nesting stands are typically in dense pockets of large trees, often on north-facing, bench slopes near water. Foraging habitats are often more open to allow for the aerial ambush foraging strategy of the goshawk. Historically, there have been numerous sightings of goshawks on the Mad River District, with reproductive territories known to occur. Historically there are 2 known nest sites (prefire) within the Three Forks Fire Salvage Project which is adjacent to the 41 Cattle Co. reforestation units. These 2 known nest sites were burned with high severity (75-100% BAK). These areas no longer meet suitable >40% canopy cover needed for goshawk habitat. The CAL FIRE Forest Heath project does not occur in suitable goshawk habitat.

#### **Osprey (*Pandion haliaetus*)**

*Listing Status:* CDFW 'Watch List'

Reported on CNDDDB in project area: yes

Range: Breeds in northern California from Cascade Ranges south to Lake Tahoe and along the coast south to Marin County.

Habitat: Riparian Forest habitats. General habitats include ocean shores, bays, fresh-water lakes and larger streams.

Breeding takes place along major rivers, lakes, and estuaries. Breeding population estimated in 1975 at 350 - 400 pairs in northern California, numbers apparently increasing in recent years. Associated strictly with large fish bearing waters. Preys mostly on fish. Ospreys require open and clear waters for foraging. Swoops from flight, hovers or perches to catch fish near surface of the water. Uses large trees, snags, and dead-topped trees in open forest habitat for cover and nesting, within 15 miles of a good fish-producing body of water. Also uses large platform nests on cliffs or human-made structures such as power poles. Nests as high as 250 feet above the ground. Needs tall open branched perch trees for landing before approaching nest and for flight practice for young.

There are several historic osprey nests around Ruth Lake. Sightings of this species have been confirmed by BBWA staff during this project scoping, field work and reconnaissance.

Known nest trees will be avoided and noise generation will be avoided within 375' of an osprey nest tree during the breeding and rearing period. Retention of over-story conifers and snags will provide future nesting habitat for ospreys., Significant impacts to ospreys are not expected as a result of this project implementation.

#### **California Condor (*Gymnogyps californianus*)**

Reported on NDDDB in area: No

Reported on NDDDB in Biological Assessment Area: No

The California Condor is listed as endangered under the federal Endangered Species Act and the California Endangered Species Act, as well as a California Board of Forestry Sensitive Species and Fully Protected under the California Fish and Game Code.

Historically, the range of California Condor ran from British Columbia to Baja California. Their main population rings the southern mountain boundary of the Central Valley, from the Los Padres National Forest to Sequoia National Forest. A stable population has been established in the Ventana Wilderness and Pinnacles National Park.

Nesting habitat is generally characterized by steep, rugged terrain with nests in rock crevices with overhanging ledges or broken-topped large trees, like sequoia or coast redwood. They are known to roost on rocky outcrops, tall trees, or snags near foraging, nesting, and water. Condors need large areas to allow for take-off and landing, where winds provide thermals for flight. Foraging habitat needs to have high productivity for obligate scavenging. Sparse vegetation provides higher visibility of carrion and thermals keep them in the air long enough to find carrion, without expending large amounts of energy. Condors can cover large distances in the course of a day as they forage; sometimes flying up to 150 miles for food.

Language in the state listing final rule states that take of condor is allowed, provided the “take is not intentional .... or due to negligent conduct.” Additionally, the Final rule states “Habitat alteration (e.g., removing trees, . . . altering the nest structure or perches near the nest) or significant visual or noise disturbance (e.g., chippers, chainsaws, within 656-ft (200 m) of an occupied nest are prohibited. Excluded from this prohibition are emergency fuels treatment activities by Federal, State, and local agencies and Tribes to reduce the risk of catastrophic wildfire and emergency response services. Activities such as ranching and use of existing roads and trails within the 656-ft (200 m) buffer area around an occupied nest would not be considered a significant visual or noise disturbance. For the purposes of this rule, an occupied California condor nest is defined as a nest that is: (1) attended by a breeding pair of condors, (2) occupied by a condor egg, or (3) occupied or attended by a <1-year-old condor . To minimize the potential of take in the instance an active or occupied California Condor nest site is discovered within 200 meters of the property, no noise, smoke or habitat altering operations will be conducted within the 200 meter zone. If a nest site is discovered during active project operations, operations will cease within 200 meters and CDFW will be consulted to provide guidance for protection of this species.

### **Sonoma Red Tree Vole (*Arborimus pomo*)**

Listing Status: California Department of Fish and Wildlife ‘Species of Special Concern’

Reported on CNDDDB in project area: No

Range: Sonoma County north to Humboldt and western Trinity counties to the South Fork of the Smith River, Del Norte County.

Habitat: North Coast coniferous forest, old-growth and redwood habitats

The Sonoma red tree vole primarily inhabits coniferous forests dominated by Douglas-fir, but they also live where Douglas-fir co-occurs with other species. The species is most abundant in mature stands though can also inhabit pole and young stands (Thompson & Diller 2002). Arboreal voles that exhibit some terrestrial activity, nests are 2-65 m above the ground, in trees of any size, often in Douglas-fir, generally in the largest available trees. They feed almost exclusively on Douglas-fir needles, though will occasionally take needles of grand fir, hemlock or spruce. Commonly in the lower third of the live crown; several nests may be built in large; whorls of branches provide support for nests in young trees; large branches of old-growth trees can support large maternal nests or nurseries; nests are sometimes built in cavities and hollows in trees or under the moss covering large branches of old trees. There is likely red tree vole habitat within the project area but they were not observed during the biological field review. Any Sonoma red tree vole eating platforms or resin ducts observed during project activities will be recorded. Since no green trees are proposed for removal under this project, it should not cause a significant negative impact to this species.

### **Pacific Tailed Frog (*Ascaphus truei*)**

Listing Status: California Department of Fish and Wildlife 'Species of Special Concern'

Reported on CNDDDB in project area: No

Range: The range in California extends from Del Norte County south to central Sonoma County and eastward to Shasta and Tehama Counties.

Habitat: Occur in aquatic, Klamath and north coast flowing waters, lower montane coniferous forest, north coast coniferous forest, redwood and riparian forest habitats. The general habitats of this species are flowing waters in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine forests. They are restricted to perennial montane streams. In California, the range of this species is from sea level to approximately 6,500' above sea level. A rocky streambed is important in providing hiding places for larvae, sites for attaching eggs and cover for adults. Tadpoles require water below 15 °C. This species is mostly aquatic, though the adult is known to forage on land during cool and wet conditions. Stream characteristics seem to be a better predictor of *A. truei* abundance than landscape characteristics (Bull and Carter 1996). This suggests the possibility that other factors of habitat suitability, such as water temperature, may be more important than forest age and observations of this species in suitable habitat in young growth stands corroborates this. This species has also been found in suitable habitat in the Turwar Creek drainage (tributary of the Klamath River) following intense fires which removed essentially all stream side vegetation and woody instream cover. It was also able to quickly reestablish itself on the treeless terrain created by the Mt. St. Helen eruption (Hawkins *et al.* 1988).

Presence of this species will be assumed in aquatic habitats within the project area. Tailed frogs are presumed to exist in the larger watercourses having substrates of consolidated parent material. Considering protection provided to watercourses and the project area in its entirety, it is reasonable to conclude that this project will not create a significant adverse impact to tailed frog populations.

#### **Marbled Murrelet (*Brachyramphus marmoratus*)**

Listing Status: State Endangered, Federal Threatened

Reported on CNDDDB in project area: No

Range: Nests inland along coast from Eureka to the Oregon border & from Half Moon Bay to Santa Cruz.

Habitat: Lower montane coniferous forest, old-growth and redwood habitats. Nests in old-growth, redwood-dominated forests, often in Douglas-fir. Non-breeding season occurs in pelagic habitats.

The marbled murrelet is a small seabird that nests in old-growth trees within 60 km of the coast or, less frequently, on the ground in areas where trees are absent. Specific nesting habitat of this species in this part of its range is large, sometimes decadent trees with large limbs (>10 cm) for nesting platforms (Hamer and Nelson 1995). The marbled murrelet will lay one egg on these platforms within natural accumulations of lichens and moss. It feeds in near-shore habitats up to 1.4 km offshore, in bays, lagoons and sometimes inland lakes. In California the species ranges from the Oregon border south to Santa Cruz County.

Throughout most of the year this species is found in small groupings in near-shore coastal waters where they feed on small baitfish. Cutting of nest trees, gillnetting, and catastrophic events such as oil spills and wildfires are potential threats to this species. The project area is within the range of the marbled murrelet, however specific habitat elements do not exist within or adjacent to the project area. No sightings have been reported to the CNDDDB for the project area and Ruth Lake is likely situated too far from the coast for this species. Considering the location of the project area and the lack of available habitat, no formal surveys were deemed necessary. This project should not have a significant negative impact on nor result in take of marbled murrelets.

#### **Northern Spotted Owl (*Strix occidentalis caurina*)**

Listing Status: State & Federally Threatened, California Department of Fish and Wildlife 'Species of Special Concern'

Reported on CNDDDB in project area: Yes

Range: Northern California, Oregon, Washington and southern British Columbia.

Habitat: North Coast coniferous forest, old-growth and redwood habitats. Habitat: The northern spotted owl (NSO) is a medium to large raptor, which primarily preys on small mammals. Usually found in stands of larger multi-storied timber, they nest in large trees, snags and cliffs, and they often use abandoned raptor nests.

Requiring mature forest patches with permanent water and suitable nesting trees and snags (Zeiner 1990a), this species was initially believed to be old growth obligate. Post listing it became evident that NSOs that were common in younger forest types of northern California. In their seminal work, "Climate, habitat quality, and fitness in northern spotted owl populations in northwestern California" (2000), Franklin, Anderson, Burnham and Gutierrez suggested that a mosaic of older forest types interspersed with other vegetation types promoted the highest NSO fitness.

NSO habitat exists within and out to a 0.7-mile NSO radius surrounding the project area. CNDDDB was run in preparation for this project area and out to a 0.7-mile radius. The project area had six recorded NSO activity centers (ACs) at the time of the 2022 database query within 0.7 miles of the project area treatment units. TRI0310 (last observation 2011); TRI0122 (last observation 2011); TRI0509 (last observation 2009); TRI0504 (last observation 2015); TRI0452 (last observation 2009); TRI;506 (last observation 2028). There are no historic activity centers within 0.25 miles of project treatment areas.

Based upon air photo review, most of the ACs burned during the August Complex Fire.

No NSO habitat will be degraded as a result of operations. There will be no reduction or nest/roost habitat from project activities. Pile burning operations will occur after the breeding season (post Aug. 1st). This project should not have a significant negative impact on nor result in take of northern spotted owls.

**Pacific Fisher (*Pekania pennanti*)** (Northern California Evolutionarily Significant Unit)

Listing Status: Federally Proposed Threatened, California Department of Fish and Wildlife 'Species of Special Concern'

Reported on CNDDDB in project area: No

Range: The West Coast Distinct Population Segment includes the states of Washington, Oregon, and California. Fishers were reintroduced into the Olympic Peninsula of Washington in January & March of 2008.

Habitat: North Coast coniferous forest, old-growth and riparian forest habitats.

Fishers use large areas of primarily coniferous forest with fairly dense canopies and large trees, snags and down logs. The fisher dens in rotting logs, hollow trees, and rocky crevices of old growth forests. They are specialized animals that frequently travel along waterways and rest in or on live trees, snags, or downed logs with cavities. These characteristics are usually only found in large tracts of old forests. Although fishers use a variety of protected cavities, brush piles, logs, or upturned trees, hollow logs, trees and snags are especially important (Zeiner *et al.* 1990b). Douglas-fir is the most common species used for resting in northern California, whereas the general oak species, white fir, and red fir are commonly used in the Sierra. The diameter of trees used by fishers for resting and denning is consistently large. Rest sites are widely distributed throughout fisher habitat. The average home range of fishers vary between coastal and Sierra populations. In addition, the home range for males is greater than females. In a Zielinski *et al.* (2004) study, home range size for the coastal population was estimated at 3,702 acres for females and 14,334 acres for males. The Sierra population home ranges were smaller with females at 1,286 acres and 7,408 acres for males. This study also found that there were no obvious differences between the sexes with respect to proportion of different size classes of trees within the home ranges. Average stand sizes of 11-24" in dbh with canopy closures 61-100% occupied the highest proportion of home ranges. For the coastal population, Douglas-fir and true fir were the most prevalent species. Sierra mixed conifer and ponderosa pine were the most prevalent species types for the Sierra Nevada study area. Resting structures were among the largest diameter trees available and resting site locations had high levels of canopy cover. Additionally, the Sierra Nevada study area resting sites were more frequently noted within 100 meters of water and with a hardwood component (Zielinski *et al.* 2004, Purcell *et al.* 2009, Zhao *et al.* 2012). Structural elements used



by the fisher include; live tree cavities, broken tops, mistletoe platforms, large down logs, stumps and ground cavities. Other stand characteristics selected by fisher include high levels of canopy cover (>60%) and relative greater height and average diameter of the stand in relation to the surrounding areas (Zhao *et al.* 2012). Reportedly extirpated from 48% of its historical range, the California Department of Fish and Wildlife considers potential threats to the fisher to include timber harvest that excessively reduces late seral forest and/or does not retain late seral elements (California Department of Fish and Wildlife 2010). Rather than the range map provided by California Department of Fish and Wildlife this analysis utilizes CEQA appropriate fisher range map offered by CAL FIRE that more closely corresponds to expert opinion (Zielinski *et al.* 2004). Fisher habitat exists within and adjacent to the project boundary, though no resting or denning structures were identified during the preparatory stages of this project. No large stature trees are to be removed for this project. There have not been sightings of fisher within this part of the Mad River watershed. This project should not have a significant negative impact on or result in take of Pacific fishers.

**Pacific Marten (*Martes caurina*)** The subspecies of American marten that occurs on the Forest is the Humboldt marten (*Martes c. humboldtensis*). Humboldt martens utilize old growth Douglas fir stands on non-serpentine soils and late seral stage mixed-conifer (Douglas fir, sugar pine, western white pine and lodgepole pine) on serpentine soils (Slauson *et al.* 2007). Martens require a dense shrub layer (>60%) in both habitat types for foraging and concealment from predators. Dominant shrub layer species include: salal (*Gaultheria shallon*), evergreen huckleberry (*Vaccinium ovatum*), Pacific rhododendron (*Rhododendron macrophyllum*), huckleberry oak (*Quercus vacciniifolia*), and bush tanoak (*Lithocarpus densiflorus var. echinoides*) (Slauson and Zielinski, 2009). The current known distribution of the Pacific marten includes the northern districts of the SRNF. Martens are not known to be present in the upper Mad River watershed.

**Townsend's Big-eared Bat (*Corynorhinus townsendii*)** The Townsend's big-eared bat occurs in a variety of habitats, and is strongly correlated with the availability of caves or cave-like roosting habitat. It has been found from sea level to 8700 ft. elevation (Humphrey and Kunz 1976, Kunz and Martin 1982, Pierson and Rainey 1994) and occurs in xeric to mesic habitats; although throughout much of its range it occurs in mesic habitats characterized by deciduous and coniferous forests (Kunz and Martin 1982). The species tends to avoid open grassland when foraging and flying to and from roost sites. In coastal California, they prefer riparian habitats near streams and small tributaries, foraging along the edge of the forest (Fellers and Pierson, 2002). The Townsend's big-eared bat occurs in a variety of habitats, and is strongly correlated with the availability of caves or cave-like roosting habitat. It has been found from sea level to 8700 ft. elevation and occurs in xeric to mesic habitats; although throughout much of its range it occurs in mesic habitats characterized by deciduous and coniferous forests. Because of this, it is difficult to define measurable habitat variables. The most limiting factor appears to be availability of suitable roost sites. Little is known on the species abundance and distribution, although potentially suitable roost sites exist within the project area. This species is known to roost in caves, mine shafts and abandoned buildings. There are no detections of this species in the project area. The project does not occur in suitable habitat for this species.

**Pallid bat (*Antrozous pallidus*)** Pallid bats are most common in open, dry habitats near water that contain rocky areas for roosting. Occasional forays may be made in winter for food and water (Philpott 1997). Pallid bats are unusual in that most of their food consists of large insects captured on the ground (Verts and Carraway 1998). Open areas such as forest roads and canyon mouths are used for foraging. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings (Sherwin & Rambaldini, 2005). Cavities in broken branches of black oak are very important and there is a strong association with black oak for roosting (Klamath National Forest 2002). Roosting sites are usually selected near the entrance to the roost in twilight rather than total darkness. The site must protect bats from high temperatures, as this species is intolerant of roosts in excess of 104

degrees Fahrenheit. Pallid bats are also very sensitive to roost site disturbance (Zeiner et al. 1990; Philpott 1997). Night roosts are usually more open sites and may include trees or snags, open buildings, porches, mines, caves, and under bridges (Philpott 1997; Klamath National Forest 2002; Pierson 1996). There are no detections of this species in the project area. The project does not occur in suitable habitat for this species.

**Western bumblebee (*Bombus occidentalis*)** The western bumblebee is a generalist forager and does not depend on any one flower type. *Bombus occidentalis* visits a wide variety of wildflowers. Since bumble bee colonies obtain all their nutrition from pollen and nectar, they need a constant supply of flowers in bloom. It performs “buzz pollination” and has been used as a commercial pollinator for greenhouse tomatoes, field berry crops, alfalfa, avocado, apples, cherries and almonds (Evans et al 2008). The Western bumble bee requires habitats with rich supplies of floral resources with continuous blooming from spring to autumn. Landscape level habitat quality has been shown to influence bumble bee species richness and abundance, indicating that isolated patches of habitat are not sufficient to fully support bumble bee populations (Hatfield and LeBuhn 2007; Öckinger and Smith 2007). Western bumble bees require open meadows with rich supplies of floral resources with continuous blooming from spring to autumn. Western bumble bees have been observed taking nectar from a variety of flowering plants. There is little information regarding the western bumblebee on the Forest. Until recently, the nearest confirmed detections were of two workers in 1997 in the Marbled Mountain Wilderness on Klamath National Forest. In September 2014, one, possibly 2, western bumble bees were detected on Route 1 near Horse Mountain on the Lower Trinity Ranger District. There are no detections of this species on the Mad River District. The project does not occur in suitable habitat for this species

#### **Gray Wolf (*Canis lupus*)**

Listing Status: & State Endangered, federally delisted Jan. 4, 2021. Federally re-listed as endangered on 2-10-22.

Reported on CNDDDB in Project area: No

Reported on CNDDDB in Biological Assessment Area: No

Range: Historically throughout most of North America except southeastern U.S. Current range includes Canada, Alaska, the Great Lakes, northern Rockies and the Pacific Northwest.

Habitat: Habitat generalists, historically occupying diverse habitats including tundra, forests, grasslands and deserts. Primary habitat requirements are the presence of adequate ungulate prey, water and low human contact.

The gray wolf was listed as endangered under the California Endangered Species Act (CESA) by the California Fish and Game Commission on June 4, 2014. This species is also listed as a Species of Greatest Conservation Need in the State Wildlife Action Plan. The “take” of a gray wolf in the state is prohibited, including to hunt, pursue, catch, capture, or kill. This recovering species is in the early stages of establishing itself in California. Although historical abundance and distribution of gray wolves in California is poorly understood and reliable records are rare, wolves are considered to have occurred in the Sierra Nevada, southern Cascades, Modoc Plateau, and Klamath Mountains. Gray wolves are large (usually >100 lbs., about 5 ft. long, and 2.5 ft. at shoulder height) and highly mobile (movements of up to 30 miles/day) habitat generalists and are most likely to occur in areas with a significant prey base (ungulates) and low densities of humans. Given that gray wolves have been reestablished in southern Oregon and northern California, public and private timberlands and ranchlands in northern California are the most likely areas in which wolves may begin to become reestablished in California. On November 3, 2020, the United States Fish & Wildlife Service (“Service”) published a final rule removing the gray wolf (*Canis lupus*) from the federal list of Endangered and Threatened Species in the lower 48 United States and Mexico. The rule took effect on January 4, 2021. Gray wolves were re-listed as federally endangered again on February 10, 2022.

Gray wolves have not been observed in or near the project area but habitat and prey base does potentially exist. The plan area is in close proximity to a significant amount of inhabited smaller parcel residentially zoned lands. If a gray wolf, or den/rendezvous site, is observed in the project area the protection measures include a protection buffer to 0.25 mile.

**Foothill Yellow-legged Frog (*Rana boylei*)**

Listing Status: State 'Candidate Threatened', California Department of Fish and Wildlife 'Species of Special Concern'

Reported on CNDDDB in project area: No

Range: Present in most of northern California west of the Cascade crest from sea level to 7,000 feet, occurring in the coast ranges from the Oregon border to Los Angeles County, east to the western flank of the Sierra Nevada and south to Kern County.

Habitat: Aquatic, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadow & seep, riparian forest, riparian woodland, Sacramento and San Joaquin flowing water habitats. General habitats include partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats. Confined to the immediate vicinity of permanent streams, most common along streams having rocky, gravelly, or sandy bottoms but may occur in those with muddy bottoms. In all habitats, the species is seldom found far from small, permanent streams with banks that can provide sunning sites. They need at least some cobble-sized substrate for egg-laying. They need at least 15 weeks to attain metamorphosis. Declines in the number of this species in the foothills of the Sierra Nevada and San Joaquin Valley are believed to be the result of habitat alteration, predation and competition by introduced bullfrogs. The Mad River watershed is not an area where this species has had notable declines.

**Western Pond Turtle (*Emys marmorata*)**

Listing Status: California Department of Fish and Wildlife 'Species of Special Concern'

Reported on NDDB in project area: No

Habitat: Aquatic, artificial flowing water, Klamath and north coast flowing and standing water, marsh & swamp, Sacramento and San Joaquin flowing and standing waters, south coast flowing and standing waters, and wetland habitats. This species needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg laying.

The western pond turtle is a diurnal and aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000' elevation. This turtle is often seen basking above the water but will quickly slide into the water when it feels threatened. Active from around February to November; may be active during warm periods in winter. It hibernates underwater, often in the muddy bottom of a pool. The western pond turtle is in decline in 75 – 80% of its range (Stebbins 2003). This species is noted on the CNDDDB along the mainstem Mad River within the Shannon Butte Quadrangle.

c) **Less than Significant** . Pursuant to Clean Water Act Section 404, a Section 404 Permit is required for any fill or dredging within jurisdictional wetlands or waters of the Army Corps of Engineers has jurisdiction over wetlands which meet the three-parameter wetland criteria (hydrology, soils, and vegetation) defined in the COE Wetlands Delineation. No wetland fill is associated with this project therefore no impacts expected to federally protected wetlands.

d.) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**No impact:** The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, will not interfere with any wildlife corridors, and will not impede the use of native wildlife nursery sites. The project includes reforestation, hand thinning, pile burning, and prescribed fire. These treatments would not result in a conversion of forested to non-forested land, or otherwise result in

conditions that would impede the local or regional movements of wildlife or impede the use of native wildlife nursery sites. Therefore, the project would not substantially interfere with the use of nursery sites or the movement of migratory birds or other wildlife species. The impact would be less than significant.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact: The project will not conflict with any local policies or ordinances protecting biological resources, including tree preservation policies or ordinances. As discussed in a) above, the project would not conflict with these policies. However, the project BMPs that are part of the project description would ensure that project activities comply with County policies. The impact would be less-than-significant.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

**No Impact:** The project will not conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, Safe Harbor Agreement or other approved local, regional, or state habitat conservation plan.

### **Biological Resources Project BMPs**

#### **BMP Bio -1**

*Invasive plants removed shall be deposited on the edge of treated areas, out of the way of operations to avoid retrieval on equipment. Pile treated plants and burn where treated or if plant numbers are few, incorporate plant material into a nearby burn pile. Where operations cannot avoid yellow star-thistle infested areas, either manual treatment would be implemented prior to use, or as part of slash/fuels reduction operations, equipment would be used to blade plants away from work sites and cover with soil and 6 inches of weed free mulch.*

#### **BMP Bio-2**

*If any federal or state listed threatened or endangered plant species are detected in the project area that may be impacted by the project work, then all project related activities will immediately stop within that area which will be flagged with a 50' "No Treatment Zone". All sightings will be documented using the California Natural Diversity DataBase (CNDDDB) field survey form a copy of which will be submitted to the CNDDDB. 50' avoidance buffers will be flagged for any observations of *Piperia* spp. that are detected in the area previously mapped on the CNDDDB.*

#### **BMP Bio-3**

*The project is within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection for sudden oak death (SOD) pursuant to Public Resources Code § 4716. SOD host material including but not limited to (Douglas-fir (*Pseudotsuga menziesii*), bay laurel (*Umbellularia californica*), huckleberry (*Vaccinium ovatum*), big leaf maple (*Acer macrophyllum*)), shall not be removed from the regulated area unless appropriate state and federal permits are obtained.*

#### **BMP Bio-4**

*If an arboreal nest is discovered, operations shall be suspended within 100 feet and CDFW will be consulted for species-specific protections. Furthermore, if an occupied nest of a listed species, sensitive species, species of special concern, or a raptor is discovered, nest tree(s), designated perch tree(s), screening tree(s), and replacement tree(s), shall be left standing and unharmed.*

#### **BMP Bio-5**

*Daytime stand searches for northern spotted owl (NSO) will be conducted in activity centers that are within 0.25 mi of flight paths prior to operations by qualified biologists. If a NSO is found then follow-up searches will be conducted to determine nesting status or activity center status. If a nest tree is located, then a 300*

foot noise buffer will be implemented, and no chipping or mastication project activity will occur within 300' of the nest tree during the critical nesting period.

**BMP Bio-6**

In order to prevent the spread of invasive plant species, all heavy equipment not already on project site, to be used in the execution of project work will be cleaned off site prior to use within the project area. The project manager and/or trained staff will assure and document equipment cleaning. Contractors shall disclose where equipment had been operating prior to hauling to the project site.

**BMP Bio-7**

A registered professional forester or designee will be sufficiently present onsite during operations to evaluate the presence of biological resources and ensure biological resource protection through avoidance. If any wildlife is encountered during project activities, said wildlife will be allowed to leave the area unharmed and if any listed wildlife is encountered and cannot leave the project site on its own, the registered professional forester or project manager should contact California Department of Fish and Wildlife immediately and consult regarding species relocation protocol.

**BMP Bio-8**

To avoid impacting nesting birds and/or raptors: All temporary flagging, fencing, trash, debris, and/or barriers will be removed from the project site upon completion of project activities.

**BMP Bio-9**

Habitat elements (nest trees, downed logs and woody debris, cavities and tree hollows, snags, large dead branches, etc.) that provide valuable habitat will be identified by an RPF or qualified biologist and retained.

**BMP Bio-10**

In order to protect any species covered by the Migratory Bird Treaty Act (MBTA), no fuels treatment work will occur between March 1<sup>st</sup> to August 31<sup>st</sup>, unless the following is implemented: 1. A survey is conducted by a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA and it is determined that there are no occupied nests within the proposed activity area. 2. If an occupied nest is found, then a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA will determine if the birds present are those protected by the MBTA. 3. If an MBTA species is located then no noise or smoke producing activities will occur within 100 feet of the nest during the breeding season (March 1<sup>st</sup>-August 31<sup>st</sup>).

**TABLE 1 - Potential Threatened or Endangered Animal Species Impacts**

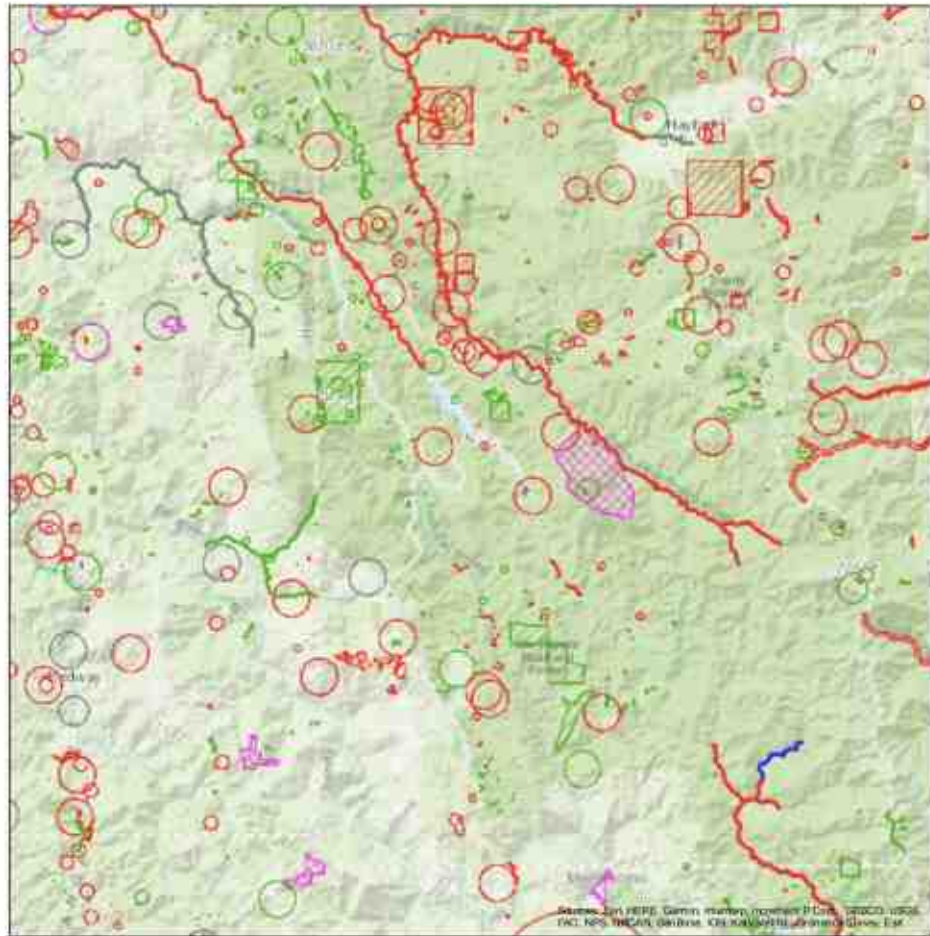
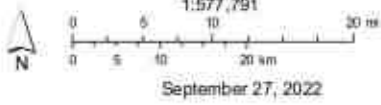
<b>NAME</b>	<b>STATUS</b>	<b>SHORT &amp; LONG-TERM PROJECT IMPACTS/BENEFITS</b>
Coho Salmon – Southern Oregon / Northern California ESU <i>Oncorhynchus kisutch</i>	Federal Threatened (06/05/97) State Threatened (02/25/04)	<u>NO IMPACT</u> - - Work will occur above anadromy above Ruth Dam.
Chinook Salmon O. <i>tshawytscha</i>	Federal Threatened (11/15/99)	<u>NO IMPACT</u> - - Work will occur above anadromy above Ruth Dam.

NAME	STATUS	SHORT & LONG-TERM PROJECT IMPACTS/BENEFITS
Steelhead – Northern California ESU <i>Oncorhynchus mykiss</i>	Federal Threatened (08/07/00)	<u>NO IMPACT</u> - Work will occur above anadromy above Ruth Dam.
Marbled Murrelet <i>Brachyramphus marmoratus</i>	Federal Threatened (09/30/92) State Endangered (03/12/92)	<u>Habitat for this species will be benefitted by reforestation actions.</u>
Foothill Yellow-legged Frog <i>Rana boylei</i>	State Candidate Threatened (S3)	<u>NO IMPACT</u> <i>Rana boylei</i> requires shallow, flowing water, apparently preferentially in small to moderate-sized streams situations with at least some cobble-sized substrate. No equipment operations are proposed within streams, ponded areas, springs or watercourses and no downstream effects are anticipated.
Fisher (West Coast DPS) <i>Pekania pennanti</i>	State Threatened (S2S3)	<u>NO IMPACT</u> Fishers require large areas of mature conifer forest habitat. High quality habitat exists surrounding the project site and Nesting and denning sites have not been located in the project site. No large stature trees or diameter, snags or special habitat features will be impacted. The natal den period for fisher is March-May 15. The maternal den period is May 16-July 31 <sup>st</sup> . If work occurs during this period and a fisher is encountered near the project site, a consultation with California Department of Fish and Wildlife will be conducted.
<u>Gray Wolf</u> <u>(<i>Canis lupus</i>)</u>		<u>If a gray wolf, or den/rendezvous site, is observed in the project area the protection measures include a protection buffer to 0.25 mile.</u>
<u>Northern Spotted Owl</u> <u>(<i>Strix occidentalis caurina</i>)</u>		<u>Habitat for this species will be benefitted by reforestation actions.</u>

## Ruth Lake Project Area

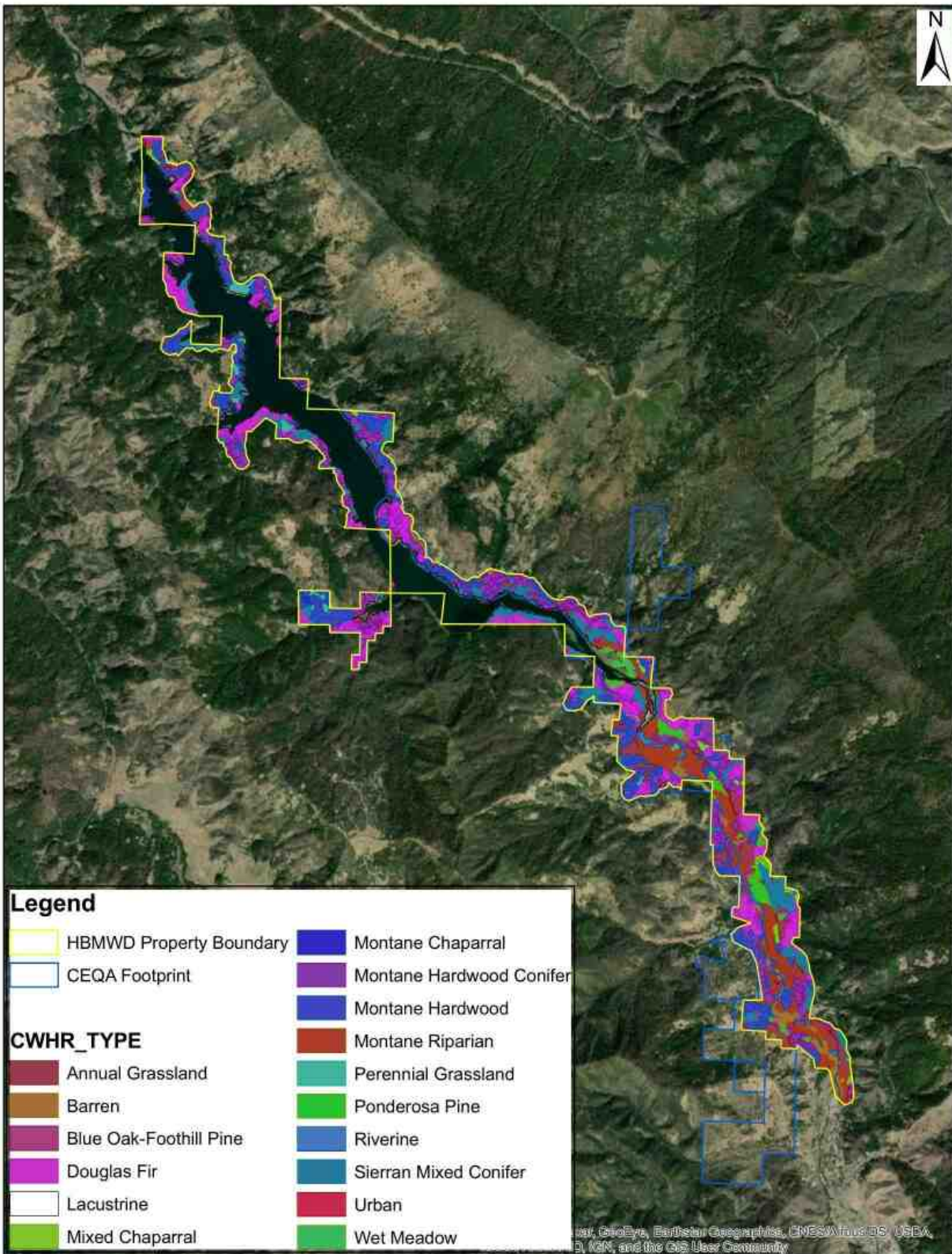
California Natural Diversity Database (CNDDDB) Government [ds45]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)



Author: mmm201@gmail.com  
 Project from mmm201@calpoly.edu

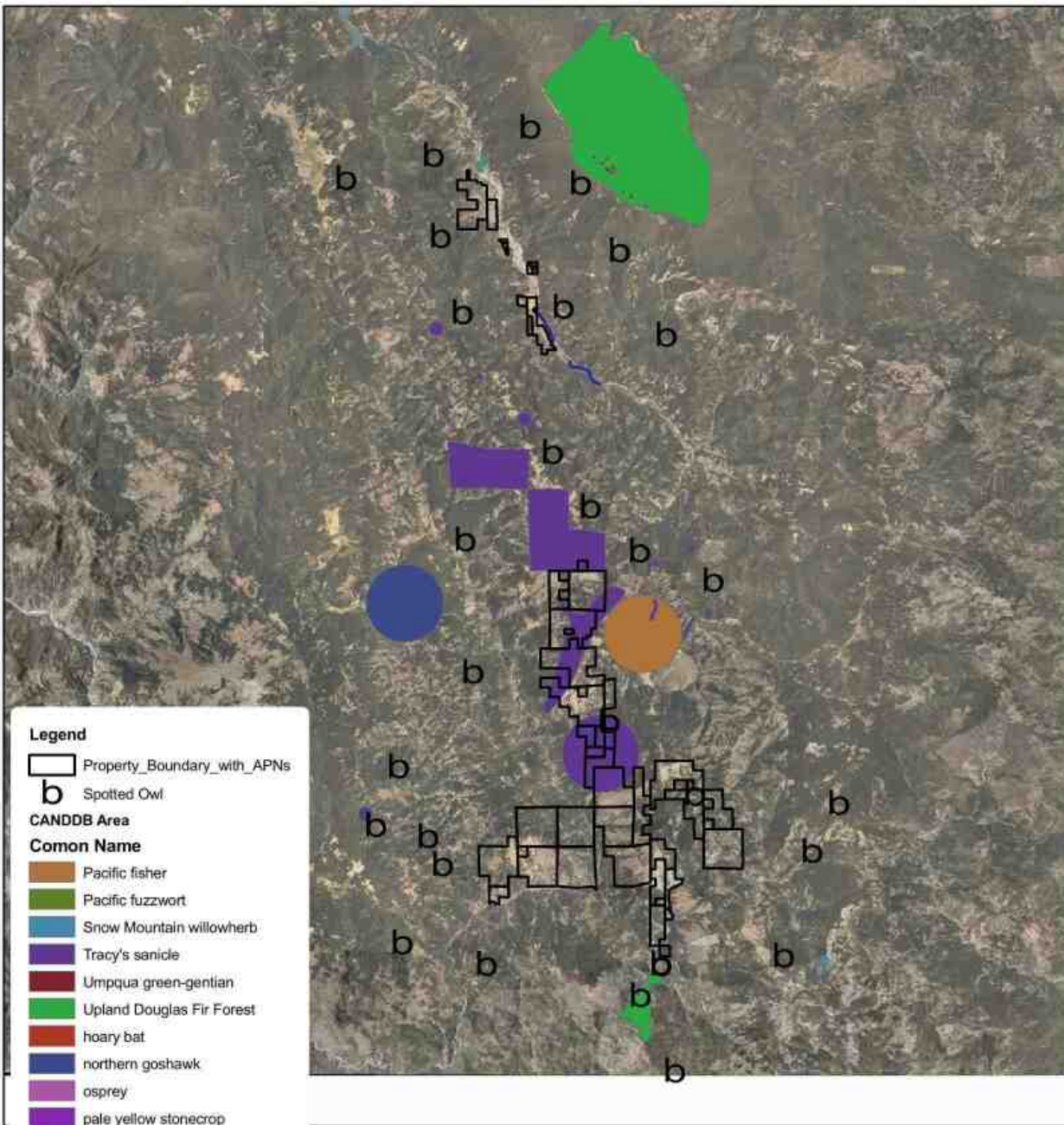
**Note: CNDDDB mapped locations of special status species on a scale greater than 1:350,000 are not included in the Initial Study but are on file with the CEQA lead agency and project consultants.**





Customer: Browns Investments  
 Approx. Acres: 11,806  
 T., R., Sec. Meridian  
 7.5 min. USGS Quad

USDA-Natural Resources Conservation Service  
 Weaverville Field Office  
 Phone: 530-623-3991  
 Web Site: www.ca.nrcs.gov



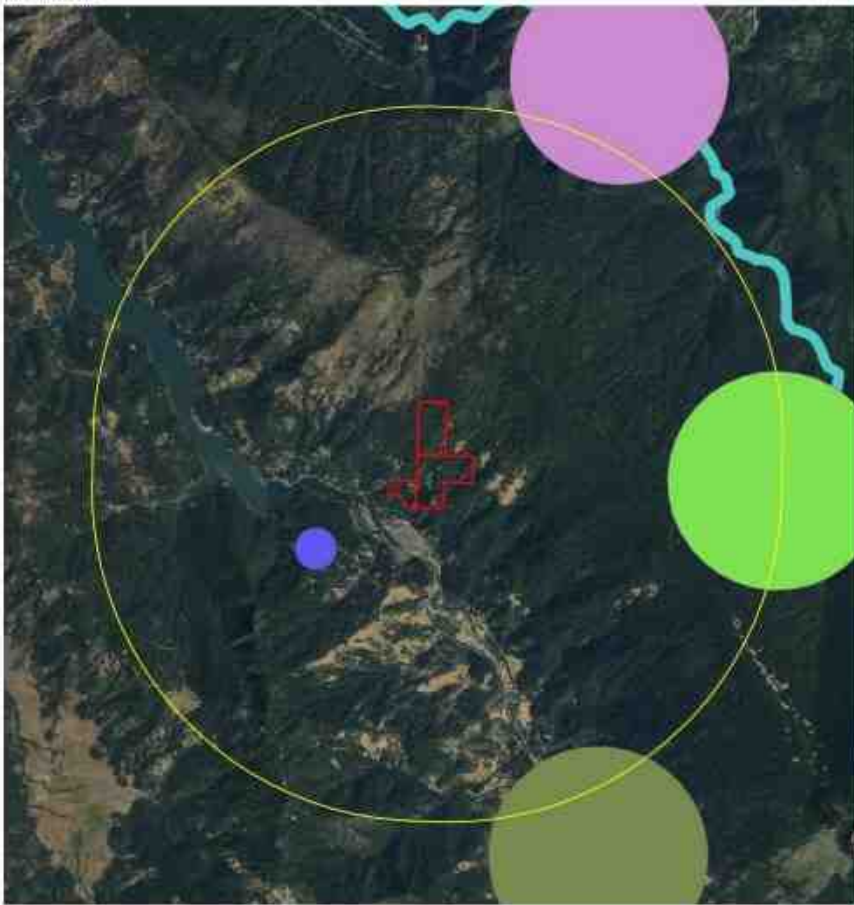
0 6,500 13,000 26,000 39,000 52,000 Feet





Field Office: Weaverville  
 Agency: USDA-NRCS  
 Trinity County, CA  
 Assisted By: Tiffany Perez  
 Date: 10/27/2021

Client: The 2003 Darroll D. Meyer Jr  
 and Barbara J. Meyer Family Trust  
 CNDDDB CDFW Status

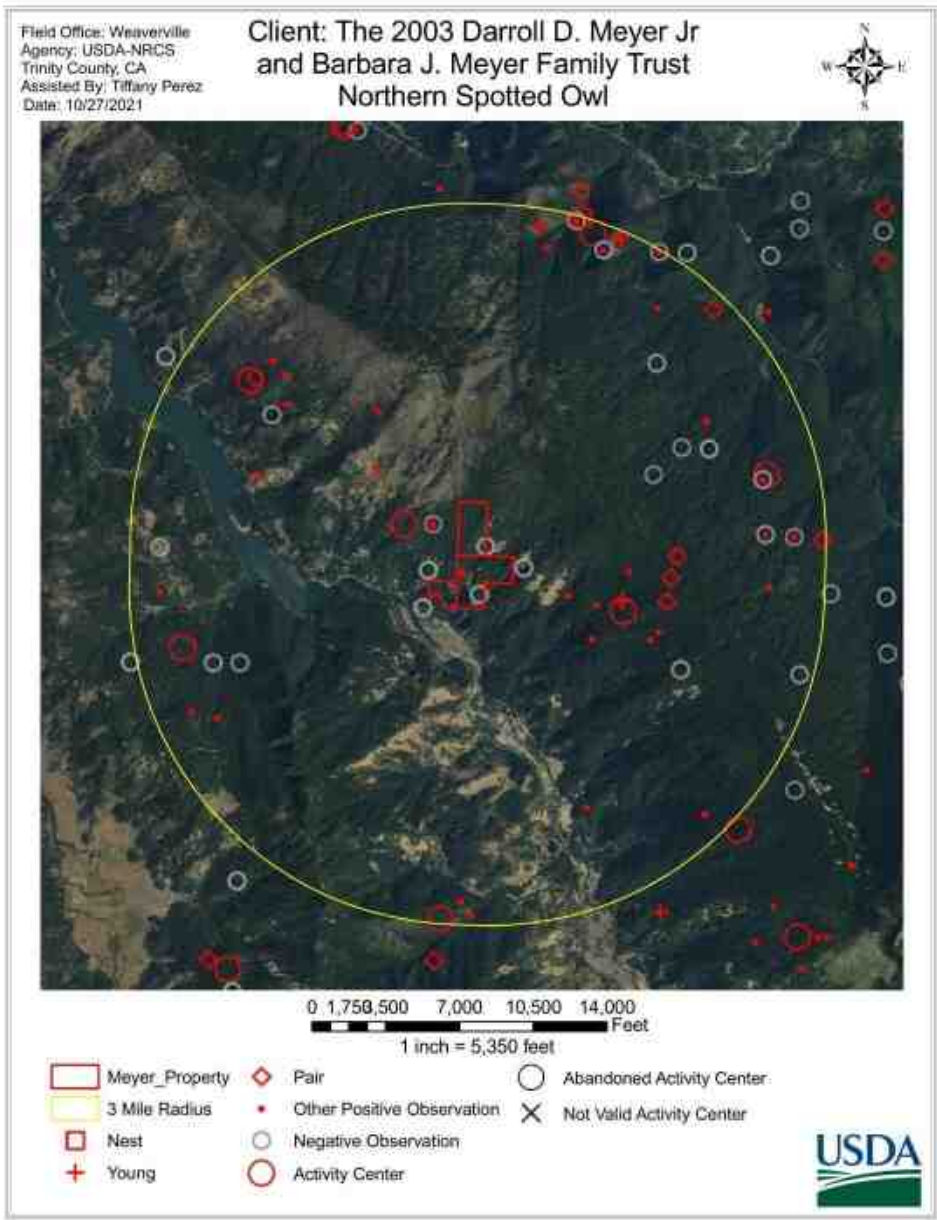


0 1,750 5,000 7,000 10,500 14,000  
 Feet

1 inch = 5,350 feet

- |                    |  |                                  |
|--------------------|--|----------------------------------|
| Meyer_Property     | <b>CNAME, CDFWSTATUS</b>                                   | foothill yellow-legged frog, SSC |
| 3 Mile Radius      | Fishel, SSC  | summer-run steelhead trout, SSC  |
| <all other values> | bald eagle, FP   | western bumble bee               |
|                    | chinook salmon - upper Klamath and Trinity Rivers ERL, SSC |                                  |





**References:**

Able Forestry Consultants- pers. Communication with Eric C. Taft, RPF #3036  
 James L. Able Forestry Consultants, Inc. regarding botanical and biological aspects on THP 1-17-100 TRI  
 APN 020-330-06-00

California Department of Fish and Wildlife, Natural Diversity Database (CNDDDB). 2022. *Rarefind 5*  
 including the Northern Spotted Owl Observations Database accessed August 18, 2022 and January 14,  
 2022. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.

CAL FIRE Timber Harvest Plan 1-17-100-TRI for Jeff Meyer property 62 acres adjacent to HBMWD.

Hoover, L.D. 1999. Conservation Strategy for *Sanicula tracyi* Shan & Constance. On file at Six Rivers National Forest Supervisor's Office. Eureka, CA.

USFWS Wetlands Mapper accessed 1-14-22

USFS Three Forks Fire Salvage Project - Botany Report April 28, 2021 John McRae, Forest Botanist

USFS Wildlife Report Management Indicator Species Migratory Birds Survey and Manage Species Mad River August Complex Restoration Project Six Rivers National Forest January 6, 2022

USFS Biological Assessment/Evaluation Threatened, Endangered, and Forest Service Sensitive Species Mad River Ranger District Three Forks Salvage CE Klamath Province Six Rivers National Forest April 22, 2021

USFS Mad River August Complex Restoration Project Preliminary Environmental Assessment Finding of No Significant Impact 6-25-21

USFWS Information for Planning and Conservation (IPaC) Species list. 2020. Accessed June 2020 from <https://ecos.fws.gov/ipac/location/index>

V. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>CULTURAL RESOURCES:</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

The upper Mad River watershed was home to three different groups whose languages are related to the Athabaskan family, the Whilkut, Nongatl and Lassik (Baumhoff 1958). "The Lassik inhabited the drainage of the main Eel River between the mouths of Dobbyn and Kekawaka Creeks along with lands to the east including the headwaters of the North Fork Eel River and on the site that the former Ruth Store occupied in the 1920's (Baumhoff 1958;179). Kroeber (1925:143) places the Lassik as far north as Lassik Peak. It is possible, however, that a Nongatl group may have claimed this area; the southern Athapskan groups are among the least known in California, and accounts of their territorial holdings are approximations' ". According to Kroeber (1925:144) , the Lassik were terribly persecuted by white settlers in their lands. They may have been exploited by Mexican slave traders from Sonoma County prior to the American white invasion. Members of all southern Athabaskan tribes and many of their neighbors were forcibly removed to reservations.

**a&b) Less than Significant.** As such, there will be no impact that causes a substantial adverse change in the significance of a historical resource. Historic resources, as distinguished from archaeological resources, include antiques, buildings, structures, and sites generally from the past two centuries. The historic period brought with it large-scale changes to the landscape, with logging, clearing of the land for agriculture, importation of livestock, and fire suppression leading to alterations in the vegetation and habitat types on the

project area and the surrounding area. For much of the historic period, the project area was used for timber operations and livestock ranching.

The Northeast Information Center (NEIC) at Chico State was contacted to conduct a records search. The NEIC base maps show that there are no previously recorded Native American archaeological resources within or adjacent to the project area. But, based on the environmental setting that there is a moderate to high potential for unrecorded Native American resources as well as historic period cultural resources. To date all known archeological sites have been mapped and will be avoided by project activities.

Notification letters were sent to the Native American Contacts, Tribal Heritage Preservation Officers (THPOS) per AB52 on the list provided by the Naive American Heritage Commission (NAHC). That included the Wintu Tribe of Northern California, Wintun Educational and Cultural Council, Wailaki Tribe, Tsnungwe Council, Round Valley Reservation / Covelo Indian Community, Nor-Rel-Muk Nation, Hoopa Valley Tribe and Redding Rancheria. No responses were received from the notification letters.

A USFS archaeologist surveyed the USFS portion of the project area. On the 200 acre Darroll Meyer private land, a registered professional forester who is a Certified Archaeological Surveyor through the California State Board of Forestry and Fire Protection (14 CCR Section 929 *et seq.*) surveyed the private lands portion of the project along as part of filed and extended CAL FIRE Emergency Notices. The filed and extended Emergency Notices are listed below:

1-21EM-00054-TRI

1-21EM-00050-TRI

1-21EM-00146-TRI

1-21EM-00050-TRI

1-21EM-00055-TRI

CAL for HBMWD Area 1 Emergency Notice

CAL for HBMWD Area 2 Emergency Notice

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Per the Cultural Resource Review Procedures for CAL FIRE Projects (2010), many aspects of the Ruth Lake Reforestation Project fall under the "List of Exempt Practices" (page #8). The following are examples of CAL FIRE projects that, because they are unlikely to impact cultural resources, do not require archaeological survey, investigation, and reporting:

- Reforestation: Tree planting after harvest or other natural disturbances
- Follow-up (Release): Practices necessary to promote the survival of seed or seedlings within 36 months of planting. Generally, such work is intended to control insects, diseases, rodents, weeds or brush competition and may include the use of herbicide, chain saw, weed-eater, or hand-grubbing. This work will usually be done by crews using hand tools. If other equipment is used, archaeological surveys may be needed.
- Timber Stand Improvement: Activities designed to improve timber stands include pre-commercial thinning of young commercial tree species to reduce the number of stems per acre, release of commercial tree species by removing competing noncommercial species of trees and shrubs, and pruning of young trees by removing lower branches from commercial tree species. This work will usually be done by crews using hand tools and the slash is just left on the ground, typically lopped and scattered. If the slash will be piled and burned, or mechanically collected and removed for biomass utilization, archaeological surveys may be recommended.
- Shaded Fuel Breaks: Thinning and pruning of trees, generally along both sides of a road or along the crest of a ridgetop, to create an effective fuel break to potentially stop a wildfire. To be exempt such projects must involve the chipping and removal of woody material or the chipping and

scattering of woody material. Shaded fuel break projects involving mechanical methods or the piling and burning of slash will likely require archaeological survey.

- Timber Stand Improvement: Activities designed to improve timber stands include pre- commercial thinning of young commercial tree species to reduce the number of stems per acre, release of commercial tree species by removing competing noncommercial species of trees and shrubs, and pruning of young trees by removing lower branches from commercial tree species. This work will usually be done by crews using hand tools and the slash is just left on the ground, typically lopped and scattered. If the slash will be piled and burned, or mechanically collected and removed for biomass utilization, archaeological surveys may be recommended.
- Fire-Safe Projects: Treatment of vegetation surrounding communities to reduce the risk of catastrophic wildfires through thinning and/or removal of vegetation by crews using hand tools or non- ground disturbing equipment. To be exempt such projects must involve the chipping and removal of woody material or the chipping and scattering of woody material.
- Disturbed Areas: Those activities or projects where the area of potential effect is entirely within obviously disturbed contexts, and the disturbance is such that the presence of cultural resources is considered highly unlikely.
- Fuelwood and Christmas Trees: The collection and personal use of fuelwood.
- Handlines: The creation of narrow handlines using hand tools to establish a burn perimeter.
- Handlines are often used to keep prescribed fire from entering a cultural resource. This includes hand grubbing around trees or near cultural resources to prevent fire from entering or damaging such resources. Such activities are limited to light brushing of vegetation to expose mineral soil using hand tools.
- Hazard Tree Removal: The felling of hazardous trees within recreation areas or other areas for health and safety reasons.

BBWA RPF's who are Certified Archeological Surveyors traversed and flagged all areas for forest health treatments ( pile and burn, biomass chipping and reforestation).

In August 2022, DCZ Archeologists surveyed the part of the project area that includes the 41 Cattle Co lands and a portion of the HBMWD lands not covered by previous archeological surveys. Based upon the notification letters and communication with Native Americans, the responses received did not indicate that they wanted to consult on this project and that no information concerning archaeological or cultural sites within the project area was disclosed.

1. Pre-field research including other archeological surveys in the region, historic maps, interviews with the property owner, aerial photos and area historic literature.
2. A NEIC Chico State archaeological records search.
3. A field survey and reconnaissance covered the 41 Cattle Co, project area and HBMWD areas not covered by previous Archeological Surveys pertinent to CAL FIRE Emergency Notices in August 2022.
4. BMP Cultural-1 requires a flagged 50' buffer to be established.

There is the potential for inadvertently discovering cultural/paleontological resources during project activities. As such, appropriate project BMPs have been described should any resources be discovered, impacts to cultural resources will be less than significant.

There are few if any sites within California that have not been burned at one time or another. Most cultural sites have been subject to low-intensity fires many times in the past and whatever damage is possible under these conditions has already occurred. The least impact to sites has been to those that have been burned prior to 1930. Archaeological sites that have not been exposed to fire in the last 60 to 100 years are in peril. Significant changes to surface and below ground artifacts will occur if they are burned by high intensity wildfires. Prescribed fire projects afford the opportunity for the archeologist and the prescribed fire

manager to work together and provide long term protection to our cultural resources.

**a & b.**

c) ***Less than Significant.*** No human remains have been documented within the project area during any of the previous and recent cultural resource surveys. However, ground disturbing activities related to mastication and pile burning treatments and hand fire lines could potentially disturb previously undocumented buried human remains. These activities could therefore have a potentially significant impact on human remains. Should human remains be uncovered, State law requires that the County Coroner be contacted immediately. Should the Coroner determine that the remains are likely those of a Native American, the California Native Heritage Commission must be contacted. The Heritage Commission consults with the most likely Native American descendants to determine the appropriate treatment of the remains. ***BMP Cultural-2***, procedures for encountering human remains, would reduce impacts on human remains to a less-than-significant level by requiring the implementation of standard procedures if human remains are encountered.

**BMP Cultural-1**

*All new and previously recorded archeological sites identified during field surveys completed in connection with the preparation of this IS and documented in the archeological report for the project shall be protected through following the protective measures contained in the project Archaeological Survey Report. Flagged 50' buffers shall be established around each artifacts or sites by the project manager or registered professional forester prior to implementation of any project work. Within areas of ground or vegetation disturbing activities, if project work appears to expose any previously unknown archeological, prehistoric, historic or paleontological resource sites within 100 feet beyond the project boundary, the site shall be avoided. Work may continue elsewhere within the overall project area. Exposed cultural or paleontological resources shall be appropriately flagged in order to immediately establish an exclusion buffer of at least 100-feet. Any discoveries of previously unidentified cultural resources that are made during operations shall be dealt with in accordance with the Procedures for Post-Approval Discovery of Cultural Resources (pp. 17 and 18, *Archaeological Procedures for CAL FIRE Projects*). In general, slash piles will be placed at least 50 feet from any archaeological features or artifacts.*

**BMP Cultural-2**

*Should human remains be inadvertently discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, CAL FIRE, the project manager, Trinity County Coroner, Native American Heritage Commission (NAHC), and the relevant Native American representative(s) shall be notified immediately, and the remains shall be treated in accordance with NAHC treatment and disposition requirements and relevant state law.*

**BMP Cultural-3**

*Prior to ground disturbing projects, project managers shall receive training on the location of cultural resources and measures necessary to protect them. Upon completion of project activities, markings designating the location of cultural resources shall be removed.*

**References:**

Allen, Craig (editor)

1996 Fire Effects in Southwest Forest: Proceedings of the Second La Mesa Fire Symposium, 1994. General Technical Report RM-GTR-286. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

Biswell, Harold, 1989 Prescribed Burning in California Wildlands Vegetation Management. University of California Press, Berkeley, California.



Clark, Bob, and Melanie Miller, 1994 Fire Effects Guide. USDA National Wildfire Coordination Group.  
 Lewis, Henry 1973 Patterns of Indian Burning in California: Ecology and Ethnohistory. Anthropological Papers No. 1. Ballena Press, Ramona, California.

California Historical Reference System, Northeast Information Center IC File # K21-127 dated 10-5-2021.

California Historical Reference System, Northeast Information Center IC File # K2254 dated 7-1-2022.

Dann, William/Gerald Garvey Confidential Archaeological Letter Emergency Notice Humboldt Bay Municipal Water District – Area #2 Trinity County, CA 2-15-2021

Dann, William/Gerald Garvey Confidential Archaeological Letter Emergency Notice Humboldt Bay Municipal Water District – Area #1 Trinity County, CA 1-25-2021

DCZ Archeology Report for Ruth Lake Reforestation Project 2022

Northeast Information Center (Chico State) File(s) # K-21-127 (Oct. 2021); K-22-54 (July 2022).

Pieper, J., 2004 Archeological Survey Report for Hobart Creek Timber Harvest Plan

Taft, Eric RPF #3036 Able Forestry Consultants pers. communication regarding Archeological Survey for THP 2-27-200-TRI”Ruth Lake THP” for APN 020-330-06.

USDA NRCS Cultural Resource Survey Report #15FY53-0003 for 41 Cattle Company 2015

**VI. Energy**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**a) No Impact.** Implementation of project activities would not result in the development or ongoing use of electricity or natural gas utility services. Therefore, project-level activities would result in no environmental impact due to wasteful, inefficient, or unnecessary consumption of electricity and natural gas resources. Forest resilience projects would require the use of trucks and power equipment and would therefore result in the consumption of petroleum-based fuels. Additionally, project-level prescribed pile burn fire activities in the project area would require the use of small amounts of petroleum-based fuels for ignition, as well as for vehicles and support equipment.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**b) No Impact.** Project-level activities proposed project would not increase the use of electricity or natural gas utilities and would result in only a minor increase in the consumption of petroleum-based

fuels for vehicles and equipment. These activities would not conflict with or obstruct any renewable energy or energy efficiency plan. There would be no impact.

VII. Geology and Soils Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>GEOLOGY AND SOILS:</b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

The predominant soils of the area include:

- Clallam family, 35 to 75% slopes.
- Clallam-Hugo-Holland families, 35 to 70% slopes.
- Deadwood family-Clallam family, 45 to 85% slopes.
- Doty-Hecker families, 25 to 70% slopes.
- Holland-Goldridge families, 5 to 35% slopes.
- Oxalis-Hecker-Doty families association, 25 to 70% slopes.

Skalan-Kristirn-Holland families association, 35 to 70% slopes.  
Typic Xerofluvents-Riverwash association, 2 to 10% slopes

The soils within the project area are underlain by Franciscan Assemblage parent material, located within the California Coast Range physiographic province. Soil parent materials include sedimentary, metasedimentary, and meta-igneous substrates. Typically, Franciscan sediments and meta-sediments in this area are primarily derived from Late Jurassic greywacke, and small amounts of shale or schist, as well as 6 metamorphosed basic igneous rocks. Soil depths range within the project area from moderately deep to very deep (20 to greater than 60 inches). Surface soils are generally loams to very gravelly loams with very gravelly loams and clay loams in the subsoil. Permeability varies from moderately slow to rapid, and soils are well to somewhat excessively drained. Their general ability to infiltrate water flow is likely attributable in part to the relatively high content of large particle size classes, such as gravel, in the soil.

Overly drained, rocky soils are part of the reason that the site index found during the timber inventory was not very high (III and IV). The erosion hazard rating (EHR) for the property varies with the slope class but an overall average for the property is 50-65 (CDF technical guidelines) that translates to a "moderate" erosion hazard and a low soil compaction rating. Generally, land disturbing activities should not take place during wet periods as soil disturbance associated with wet weather greatly increases the chance of erosion and soil damage through compaction.

a) *i-iv) No Impact.* The project is not located within the Alquist-Priolo Earthquake fault hazard area but is located within a seismically active region with active fault zones and land sliding. The project site is susceptible to strong seismic ground shaking common to the north coast region of California. The proposed project does not involve construction of any roads or habitable structures, and therefore will not expose people or structures to potential adverse effects including risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic induced ground failure, or landslides. The project will not cause rupture of a known earthquake fault, will not cause seismic ground shaking, will not cause seismic-related ground failure, including liquefaction, and will not cause any landslides or increase landslide potential.

b) *Less than Significant Impact.* The proposed project will not result in substantial soil erosion or the loss of topsoil. This project is not expected to generate significant soil erosion and will not deliver sediment into watercourses. Reforestation will establish native vegetation on the project area. Adequate mulch will cover areas masticated or chipped. Heavy equipment will not be conducted on slopes over 50%. Prescribed burn piles are expected to revegetate quickly with on-site seed banks.

#### **BMP Geo-1**

*For the fuel treatment work adjacent to the existing road network, any newly-exposed soil of over 100 square feet in area will be mulched to minimize the potential for erosion. Hand water bars will be installed to divert water onto stable vegetation and away from watercourses, as needed. Verification of proper installation and sufficiency of both mulching and waterbars will be made by the project manager prior to and following the season's first precipitation event and recorded in the project file.*

c) *No Impact.* Tractor or heavy equipment operation will not be conducted on known slides or unstable areas.

d) *No Impact.* Expansive soil occurs when clay particles interact with water causing volume changes in the clay soil. The clay soil may swell when saturated and shrink when dried, destabilizing any structures in the proximity. The proposed project will not create risks to life and property because it does not involve erection of any structures and is not located in the proximity of any structures such that it could impact their stability.

e) **No Impact.** The project does not involve the construction or use of septic systems or an onsite wastewater disposal system.

f) **Less than Significant** .(BMP Cultural-1) will insure that unique paleontological resource or site or unique geologic features are not impacted.

Paleontological resources are the remains or traces of prehistoric animals and plants. Paleontological resources, which include fossil remains and geologic sites with fossil-bearing strata are non-renewable and scarce and are a sensitive resource afforded protection under environmental legislation in California. Under California PRC Section 5097.5, unauthorized disturbance or removal of a fossil locality or remains on public land is a misdemeanor. State law also requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontological resources (CPR Section 30244). Although it is unlikely that project activities would impact potentially significant unique paleontological or geologic resources, it cannot be ruled out altogether. The published geologic mapping of the region (CDMG 1984) indicates that sediments underlying the project area are associated with the Franciscan Formation. There is no evidence to suggest that the project will directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Paleontological resources were not surveyed or encountered during field environmental review for this project.

**References:**

USFS Soil Resource Report for the Three Forks Fire Salvage Project Six Rivers National Forest, Mad River Ranger District Prepared by Scott Hagerty - Soil Scientist Northern California Resource Center April 28, 2021

NRCS Web Soil Survey accessed 2022.

VIII. Greenhouse Gas Emissions Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

a) **Less than Significant Impact.** The area for assessment of GHG impacts is statewide. Under CEQA guidelines developed by the Office of Planning & Research, lead agencies must determine if a project will emit GHGs, determine the significance of the emission and develop mitigations. CEQA Guidelines define greenhouse gases to include CO<sub>2</sub>, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Carbon from this project material will be stored as large woody debris or chipped biomass until they decompose or are burned, ultimately releasing the carbon back to the atmosphere. Additional activity generated fuels may be left in the woods and would slowly emit carbon back to the atmosphere. Other emissions include smoke, dust, and greenhouse gases from prescribed fire, pile burning, and vehicle and equipment use during implementation. Overall the project will increase long-term storage of carbon through reforestation treatments, and the stability of the existing stores would be increased by reducing the risk of large wildfires. Burning has been found to be a large source of emissions, as compared to only mechanical treatment, but was still small compared to high severity wildfire which converted most live carbon stores into decomposing carbon sources (North and Hurteau 2011). Treatments which reduce

densities of small diameter trees as well as some intermediate, fire-sensitive trees were found to be most effective in reducing losses during burning and enabling rapid carbon recovery (Millar et al. 2007, Hurteau and North 2010).

The track chipper uses approximately 10 gallons of diesel per an eight hour work day. A total of approximately 20 days of chipper usage will be necessary.

About 6 gallons of diesel and one of gasoline for the use of drip torches will be used for 20 days.

The skid steer uses approximately 25 gallons of diesel per an eight hour work day worth of mastication. A total of approximately 20 days of mastication will be necessary.

Two contractor crew transports (reforestation and chipping etc.) will be traveling on average 140 miles round trip for 50 days, using a total of 20 gallons of gasoline per day.

Admin vehicles are estimated to travel to project area 10 times with a 100 mi round trip, using a total of 125 gallons of gasoline.

Chainsaw crew Net Gasoline Fuel= 2 gallons:  $2 \text{ gal} * 8.18 \text{ (conversion factor)} = 8.18 \text{ KG}/1000 = 0.01636$  metric tons CO2 emissions Total= $0.01636$  metric tons of CO2 emissions per day X 50 days=  $0.0818$  metric tons CO2 emissions

Crew Pile burn Net Gasoline Fuel= 1 gallon:  $1 \text{ gal} * 8.18 \text{ (conversion factor)} = 8.18 \text{ KG}/1000 = 0.00818$  metric tons CO2 emissions Total= $0.00818$  metric tons of CO2 emissions per day X 20 days=  $0.1636$  metric tons CO2 emissions.

Net Diesel Fuel= 6 gallons:  $6 \text{ gal} * 10.15 \text{ (conversion factor)} = 60.9 \text{ KG}/1000 = 0.0609$  metric tons CO2 emissions Total= $0.0609$  metric tons of CO2 emissions per day X 20 days =  $1.218$  metric tons CO2 emissions.

Total emissions=  $14.881$  metric tons CO2 emissions

Most of the biomass will be piled and burned or chipped and left on site allowing a slow decay and release of sequestered carbon. Emission from the decomposition of treated material is expected to be re-sequestered by the remaining vegetation and planted trees as the project site revegetates. The project is intended to reduce the risk of uncontrolled wildfire which would result in a rapid release of carbon and other greenhouse gasses at a higher rate.

The short term increase in GHG release is not considered significant and if it contributes to high intensity fires or larger fires, it can significantly reduce GHG releases compared to high intensity fire in the same locations. No mitigation is required for GHG emissions. Using the Air Resources Board Carbon Calculator, this project has an overall GHG benefit by reforesting thousands of acres of burned timberland.

GHG benefit from reforestation activity District and Private Lands (MT CO <sub>2</sub> e)	280,522
On-site carbon storage and project emissions in reforestation project scenario (MT CO <sub>2</sub> e)	360,510

On-site carbon storage in baseline scenario (MT CO <sub>2</sub> e)	79,988
GHG benefit from reforestation Federal Lands (MT CO <sub>2</sub> e)	420,271
On-site carbon storage and project emissions in reforestation project scenario (MT CO <sub>2</sub> e)	526,922
On-site carbon storage in baseline scenario (MT CO <sub>2</sub> e)	106,651

Trinity County and the NCUAQMD currently do not have local plans, policies or regulations adopted to reduce GHG emissions. As a result, it is anticipated that the limited amount of greenhouse gas emissions generated through the development of this project will be sequestered along with those generated offsite by area traffic and other activities. Based upon a negligible contribution to overall emissions, consistency with adopted air quality regulations for vehicle emissions and the positive impacts the reduction of wildland fuels will have on forest sequestration of greenhouse gas emissions, it is anticipated that this project will have a **less than significant impact** on greenhouse gas emissions.

**b) No Impact.** Project activities would be temporary and minor, and therefore have minimal effects on AB 32 greenhouse gas emission reduction goals. As mentioned above, the proposed project would likely reduce long-term greenhouse gases region-wide from uncharacteristic large wildfire and therefore would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing long-term greenhouse gases. The California Air Resources Board adopted a Climate Change Scoping Plan Update in 2017, which contains strategies for reducing GHGs. The scoping plan recognizes the role of California’s natural and working lands in meeting California’s reduction goals. One of the key sectors is forestry, where the emphasis is on preparing for increased wildfire hazards, including treatment of hazardous fuels, and improving forest management approaches in a changing climate (CNRA 2017). The scoping plan recognizes that some actions taken to address ecosystem health may result in temporary, short-term reduction in sequestration or emissions, but are necessary for forest resilience for reducing larger carbon losses due to wildfire. Additionally, the proposed project is consistent with the California Forest Carbon Plan (2018).

Trinity County and the NCUAQMD currently do not have local plans, policies or regulations adopted to reduce GHG emissions. As a result, it is anticipated that the limited amount of greenhouse gas emissions generated through the development of this project will be sequestered along with those generated offsite by area traffic and other activities. Based upon a negligible contribution to overall emissions, consistency with adopted air quality regulations for vehicle emissions and the positive impacts the reduction of wildland fuels will have on forest sequestration of greenhouse gas emissions, it is anticipated that this project will have no impact on greenhouse gas emissions.

**References:**

Air Resources Board, Forest Restoration and Management Benefits Calculator Tool 2019  
 California Forest Carbon Plan, May 2018

IX. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>HAZARDS AND HAZARDOUS MATERIALS:</b> Would the project:				

IX. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.			X	

The following databases were reviewed to locate "Cortese List" sites.

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor database.
- SWRCB GeoTracker Database.
- list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of active Cease and Desist Orders and Clean-Up and Abatement Orders from the SWRCB. The records search revealed that the project is not located on a known hazardous waste site. There are no active clean-up sites or known hazardous waste sites within a one-mile radius of the project area.

a) **Less than Significant.** Refueling staging areas will be situated away from waterways, dry or wet, and equipment will be stored and maintained within properly cleared areas. The existing 41 Cattle Co. ranch road system includes a low water ford of the Mad River. With the exception of the low water ford, diesel fuel will not be transported across a live stream, except for that in the fuel tank of equipment being operated. Contractors providing operations equipment (masticators, excavators, etc.) will make daily inspection of equipment for leaks, correcting and repairing any such leaks prior to crossing of live streams. Drip torch fuel will be transported to the project area in containers designed for that use. Based upon implementation of project BMPs Haz-1 and Haz-2, there will be a less than significant impact pertaining to hazards to the public and environment through transport of hazardous materials.

b) **No Impact.** No hazardous materials other than those listed in a), above, are to be used on the project site; therefore, no release of hazardous materials is foreseen. Spill kits will be onsite to clean up any small spills that could occur, therefore preventing the release of hazardous materials into the environment. As such, there will be no impact involving the release of hazardous materials.

c) **No Impact.** The project site is not located within a quarter of a mile from an existing or proposed school. Therefore, there will be no impact.

d) **No Impact.** California Government Code Section 65962.5(a)(1) requires the California Department of Toxic Substances to compile and update, as appropriate, a list of all hazardous waste facilities subject to corrective action, all land designated as hazardous waste property or border zone property, all information received by the Department of Toxic Substances Control pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land, all sites listed pursuant to Section 25356 of the Health and Safety Code, and all sites included in the Abandoned Site Assessment Program. These lists are commonly referred to as the Cortese List. The project site is not listed on any of the individual lists that comprise the Cortese List; none of the lands bordering the site are on any of the Cortese List. The proposed project is not located on a site that is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

e) **No Impact.** The project site is not located within an airport land use plan. The 41 Cattle Co portion of the project area has areas that is 6,700 feet from the Ruth Airport and the USFS lands are within 2 miles of the Ruth Airport (Airport code T42). This airport receives very low volume use with private small craft. There is one small portion of the 41 Cattle Co lands within 1600 feet of the airport.

f) **No Impact.** The project is in a remote location and will not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project will not include development that would increase the number of people exposed to emergencies and would not include uses that would require an amendment of a locally adopted emergency plan. Therefore, no impacts are anticipated.

g) **Less than Significant Impact.** The execution of the project work has the potential to ignite a fire within a wildland area. The risk to people and structures will be reduced as project work will be conducted when fuel moisture and humidity are at adequate levels as determined by CAL FIRE or other local firefighting authorities. In addition, firefighting equipment, fire extinguishers and firefighting tools will be made available at work sites per **BMP Haz-3**. Long-term, the project will reduce risks of loss, injury or death from large re-burn wildfires through the removal of excess dead vegetative fuels. Therefore, exposure to people or structures directly or indirectly from a significant risk of loss, injury or death involving wildland fire during the implementation of the project or over the long-term will be less than significant by using **BMPs Haz-4** and **Haz-5**.

#### **BMP Haz-1**

*Standard Public Notifications: Approximately two weeks prior to the commencement of pile burning operations, the project coordinator will: 1) post signs along the closest major road way to the area describing the activity, timing, and requesting for smoke-sensitive persons in the area to contact the project coordinator; 2) publish a public interest notification in a local newspapers, District Facebook page or other widely distributed media source describing the activity, timing, and requesting for smoke sensitive persons in the area to contact the HBMWD and 3) develop a list of smoke sensitive persons in the area and contact them prior to burning.*



**BMP Haz-2**

*To reduce impacts associated with exposure of people or structures to wildland fires, the project manager or registered professional forester shall ensure that adequate fire protection equipment is available at work sites. This shall include fire extinguishers attached to all mechanized equipment. In addition, firefighting hand tools shall be made available at all areas where equipment is operated. The project manager, or registered professional forester, and any other workers shall comply with all applicable fire safe standards as found in Public Resources Code Division 4, Chapter 6, (Public Resources Code §§ 4427, 4428, 4429, 4431, 4442, list not all inclusive). Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.*

**BMP Haz-3**

- *Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag or heat from igniting exposed combustibles (Section 3504, California Code of Regulations, Title 24, Part 9.*
- *A fire watch shall be provided during hot work activities and shall continue for a minimum of 30 minutes after the conclusion of the work.*
- *Individuals assigned to fire watch duty shall have fire-extinguisher equipment readily available and shall be trained in the use of such equipment.*
- *Where fire hoses are required, they shall be connected, charged, and ready for operation utilizing a portable water truck if needed.*
- *A minimum of one portable fire extinguisher complying with Section 906 California Code of Regulations, Title 24, Part 9 and with a minimum 2-A:20-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed*
- *There shall be no hot work, chainsaw work, heavy equipment work, chipping or masticating on red flag days declared by the North Coast Air Quality District.*

X. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>HYDROLOGY AND WATER QUALITY:</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				X
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.				X
c) Substantially alter the existing drainage pattern of the site or area, including through stream or river or through the addition of impervious surfaces in a manner which would:				X
i) result in substantial erosion or siltation onsite or offsite?				X
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				X
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide				X

X. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
substantial additional sources of polluted runoff; or				
iv) impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Runoff from burned areas often contains ash, which may have significant effects on the chemistry of receiving waters such as lakes, wetlands, reservoirs, rivers and streams. Runoff from burned areas also produces higher nitrate, organic carbon, and sediment levels, warmer temperatures, and flashier stream flows. The reforestation focus of this project will revegetate and stabilize exposed soils and ash.

a) **No Impact.** The project proponent will comply with all applicable water quality requirements adopted by the appropriate Regional Water Quality Control Board and approved by the SWRCB (i.e., Basin Plan). In general, GWDR and waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters; and that water board staff must be allowed reasonable access to the property in order to determine compliance with the waiver conditions. Through the implementation of project BMPs, and permit requirements from the Regional Water Quality Control Board that require that no significant sediment discharge occur from project activities and because the project will not generate or discharge wastewater or industrial flows to wetlands, creeks or waters of the U.S., the project will not violate any water quality standards or waste discharge requirements and therefore impacts will have no impact

**BMP Hydro-1**

*Prior to any project activities, provide the Initial Study-NOE and an erosion control plan (ECP) to the California Regional Water Quality Control Board and comply with the Categorical Waiver of Waste Discharge Requirements (Order No. RI-2014-0011 Category F.*

b) **No Impact.** No wells or structures that would remove groundwater are proposed in the project. No project-level activities would interfere with groundwater recharge. Therefore, there would be no impact.

c) i. **No Impact.** Significant vegetation including forest vegetation will buffer any watercourses from stormwater impacts associated with fuel break and prescribed fire treatments. Storm water runoff will follow the same flow patterns as the existing site configuration. The existing drainage pattern of the site will not be altered and therefore impacts will be less than significant with the incorporation of BMP Hydro-2. The project will not alter the existing drainage pattern of the area or increase the rate or amount of surface runoff in a manner which would result in off-site flooding.

ii. **No Impact** Project activities will not create new impervious surfaces or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. Broadcast burning will be implemented using low-intensity burn prescriptions that will not be hot enough to cause hydrophobic soil conditions which could affect runoff rates. Hand and mechanized fuel treatment on the shaded fuel breaks will leave sufficient mulch on the ground to prevent surface erosion.

iii. **No Impact** The project would not create or contribute runoff in amounts that would exceed the capacity of existing stormwater drainage systems or provide substantial additional sources of polluted runoff. The

area is rural and lacks stormwater and flood control facilities. The existing road systems have drainage facilities that include structures such as culverts, dips and waterbars that will not receive increased flow as a result of this project. The existing road system will be improved to correct existing controllable erosion sites prior the end of the project per the Erosion Control Plan (ECP) as part of the Regional Water Quality Control Board Discharge Waiver Category "F" under BMP Hydro-1. Implementation of BMPs Hydro-1 and Hydro-2 will assure that there will not be significant impacts to stormwater systems including introduction of polluted runoff into those systems.

iv. **No Impact:** No work to be conducted within stream protection buffers except for riparian tree planting by hand crews.

#### **BMP Hydro-2**

- *Tractor or heavy equipment (masticators) operation will not be conducted on known slides or unstable areas.*
- *Heavy equipment will not be used within the standard watercourse and lake protection zones (14 CCR 916.9).*
- *Equipment maintenance and refueling will occur outside the standard watercourse and lake protection zones (14 CCR 914.5).*
- *Heavy equipment operations will not be conducted on slopes greater than 50%.*
- *Ignition will occur outside of the standard Forest Practice Rule defined Watercourse and Lake Protection Zone (14 CCR 916.9).*

d) **No Impact.** The project does not involve housing construction and will not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map. The project does not involve construction of any structures and therefore will not place any structures within a 100-year flood hazard area, which would impede or redirect flood flows. The project will not expose people or structures to a significant risk or loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. The project is not located in an area that would be affected by a seiche, or tsunami, or mudflow.

e) **No Impact.** The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. BMP Hydro-1 will require compliance with the Regional Water Quality Control Board requirements. There is no known sustainable groundwater plan for the area.

#### **BMP Hydro-3**

*In order to buffer watercourses, riparian habitats and beneficial uses of water from the potential impacts of prescribed fire or fuel treatments, all wet stream courses (Class I and Class II) will be protected by a 75' horizontal distance "No Treatment Zone." Buffers will be established on both sides of stream channels. All wetlands and springs will be encircled by a 50' "No Treatment Zone." "No Treatment Zones" will be established and flagged as directed by the project manager prior to the implementation of any project work. No prescribed fire or fuel treatment will occur within the "no treatment zones." Seasonal watercourses or Class III watercourses, shall be protected with a 25' equipment exclusion zone.*

#### **BMP Hydro-4**

*The project manager will select refueling and maintenance areas for heavy equipment, chainsaws and other combustion-powered hand tools on flat sites that are away from dry or wet waterways as well as areas that could potentially flow into a stream in the event of an accidental spill. Fuel containment equipment (i.e., absorbent sheets and waddles) will be made available and used at refueling and maintenance areas. Fuel spillage will be minimized by conducting these operations in flat areas. Equipment will be stored and maintained within properly cleared areas. The project manager will inspect refueling areas to assure compliance with this BMP. These inspections will also verify the sites' adequacy in protecting riparian and terrestrial resources as well as the use and availability of containment equipment.*

**BMP Hydro-5**

*Hand piles should be placed in a checkerboard pattern whenever possible (not piled directly above one another), located outside of areas that may receive runoff from nearby roads and existing landings.*

XI. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>LAND USE AND PLANNING:</b> Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

**a) No Impact.** The proposed project is to restore forestland including conifer dominated stands and oak woodland forested habitat. It will not physically divide an established community; therefore there will be no impact.

**b) No Impact.** This project does not conflict with land use policies, plans or regulations by the County of Trinity. The project is consistent with allowable uses on resource lands such as Timberland Production Zone and Agriculture and therefore there will be no impact. The project is consistent with the goals of the California Department of Fish and Wildlife's Recovery Strategy for California Coho Salmon, and will enhance riparian habitat in all project-area creeks. The project does not conflict with any applicable habitat conservation plan or natural community conservation plan.

XII. Mineral Resources Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MINERAL RESOURCES:</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

**a & b) No Impact.** There are no known valuable or locally-important mineral resources on the site. The Division of Mines and Geology has noted that the 'Classification and Designation of Mineral Lands' per Surface Mining and Reclamation Act Section 2790 'Minerals of Regional Significance' and associated mapping has not occurred for Trinity County and other than in-stream gravel resources and rock quarries, have not identified any mineral resources needing protection from incompatible land uses. Therefore the project will not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Based on the project description and its location, the proposed project will not result in any mineral resource-related impacts.

XIII. Noise Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>NOISE:</b> Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive ground borne noise levels?				X
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

**a) *Less than Significant Impact.*** The project area is located in a remote forested area with low background or ambient noise levels. Although there are residential structures in close proximity to some of the treatment areas, project-related activities will result in short term increases in noise levels primarily associated with chipper use. The noise levels from the mastication, chain saws, and chippers will vary during the different activity periods, depending upon the number and types of equipment being used. The exact complement of noise producing equipment in use during any particular period is difficult to predict. However, the noise levels from construction activity during various phases of a typical construction project were evaluated by the Environmental Protection Agency in 1971. Although these studies were done 30 years ago, they remain the industry standards for estimated base noise emissions from construction and demolition equipment. Use of this data is considered conservative since newer construction equipment has incorporated quieter designs to protect both operators and the public from exposure to high noise levels. Project construction noise based on typical noise level emissions from public works projects, as developed by the United States Environmental Protection Agency Office of Noise Abatement and Control (1971), show noise from typical construction equipment usually ranging between 70 to 95 dB at 50 feet from the source. A chain saw is typically 85 decibels at 50 feet. Note that these typical noise levels at distances away from the equipment item (beyond 50 feet) are conservative since the only attenuating mechanism considered was divergence of the sound waves in open air. Attenuation from air absorption, ground effects, and shielding from intervening topography, structures and vegetation are not included in these tabled calculations. Noise will also vary throughout the project according to specific activities, location, orientation of the activities, and changing equipment operations.

Noise-sensitive land uses, or sensitive receptors, are generally defined as locations where people reside or locations where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, libraries, and certain types of recreational uses. Project related activities will be limited to Monday through Saturday, and between 6 a.m. to 7 p.m. No heavy equipment related activities shall be allowed on Sundays or federally recognized holidays. The project noise will be temporary over the course of the project's duration. Within that portion of the project area immediately adjacent to mastication, chippers and chainsaw operations, ambient noise levels will be increased above existing levels but only for a short period of time. Once project work has been completed, ambient noise levels will return to their pre-project levels. Impacts to temporary ambient noise levels will be less than significant. Therefore the proposed project's impact is less than significant.

b) **No Impact.** During construction activities, equipment may generate a small amount of ground-borne vibration or ground-borne noise; the level of vibration or noise would typically be minor. No pile driving or other substantial ground-borne vibration generators will be used. Vibration levels associated with the project's level of land form modification should not be perceptible at the nearest residential unit and would not result in cosmetic or structural damage to buildings. Therefore, impacts associated with ground-borne noise levels will be less than significant. Following completion of project construction there would be no noise generated by the project that would differ from current conditions. Therefore, operation of the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

c) **No Impact** Although portions of the area are located within two miles of a public/private landing strip, excessive noise impacts to that airport function will not occur.

XIV. Population and Housing Issues and Supporting Information	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>POPULATION AND HOUSING:</b> Would the project:				
a) Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

a-b) **No Impact.** The project will not directly or indirectly induce substantial population growth, would not displace existing people or housing or people, and would not necessitate the construction of replacement housing. Therefore, there will be no impacts associated with population and housing.

XV. Public Services Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>PUBLIC SERVICES:</b> Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

a-e) **No Impact.** The primary purpose of the proposed project is to reforest burned timberland and reduce fire hazard. It will not result in an increase in population that requires an increase in service ratios, response times or other performance objectives for any of the public services. Therefore, it will not result in substantial adverse physical impacts associated with the provision of new or physically altered

governmental facilities, the construction of which could cause significant environmental impacts. Service ratios, response times and other public service performance objectives will not change due to the implementation of this project.

XVI. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

*a-b) No Impact.* The primary purpose of the proposed project is to reforest burned timberlands and reduce fire hazards. The proposed project will not induce population growth or result in any demographic changes in the community. The project will not increase the use of existing neighborhood and regional parks or other recreational facilities, therefore there would be no impact on recreation. The project does not require the construction or expansion of existing recreational facilities. The proposed project does not include the construction of recreational facilities.

XVII. Transportation Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>TRANSPORTATION:</b> Would the project:				
a) Conflict with a program , ordinance or policy addressing the circulation system ,including transit, roadway, bicycle and pedestrian facilities?.			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? Criteria for Analyzing Transportation Impacts				X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

*a) Less than Significant Impact.* As the project is of short-term duration, the project will not cause a long-term increase in vehicle trips or cause a significant long term increase in traffic, or conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project will not conflict with any policies, plans or programs regarding public transit, bicycle or pedestrian facilities, as it only involves forest restoration and enhancement.

*b) No Impact-*The project is of relatively short duration and will not cause a permanent transportation impact in terms of vehicle miles traveled compared to the baseline situation. Therefore impacts to transportation and traffic are expected to be less than significant. There are no impacted roads with limited levels of service or problematic travel demand measures.

c) **No Impact.** Hazards will not be increased due to design features or incompatible uses because no new development is proposed. Temporary and intermittent use of Wilder Ridge Road during the 3 to 4 month seasonal activities of the project may cause a temporary increase in traffic, but this would not be a substantial increase.

d) **No Impact.** The contractors and crews are required to keep access roads open at all times for emergency access. No impacts to emergency access will result.

XVIII. Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>TRIBAL CULTURAL RESOURCES</b>				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
b). A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

Starting July 1, 2015, Lead Agencies are to consult with Tribes and initiate consultation prior to the release of a negative declaration, mitigated negative declaration or environmental impact report under CEQA. More specifically, AB 52 creates a new category of resources in CEQA called "tribal cultural resources" and seeks to engage the expertise of Native American tribes in the protection and preservation of those resources. To fulfill that purpose, the new law requires the lead agency to consult with a local Native American tribe as part of the environmental review process. The law also requires that the details of the tribal cultural resource be kept confidential and provides examples of mitigation measures that focus on preserving tribal cultural resources.

Tribal notification letters were sent on August 2, 2022. No responses were received for this project from contacted tribal representatives on the list provided by The Native American Heritage Commission.

The NEIC of the California Historic Resources Information System was contacted and two separate records searches were conducted, K22-54 (6-20-22) and K21-127 (10-5-21). The purpose of the file search was to determine if cultural resources surveys were conducted on or adjacent to the project site. Tribal responses to consultations per 21080.3.1, did not result in a request to consult for this project.



a) **No Impact.** There are no tribal cultural resources located on the project site that are either listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code section 5020.1(k). Therefore, there will be no impact.

b) **Less than Significant .** Prior to the start of operations, (historical) resource sites that were identified in the archaeological report(s) within the activity area, will be appropriately marked and locations communicated to operating contractors to ensure protection and avoidance. Confidentiality of cultural resources sites must be maintained with a minimal disclosure of site locations. If additional cultural resources are encountered during operations, all ground-disturbing work to be temporarily halted. Work on site shall not be resumed until a qualified archeologist has evaluated the materials and offered recommendations for further action. Should human remains be uncovered, State law requires that the County Coroner be contacted immediately. Should the Coroner determine that the remains are likely those of a Native American, the California Native Heritage Commission must be contacted. The Heritage Commission consults with the most likely Native American descendants to determine the appropriate treatment of the remains. The California Office of Historic Preservation, California Historic Information Center’s archeological database has been searched for sensitive cultural resources in the project area.

**BMP Tribal-1**

In the event that any Native American archaeological remains are discovered during implementation of management activities, local tribes will be contacted and consulted who have traditional and cultural affiliation with the Project area. If the tribe(s) considers the resource to be a tribal resource, appropriate mitigation measures will be developed in accordance with Public Resources Code 21080.3.2.

Other BMPs to protect cultural resources in the project area have been outlined in Section V. Cultural Resources.

<b>XIX. Utilities and Service Systems</b> <b>Issues and Supporting Information</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>UTILITIES AND SERVICE SYSTEMS: Would the project:</b>				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities the construction or relocation of which could cause significant environmental effects?				X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?				X
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

a) **No Impact.** The project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas or telecommunications facilities the construction or relocation of which could cause significant environmental effects.

b) **No Impact.** The project involves forest restoration and enhancement. The project has sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? Therefore no impact is expected.

c.) **No Impact.** A reforestation project would not create an increased demand for wastewater treatment capacity; therefore, no new construction of wastewater treatment facilities would be required.

d-e.) **No impact.** Materials that cannot be recycled will be disposed of through Trinity County Disposal in an appropriate approved landfill. Therefore, the project work will not result in the need for a landfill and no impact will result.

## XX. Wildfire

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>

The project is located in the State Responsibility Area (HBMWD and private lands) and the federal lands are within the Federal Responsibility Area (FRA). The project area is rated as having high fire hazard severity. Policy documents and plans for addressing wildfire risks in Trinity County include the Trinity County General Plan Public Safety Element, the Trinity County Hazard Mitigation Plan, the Trinity County Community Wildfire Protection Plan (2019), and Strategic Fire Plan for the Humboldt-Del Norte Unit (CAL FIRE 2018). The site's

setting amid mature trees and forest understory provides a setting conducive to the ignition and spread of a wildland fire if appropriate measures are not taken during work. Chapter 26 of the California Fire Code (California Code of Regulations, Title 24, Part 9) establishes provisions for safety and care during construction activities defined as hot work. In brief, the code requires that specific measures be taken during construction to minimize the potential ignition of a wildland fire in areas susceptible to such events, which include the project site and surrounding lands. Personnel carrying out the pile prescribed burns will be highly trained with prescribed burning and wildland firefighting and will take all safety precautions necessary to avoid an escaped fire. Site watering and adherence to the California Fire Code will ensure that the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

a) **No Impact.** The proposed project would not require the closure of public roadways or otherwise interfere with emergency evacuation plans for the surrounding area. Pile burning work activities could result in temporary road closures within the project boundaries but would not impact roadways outside of the project area. Prescribed burning could lead to increased smoke on nearby roadways and temporarily decreased visibility. However, smoke would be carefully managed in accordance with an approved smoke management plan and measures such as public notification of burn days and smoke warning signage would be implemented. These activities could cause a slight increase in vehicle use during construction activities and potential short-term reduced visibility from prescribed fire but would not impair emergency response plans or evacuation plans. Therefore, there would be no impact on emergency response or evacuation plans.

b) **No Impact.** The project is designed to reduce fire hazard reburn severity impacts associated with wildfire. Therefore the project is not likely to exacerbate wildfire risks, and expose people to pollutant concentrations from a wildfire. No new housing units or business will be constructed under this project. Therefore, no impact should result from implementation of the proposed project.

c) **No Impact.** The project will not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk. Therefore no impact should result from implementation of the proposed project.

d) **No Impact.** The project is designed to reduce reforest upland areas impacted by wildfire area and no downslope or downstream flooding or landslides should result from project activities.

**References:**

CAL FIRE FRAP Fire Severity Hazard Maps  
 2005 Trinity County Community Wildfire Protection Plan  
 2019 CAL FIRE Humboldt-Del Norte Unit Strategic Fire Plan  
 2022 Ruth Lake Fire Reduction Project SCH Number 2022060469 Portions of T1S R7E Sec 19, 29, ,32 & 33; T2S R7E Sec 2, 3, 4, 5, 9, 11, 12, 13, 14 & 24 HB&M

XXI.  Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MANDATORY FINDINGS OF SIGNIFICANCE:</b>				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal			X	

XXI.  Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Certain mandatory findings of significance must be made to comply with CEQA Guidelines §15065. The proposed project has been analyzed, and it has been determined that with implementation of the project as described in this initial study, it would not:

- Substantially degrade environmental quality.
- Substantially reduce fish or wildlife habitat.
- Cause a fish or wildlife population to fall below self-sustaining levels.
- Threaten to eliminate a plant or animal community.
- Reduce the numbers or range of a rare, threatened, or endangered species.
- Eliminate important examples of the major periods of California history or prehistory.
- Achieve short term goals to the disadvantage of long term goals.
- Have environmental effects that will directly or indirectly cause substantial adverse effects on human beings.
- Have possible environmental effects that are individually limited but cumulatively considerable when viewed in connection with past, current, and reasonably anticipated future projects.

a) **Less than Significant.** The project is a reforestation and restoration project designed to benefit water quality, aquatic habitat and upland forest resilience. It will result in a long term benefit to terrestrial carbon storage, fish, amphibians, and forest upland species by improving habitat. Through the implementation of BMPs the project will have a less than significant impact. Through avoidance, minimization and project BMPs, the project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or eliminate important examples of the major periods of California history or prehistory.

b) **Less than Significant Impact.** The incremental effects of a project are cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Implementation of forest health treatments under the proposed action will lead to an improvement in the health of the forest landscape in the general vicinity of the project area. Forest health treatments and fuels reduction activities, combined with similar efforts being planned and implemented on adjacent private lands, will result in reduced wildfire activity which will reduce the risk of fire across the

landscape. No Impact: The project will not have impacts that are individually limited, but cumulatively considerable.

The project will not incrementally contribute to future population growth and development in the area as it does not result in a change in land use or zoning or involve development of any habitable structures or initiation of new uses. Many of the items reviewed as part of this initial study would result in no impact or were considered to have less than significant impacts, and where appropriate, findings were made with reference made to prevent cumulative impacts resulting from individual projects.

c) **No Impact.** The proposed project would not displace existing residents or employees, generate substantial pollution, or generate a substantial demand for public services or utilities. With implementation of BMPs the project activities proposed in this remote area project do not have the potential to, either directly or indirectly, cause a substantial adverse effect on human beings. The project area is very remote and given the low intensity nature of project work, no direct or indirect impacts to human beings are anticipated.

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**Additional References and Information Sources Consulted**

The following information sources were used in the preparation of this document and referenced throughout the Initial Study Checklist:

1. Amphibian and Reptile Species of Special Concern - California Department of Fish and Game - Mark R. Jennings/Marc Hayes – 1994.
2. Buenger, Brent 2003 The Impact of Wildland and Prescribed Fire on Archaeological Resources. Dissertation submitted to the Department of Anthropology, University of Kansas. [http://www.blm.gov/heritage/docum/Fire/Dissertation\\_Buenger.htm](http://www.blm.gov/heritage/docum/Fire/Dissertation_Buenger.htm)
3. California Department of Fish and Wildlife, Natural Diversity Database (CNDDDB). 2022. *Rarefind 5* including the Northern Spotted Owl Observations Database accessed July 25, and June 8<sup>th</sup> 2022. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.
4. California Department of Toxic Substances Control “EnvironStor.” dtsc.ca.gov. 2022. <http://www.envirostor.dtsc.ca.gov/public..>
5. CAL FIRE FRAP, Map for Fire Hazard Severity rating
6. CAL FIRE Cultural Resources Review Procedures for CAL FIRE Projects Rev 2020
7. CAL FIRE Ruth Lake Fire Reduction Project NOE - Notice of Exemption SCH Number 2022060469 6-2-2022
8. California Department of Conservation, Division of Land Resource Protection, Farmland Mapping, and Monitoring Program
9. CALTREES Timber Harvest Records Search and Review - <https://caltreesplans.resources.ca.gov/caltrees/Default.aspx>
10. Construction Noise levels of Construction Equipment – EPA 1971 <http://www.dot.ca.gov/dist11/15managed/l-15/figures/chapter3/3-23.pdf-0>

11. Forest Climate Action Team. 2018. California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate. Sacramento, CA. 178p
12. HBMWD Ruth Lake Forest Health Grant Application Submittal Materials 2021
13. Trinity County Community Wildfire Protection Plan 2019
14. Millar CI, Stephenson NL, Stephens SL (2007a) Climate change and forests of the future: managing in the face of uncertainty. *Ecol Appl* 17:2145–2151
15. Northeast information Center File NWIC File No. K21-127 Chico State University
16. California's 2017 Climate Change Scoping Plan, The strategy for achieving California's 2030 greenhouse gas target, November. Available at: [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf)
17. North Coast Unified Air Quality Management District (NCUAQMD). Accessed on line on June 16, 2022, at <http://www.ncuaqmd.org/index.php?page=district.info>
18. UC California Oak Regeneration and Restoration <https://oaks.cnr.berkeley.edu/oak-regeneration-restoration/>
19. US Fish and Wildlife Services Wetlands Mapper accesses April 7, 2022. <https://www.fws.gov/wetlands/documents/Wetlands-Mapper-Documentation-Manual-May-2019.pdf>
20. USFS Decision Notice and Finding of No Significant Impact - Three Forks Fire Salvage Project USDA Forest Services Mad River Ranger District 2022.
21. USFS Scoping and Preliminary Environmental Assessment and Finding of No Significant Impact for the August Complex Restoration Project 2022 [www.fs.usda.gov/project/?project=60286](http://www.fs.usda.gov/project/?project=60286)
22. 41 Cattle Company CAL FIRE Exemption # 1-20EX-00825-TRI (< 10% Dead and dying Exemption).

## APPENDIX A

### PROJECT GENERAL BEST MANAGEMENT PRACTICES THAT ARE PART OF THE PROJECT DESCRIPTION

#### Fuels Reduction Treatments

Fuel reduction treatments will be accomplished according to following guidelines:

- All slash produced (branches, limbs, and treatment debris less than four inches in diameter) will be treated using one of the following methods:
  - Chip or masticate adjacent to roads and other accessible portions of the treatment areas.
  - Pile and burn: slash piles for burning should be located away from residual trees and structures.
  - Lop and scatter: lopping is the severing and spreading of slash so that no part of it remains more than 18 inches above the ground. Lop and scatter would be implemented on steeper slopes and areas with limited access where chipping, mastication, and burning piles is difficult.
  - Pile and burn operations would occur where vehicle access is available along existing ranch roads utilizing existing openings and compacted ground as feasible. Piles may be created by mechanized equipment such as crawler tractors equipped with a brush rake, or excavators equipped with a grapple. Piles will also be created by hand.
  - Limit ground-based equipment ( masticators) to less than 50% slopes unless a soil scientist evaluates soil conditions and disturbance patterns to determine operability on steeper slopes.

Burning will likely take place in the fall to early winter depending on fuel moisture levels and weather conditions, except where resource issues can be avoided. The burn plan will also be coordinated with the Northcoast Unified Air Quality Management District. HBMWD and Project Cooperators will coordinate with the District to identify a permissible burn day.

Resource objectives and public notification for the prescribed fire as described in the plan are to:

- Reduce fuel loading to reduce risk of high intensity fires in the next decade.

- Burn Prescription: The prescribed fire burn prescription will be designed to initiate a surface fire of sufficient intensity that will only consume surface and ladder fuels while protecting soil resources from direct soil heating impacts. Burn periods will consider predicted wind speeds and direction for the 7 days following completion of burning. Example of sources for predicted winds include <https://gacc.nifc.gov/oncc/predictive/weather/index.htm> and <https://www.wunderground.com/forecast/us/ca/weed/96094>
- Ignition will occur outside of the Watercourse and Lake Protection Zone buffer areas.
- Where feasible, existing roads, trails, and natural fuel breaks will be utilized for fire lines.
- Air Quality: Prescribed fire should comply with all local, state, and federal air quality regulations and ordinances. The local Air Pollution Control District or Air Quality Management District will be contacted to determine local requirements.
- Standard Public Notifications: Prior to the commencement of prescribed burning operations, the project coordinator will develop a site specific notification plan.

Burn Plan Communications: Prior to the start of operations, CAL FIRE personnel should meet with the project coordinator onsite to discuss resource protection measures, if feasible. Additionally, the project coordinator should specify the resource protection measures and details of the burn plan in the incident action plan if one is prepared and should attend the pre-operation briefing to provide further information.

## Biological

A search of the CNDDDB will be conducted of the project area to determine if there have been documented special status species located.

## Upland Habitat Protection

- To avoid impacting nesting birds and/or raptors through habitat modification:
- For vegetation management activities, Limited Operating Period of February 1-September 15 depending upon target species shall be established unless surveying for nesting, roosting, and/or denning is completed and CDFW or USFWS approves an alternative LOP period for the year surveying was completed if feasible.
- In order to protect any species covered by the Migratory Bird Treaty Act (MBTA), no fuels treatment work will occur between March 1<sup>st</sup> to August 31<sup>st</sup>, unless the following is implemented: 1. A survey is conducted by a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA and it is determined that there are no occupied nests within the proposed activity area. 2. If an occupied nest is found, then a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA will determine if the birds present are those protected by the MBTA. 3. If an MBTA species is located then no activities will occur within 100 feet of the nest during the breeding season (March 1<sup>st</sup>-August 31<sup>st</sup>).
- All temporary flagging, fencing, trash, debris, and/or barriers will be removed from the project site upon completion of project activities;
- Habitat elements (nest trees) that provide valuable habitat will be identified by a qualified person and retained where no immediate risk to infrastructure exists;
- Where practical and feasible other habitat elements (downed large logs, snags with cavities and tree hollows, and other suitable snags) will be identified by a qualified person and retained where no immediate risk to infrastructure exists.
- Where habitat elements are identified, a minimum 2' wide fire line will be cut around the habitat element and ladder fuels within 10' will be thinned.
- If any federal or state listed threatened or endangered species are detected in the project area that may be impacted by the project work, then all project related activities will immediately stop within that area which will be flagged with a 50' "No Treatment Zone". All sightings will be documented using the California Natural Diversity Database (CNDDDB) field survey form a copy of which will be submitted to the CNDDDB.
- No fire ignition (nor use of associated accelerants) will occur within the special-status plant buffer.

### **Watercourse/Aquatic Habitat/Water Quality/Sediment Protection:**

**Depending upon the resource situation, the following BMPs may be used on a project site specific basis:**

- Fire lines, brushing or ground disturbing operations not be placed in sensitive hydrologic areas unless need to protect the resources from impacts of the burning;
- No manual line construction will occur within the 75' slope distance core zone of Class I watercourse, 50' slope distance of a Class II watercourse and within 30' slope distance of the channel of Class III watercourse, except where necessary at designated equipment crossings;
- Prescribed fire will not be applied directly on the ground within 75' slope distance of a Class I watercourse, 50' slope distance of a Class II watercourse, or 30' slope distance of a Class III watercourse.
- No fire ignition (nor use of associated accelerants) will occur within a watercourse buffer zone, however low intensity backing fires may be allowed to enter or spread into WLPZs.
- Watercourse buffers of at least 75' slope distance core zone of Class I stream, 50' of a Class II stream and 30' slope distance for Class III streams shall be established where the following BMPs shall apply.
- Construct hand lines within 75' slope distance of Class I or Class II watercourses and 30' slope distance of Class III watercourses only where necessary to minimize undesired fire effects;
- Petroleum products would be stored at roads or landings outside of watercourse protection zones wherever possible and a minimum 200' horizontal distance or greater distance from streams, ponds, and wet areas such that fuels and other harmful materials would not reach any waterbody. Appropriate spill containment measures would be on site and would be employed as needed (for example, absorbent pads, drip pans and containment trays). Containers of fuel and oil are removed daily off-site.
- All roads and landings used by vehicles (other than 4x4 motorcycles, quad cycles, or other low ground pressure vehicles) for prescribed fire and mop up operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow;
- No vehicle operations (other than 4x4 motorcycles, quad cycles, or other low ground pressure vehicles) shall occur during saturated soil conditions. Saturated soil means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur.;
- Vehicle use (other than 4x4 motorcycles quad cycles, or other low ground pressure vehicles) use shall be limited to dry, rainless periods where saturated soil conditions are not present or to roads and landings where a stable operating surface exists;
- Access roads and landings used by vehicles shall not be used during any time of the year when operations may result in significant sediment discharge to watercourse or lakes, except in emergencies to protect the road, to reduce erosion, to protect water quality, or in response to public safety needs.
- During the extended wet weather period (October 15-May 1) vehicle uses (other than 4x4 motorcycles, quad cycles, or other low ground pressure vehicles) shall be limited to roads and landings that exhibit a stable operating surface. Routine use of roads and landings shall not occur when equipment cannot operate under its own power;
- Roads and landings used by vehicles (other than 4x4 motorcycles, quad cycles, or other low ground pressure vehicles) during the winter period shall occur on a stable operating surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

### **Cultural Protection**



- The project proponent will train all crew members and contractors implementing treatment activities on the protection of sensitive archaeological, historical, or tribal cultural resources. Workers will be trained to halt work if archaeological resources are encountered on a treatment site and the treatment method consists of physical disturbance of land surfaces (e.g., soil disturbance). This BMP applies to all treatment activities and treatment types.
- No burn piles should be placed within 10' of known ground stones, historical features and similar features
- Work should be halted within a reasonable buffer if cultural materials are found during implementation. Examples would include ground stone, flaked or chipped stone, historic debris, building foundations, or non-human bone.
- A qualified archaeologist should be consulted to assess the discovery. Appropriate avoidance or mitigation measures should be reached in consultation with the Tribes that claim an interest in this site, as set out at 36 CFR 800.
- Should inadvertent effects to or unanticipated discoveries of human remains be made, the County Coroner [California Health and Safety Code 7050.5(b)] shall be notified immediately. If the remains are determined to be Native American, or if Native American (Indian) funerary objects, or items of cultural patrimony subject to NAGPRA are uncovered, the provisions of NAGPRA Section 3 [25 U.S.C. 3002 a-e] may apply, and its regulations at 43 CFR 10 and the provisions of ARPA at 43 CFR 7 shall be followed.

#### **Air Resources:**

Dust- To minimize dust during treatment activities, the project proponent will implement the following measures: Limit the speed of vehicles and equipment traveling on unpaved areas to 20 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol. If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff.

#### **Project Description BMP List and Monitoring Guidance**

##### **BMP Air-1**

*To minimize dust during treatment activities, the project proponent shall implement the following standards: Limit the speed of vehicles and equipment traveling on unpaved areas to 20 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board Fugitive Dust protocol. If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board. The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. Remove visible dust, silt, or mud tracked-out onto public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113, suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to*

any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property,” per Health and Safety Code Section 41700.

**Monitoring:** Evidence of Compliance: Field survey and field notes to be added to project log.

**Schedule:** Prior to project start date.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project work logbook.

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Bio -1**

*Invasive plants removed shall be deposited on the edge of treated areas, out of the way of operations to avoid retrieval on equipment. Pile treated plants and burn where treated or if plant numbers are few, incorporate plant material into a nearby burn pile. Where operations cannot avoid yellow star-thistle infested areas, either manual treatment would be implemented prior to use, or as part of slash/fuels reduction operations, equipment would be used to blade plants away from work sites and cover with soil and 6 inches of weed free mulch.*

### **BMP Bio-11**

*If any foothill yellow-legged frogs, tailed frogs, southern torrent salamanders or western pond turtles are encountered during project activities, operations in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the species will not be harmed. This includes relocating these species to an appropriate habitat adjacent to the work area. Any sensitive reptile or amphibian species that are trapped, injured, or killed, shall be reported immediately to California Department of Fish and Wildlife.*

**Monitoring:** : Project Manager shall document and record surveys and communication with California Department of Fish and Wildlife in the project log book.

**Schedule:** Prior to work in or adjacent to flowing watercourses.

### **BMP Bio-2**

*If any federal or state listed threatened or endangered plant on List 1, List 2 and List 3 species are detected in the project area that may be impacted by the project work, then all project related activities will immediately stop within that area which will be flagged with a 50' "No Treatment Zone". All sightings will be documented using the California Natural Diversity Database (CNDDDB) field survey form a copy of which will be submitted to the CNDDDB. Personnel specifically trained in the identification of List 1, List 2 and List 3 species or a professional botanist will flag 50' avoidance buffers for locations of Piperia spp. and Tracey's sanicle.*

### **BMP Bio-3**

*The project is within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection for sudden oak death (SOD) pursuant to Public Resources Code § 4716. SOD host material Douglas-fir (*Pseudotsuga menziesii*), bay laurel (*Umbellularia californica*), huckleberry (*Vaccinium ovatum*), big leaf maple (*Acer acrophyllum*), shall not be removed from the regulated area unless appropriate state and federal permits are obtained.*

**Monitoring:** Project Manager and or registered professional forester shall document that no biomass is removed from the declared zone of infestation.

**BMP Bio-4**

*If an arboreal nest is discovered, operations shall be suspended within 100 feet and CDFW will be consulted for species-specific protections. Furthermore, if an occupied nest of a listed species, sensitive species, species of special concern, or a raptor is discovered, nest tree(s), designated perch tree(s), screening tree(s), and replacement tree(s), shall be left standing and unharmed.*

**BMP Bio-5**

*Daytime stand searches for northern spotted owl (NSO) will be conducted in activity centers that are within 0.25 mi of flight paths prior to operations by qualified biologists. If a NSO is found then follow-up searches will be conducted to determine nesting status or activity center status. If a nest tree is located, then a 300 foot noise buffer will be implemented, and no chipping or mastication project activity will occur within 300' of the nest tree during the critical nesting period.*

**BMP Bio-6**

*In order to prevent the spread of invasive plant species, all heavy equipment not already on project site, to be used in the execution of project work will be cleaned off site prior to use within the project area. The project manager and/or trained staff will assure and document equipment cleaning. Contractors shall disclose where equipment had been operating prior to hauling to the project site.*

**Monitoring:** *The Project Manager will document in the project log book with photos and notes of any vehicle cleaning to avoid invasive plant species.*

**Schedule:** At the time of equipment mobilization.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:**

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Bio-7**

*A registered professional forester or designee will be sufficiently present onsite during operations to evaluate the presence of biological resources and ensure biological resource protection through avoidance. If any wildlife is encountered during project activities, said wildlife will be allowed to leave the area unharmed and if any listed wildlife is encountered and cannot leave the project site on its own the registered professional forester or project manager should contact California Department of Fish and Wildlife immediately consult regarding species relocation protocol.*

**Monitoring:** *Project Manager shall contact California Department of Fish and Wildlife or registered professional forester and flag nest trees and document nest trees with GPS coordinates.*

**Schedule:**

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Field survey and field notes.

Monitoring Party: California Department of Fish and Wildlife

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Bio-8**

*To avoid impacting nesting birds and/or raptors: All temporary flagging, fencing, trash, debris, and/or barriers will be removed from the project site upon completion of project activities.*

**Monitoring:**

**Schedule:** At the conclusion of project activities.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project logbook

Monitoring Party: Project Manager/HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Bio-9**

*Habitat elements (nest trees, downed logs and woody debris, cavities and tree hollows, snags, large dead branches, etc.) that provide valuable habitat will be identified by an RPF or qualified biologist and retained.*

**Monitoring:** GPS mapped location of features

**Schedule:** As necessary prior to work start up each year.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project logbook

Monitoring Party: Registered Professional Forester or HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Bio-10**

*In order to protect any species covered by the Migratory Bird Treaty Act (MBTA), no fuels treatment work will occur between March 1<sup>st</sup> to August 31<sup>st</sup>, unless the following is implemented: 1. A survey is conducted by a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA and it is determined that there are no occupied nests within the proposed activity area. 2. If an occupied nest is found, then a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA will determine if the birds present are those protected by the MBTA. 3. If an MBTA species is located then no activities will occur within 100 feet of the nest during the breeding season (March 1<sup>st</sup>-August 31<sup>st</sup>).*

**Monitoring:** Evidence of Compliance: Field survey and field notes to be added to project log.

**Schedule:** Prior to fuel treatment operations.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project logbook and survey datasheets.

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Bio-11**

*If any foothill yellow-legged frogs, tailed frogs, southern torrent salamanders or western pond turtles are encountered during project activities, operations in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the species will not be harmed. This includes relocating these species to an appropriate habitat adjacent to the work area. Any sensitive reptile or amphibian species that are trapped, injured, or killed, shall be reported immediately to California Department of Fish and Wildlife.*

**Monitoring:** : Project Manager shall document and record surveys and communication with California Department of Fish and Wildlife in the project log book.

**Schedule:** Prior to work in or adjacent to flowing watercourses.

**BMP Hydro-1**

*Prior to any ground disturbing project activities, provide the Initial Study Mitigated NOE and BMP Monitoring Plan to the California Regional Water Quality Control Board and comply with the Categorical Waiver of Waste Discharge Requirements (Order No. RI-2014-0011-44 Category F waiver).*

**Monitoring:**

**Schedule:** During project implementation period.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project log (photos and description) including completion of Erosion Control Plan (ECP).

Monitoring Party: HBMWD and Regional Water Quality Control Board.

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Hydro-2**

- Heavy equipment (Masticators) operation will not be conducted on known slides or unstable areas.
- Masticator equipment will not be used within the standard watercourse and lake protection zones (14 CCR 916.9).
- Equipment maintenance and refueling will occur outside the standard watercourse and lake protection zones (14 CCR 914.5).
- Heavy equipment operations (masticators) will not be conducted on slopes greater than 50%.
- Ignition will occur outside of the standard Forest Practice Rule defined Watercourse and Lake Protection Zone (14 CCR 916.9).

**Monitoring:** Project manager shall document that all five bullet points are adhered to in the Project Log and notify the CAL FIRE Grant representative of any exceptions or non-conformances.

**Schedule:** Prior to project initiation and during spot checks of activities.

**Responsible Party:** Project Manager/HBMWD.

### **Verification of Compliance:**

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Hydro-3**

*In order to buffer watercourses, riparian habitats and beneficial uses of water from the potential impacts of pile burning or fuel treatments, all wet stream courses (Class I and Class II) will be protected by a 75' horizontal distance "No Treatment Zone." Buffers will be established on both sides of stream channels. All wetlands and springs will be encircled by a 50' "No Treatment Zone." "No Treatment Zones" will be established and flagged as directed by the project manager prior to the implementation of any ground disturbing project work. No prescribed fire or fuel treatment will occur within the "no treatment zones." Seasonal watercourses or Class III watercourses, shall be protected with a 25' equipment exclusion zone. This BMP does not apply to reforestation work within riparian zones.*

**Monitoring:** Representative photographs of all wet and dry stream courses within the project footprint shall be taken (with location labels added) by the Project Manager or trained staff, before any project work, indicating that flagging of "No Treatment Zones" has been completed, in order to document pre-project conditions.

**Schedule:** Photos to be taken of riparian areas prior to and during work.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project logbook field notes.

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Hydro-4**

*The project manager will select refueling and maintenance areas for heavy equipment, chainsaws and other combustion-powered hand tools on flat sites that are away from dry or wet waterways as well as areas that could potentially flow into a stream in the event of an accidental spill. Fuel containment equipment (i.e., absorbent sheets and waddles) will be made available and used at refueling and maintenance areas. Fuel spillage will be minimized by conducting these operations in flat areas. Equipment will be stored and maintained within properly cleared areas. The project manager will inspect refueling areas to assure compliance with this BMP. These inspections will also verify the sites' adequacy in protecting riparian and terrestrial resources as well as the use and availability of containment equipment.*

**Monitoring:** *The documentation process detailed in Monitoring of BMP Hydro #1 shall be implemented to document that selected refueling and maintenance areas have been provided and that fuel containment equipment has been made available and used at refueling and maintenance areas, in compliance with BMP Hydro -4.*

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Photographs and project log book.

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Cultural-1**

*All new and previously recorded archeological sites identified during field surveys completed in connection with the preparation of this IS and documented in the archeological report for the project shall be protected through following the protective measures contained in the project Archaeological Survey Report. Flagged 50' buffers shall be established around each artifacts or sites by the project manager or registered professional forester prior to implementation of any project work. An "archaeologically trained resource professional," or a designee of either shall shield the historic artifacts or sites with a temporary protective fire-resistant material.*

*Within areas of ground or vegetation disturbing activities, if project work appears to expose any previously unknown archeological, prehistoric, historic or paleontological resource sites along the path of the fuel break or within 100 feet beyond the project boundary, the site shall be avoided. Work may continue elsewhere within the overall project area. Exposed cultural or paleontological resources shall be appropriately flagged in order to immediately establish an exclusion buffer of at least 100-feet. Any discoveries of previously unidentified cultural resources that are made during operations shall be dealt with in accordance with the Procedures for Post-Approval Discovery of Cultural Resources (pp. 17 and 18, Archaeological Procedures for CAL FIRE Projects).*

**Monitoring:** *A copy of any such findings including site photos shall be sent to the CAL FIRE Archaeologist*

**Responsible Party:** Project Manager HBMWD

**Verification of Compliance:**

Monitoring Party: CAL FIRE Archaeologist

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Cultural-2**

*Should human remains be inadvertently discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, CAL FIRE, the project manager, Trinity County Coroner, Native American Heritage Commission (NAHC), and the relevant Native American representative(s) shall be notified immediately, and the remains shall be treated in accordance with NAHC treatment and disposition requirements and relevant state law.*

**Monitoring:** *A copy of any such findings shall be sent to the CAL FIRE Archaeologist.*

**Schedule:** Continuous

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:**

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Cultural-3**

*Prior to conducting a prescribed burn, wildland fire officials shall receive training on the location of cultural resources and measures necessary to protect them. Upon completion of burning activities, markings designating the location of cultural resources shall be removed.*

**Monitoring:** *A copy of training records and post project marker removals shall be sent to the CAL FIRE Project Manager.*

**Schedule:** As necessary.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:**

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Tribal-1**

In the event that any Native American archaeological remains are discovered during implementation of management activities, local tribes will be contacted and consulted who have traditional and cultural affiliation with the Project area. If the tribe(s) considers the resource to be a tribal resource, appropriate BMPs will be developed in accordance with Public Resources Code 21080.3.2.

**Monitoring:** *A copy of any such findings shall be sent to the CAL FIRE Archaeologist.*

**Schedule:** As necessary.

**Responsible Party:** Project Manager HBMWD.

**Verification of Compliance:**

Monitoring Party: CAL FIRE Archaeologist

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Haz-1**

*Standard Public Notifications: Approximately two weeks prior to the commencement of prescribed pile burning operations, the project coordinator will: 1) post signs along the closest major road way to the area describing the activity, timing, and requesting for smoke-sensitive persons in the area to contact the project coordinator; 2) publish a public interest notification in a local newspapers, HBMWD and Ruth Lake CSD Facebook or other widely distributed media source describing the activity, timing, and requesting for smoke sensitive persons in the area to contact the HBMWD; and 3) develop a list of smoke sensitive persons in the area and contact them prior to burning.*

**Monitoring:** *Evidence of Compliance: Project Manager Field survey and field notes.*

**Responsible Party:** Project Manager/HBMWD

**Verification of Compliance:** Photos, published notices.

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

### **BMP Haz-2**

*To reduce impacts associated with exposure of people or structures to wildland fires, the project manager or registered professional forester shall ensure that adequate fire protection equipment is available at work sites. This shall include fire extinguishers attached to all mechanized equipment. In addition, firefighting hand tools shall be made available at all areas where equipment is operated. The project manager, or registered professional forester, and any other workers shall comply with all applicable fire safe standards as found in Public Resources Code Division 4, Chapter 6, (Public Resources Code §§ 4427, 4428, 4429, 4431, 4442, list not all inclusive). Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.*

**Monitoring:** *A Project Work Log shall be maintained which documents that contractors and/or landowners have provided equipment for adequate fire protection prior to the start of any project work by that contractor and/or landowners, and that fire-fighting hand tools have been made available at all areas where equipment is operated.*

**Schedule:** Prior to start of work where equipment is in use.

**Responsible Party:** Project Manager/HBMWD

**Verification of Compliance:**

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

**BMP Haz-3**

- *Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag or heat from igniting exposed combustibles (Section 3504, California Code of Regulations, Title 24, Part 9). A fire watch shall be provided during hot work activities and shall continue for a minimum of 30 minutes after the conclusion of the work.*
- *Individuals assigned to fire watch duty shall have fire-extinguisher equipment readily available and shall be trained in the use of such equipment.*
- *Where fire hoses are required, they shall be connected, charged, and ready for operation utilizing a portable water truck if needed.*
- *A minimum of one portable fire extinguisher complying with Section 906 California Code of Regulations, Title 24, Part 9 and with a minimum 2-A:20-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.*
- *There shall be no hot work, chainsaw work, heavy equipment work, chipping or masticating on red flag days declared by the North Coast Air Quality District.*

**Monitoring:** *A Project Work Log shall be maintained which documents that contractors and/or landowners have provided equipment for adequate fire protection prior to the start of any project work by that contractor and/or landowners, and that fire-fighting hand tools have been made available at all areas where equipment is operated.*

**Schedule:** When hot work activities are conducted.

**Responsible Party:** Project Manager/HBMWD.

**Verification of Compliance:** Project Work Log

Monitoring Party: HBMWD

Initials: \_\_\_\_\_

Date: \_\_\_\_\_



**Appendix B Project Area Photos**



**Reforestation unit. Armstrong Creek 41 Cattle Company (Albee)**



**Meyer property late spring 2022**



**Meyer property winter 2022.**

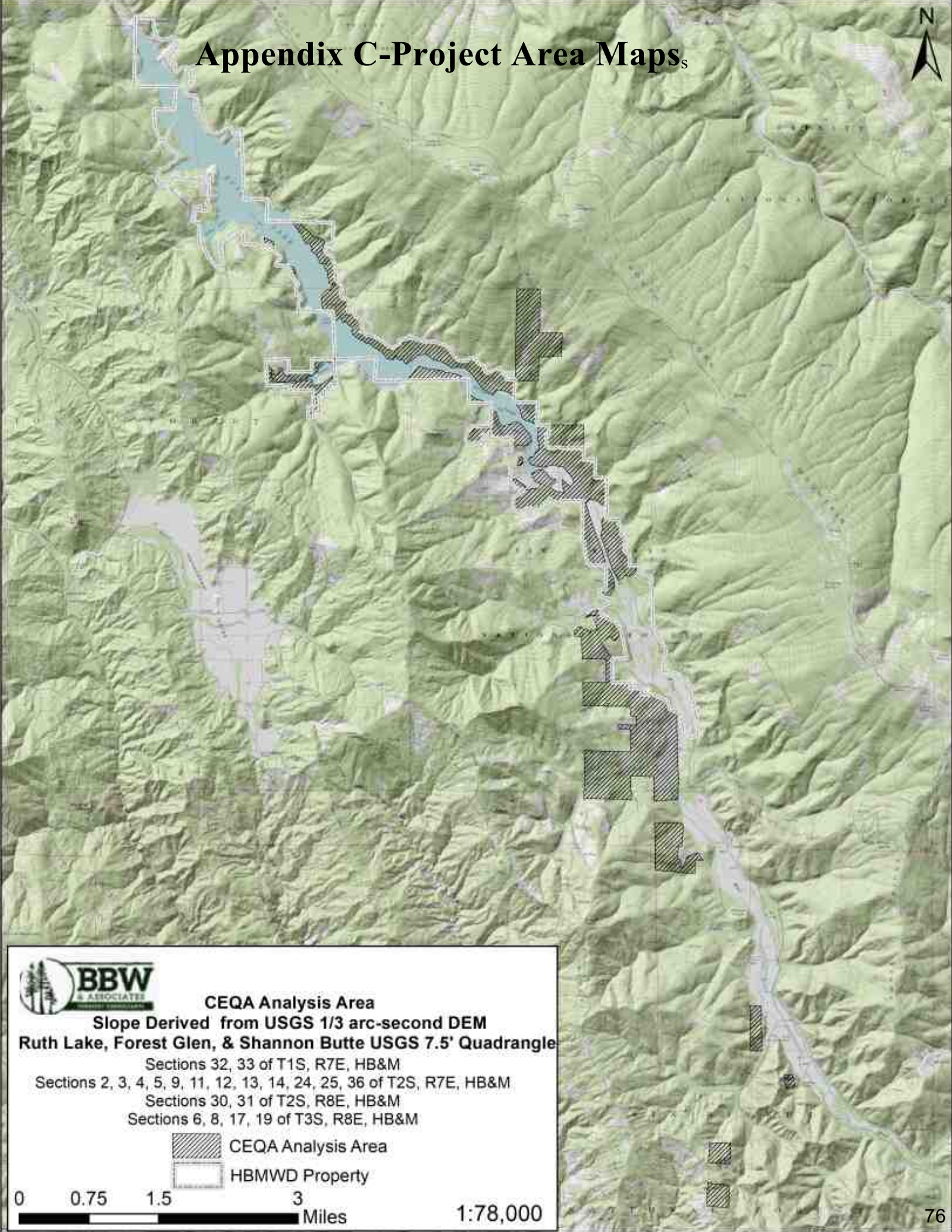


**Example of HBMWD reforestation units on lands that had been salvaged logged post-fire.**



**Class III Watercourse on HBMWD Lands**

# Appendix C-Project Area Maps<sub>s</sub>



## CEQA Analysis Area

Slope Derived from USGS 1/3 arc-second DEM


Ruth Lake, Forest Glen, & Shannon Butte USGS 7.5' Quadrangle


Sections 32, 33 of T1S, R7E, HB&M

Sections 2, 3, 4, 5, 9, 11, 12, 13, 14, 24, 25, 36 of T2S, R7E, HB&M

Sections 30, 31 of T2S, R8E, HB&M

Sections 6, 8, 17, 19 of T3S, R8E, HB&M

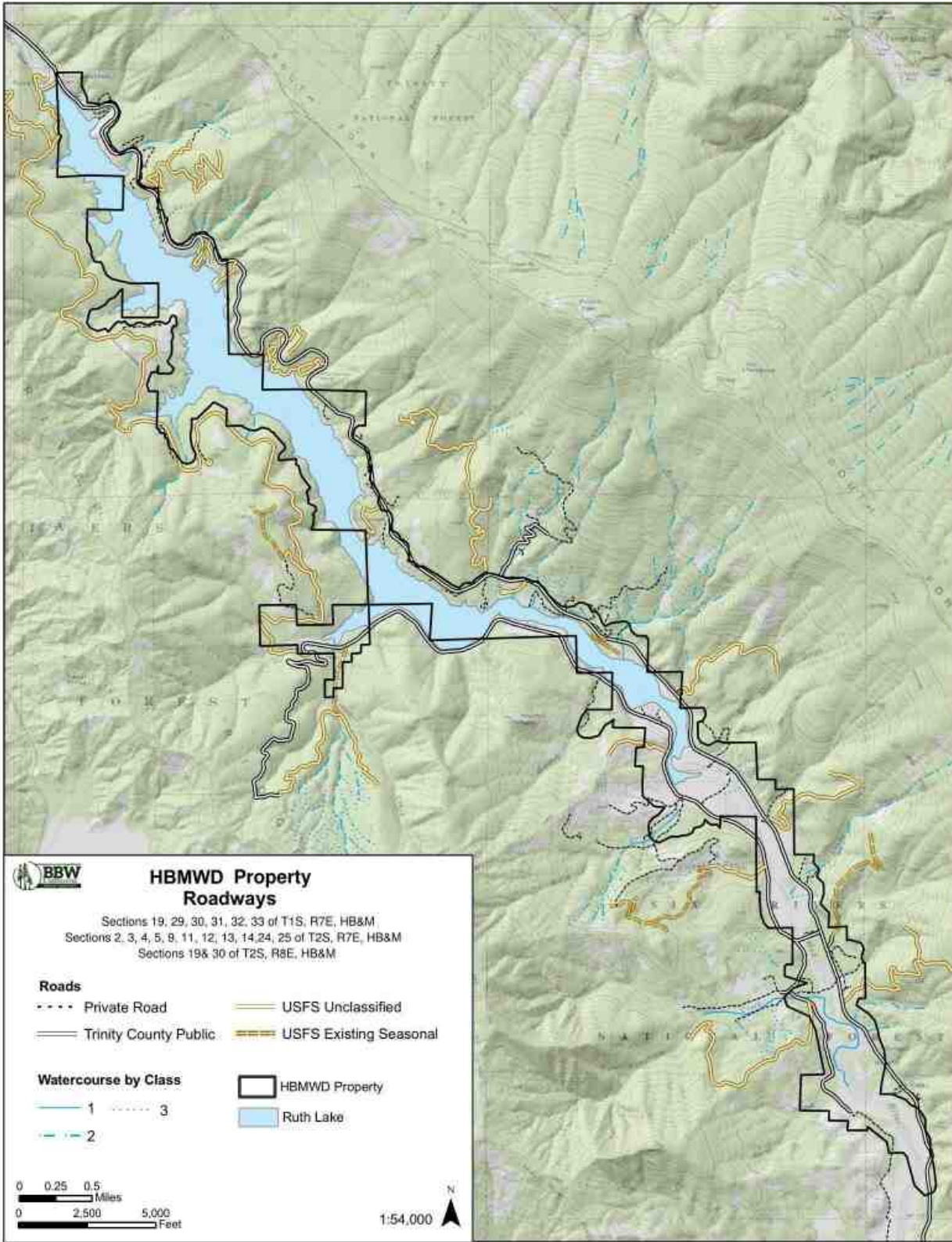
 CEQA Analysis Area

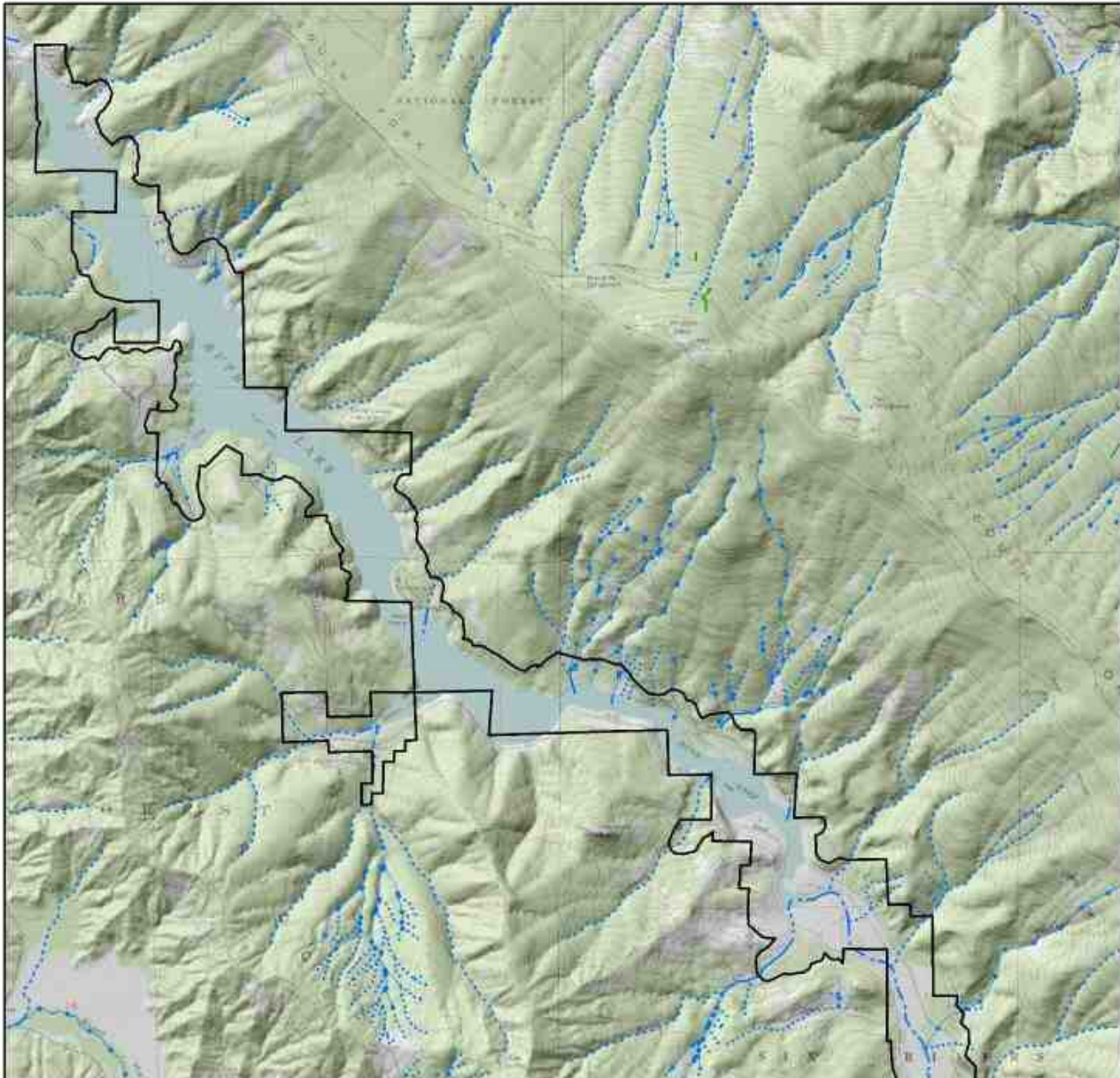
 HBMWD Property

0 0.75 1.5 3 Miles

1:78,000







**HBMWD Property  
Watercourses**

Sections 19, 29, 30, 31, 32, 33 of T1S, R7E, HB&M  
 Sections 2, 3, 4, 5, 9, 11, 12, 13, 14, 24, 25 of T2S, R7E, HB&M  
 Sections 19& 30 of T2S, R8E, HB&M

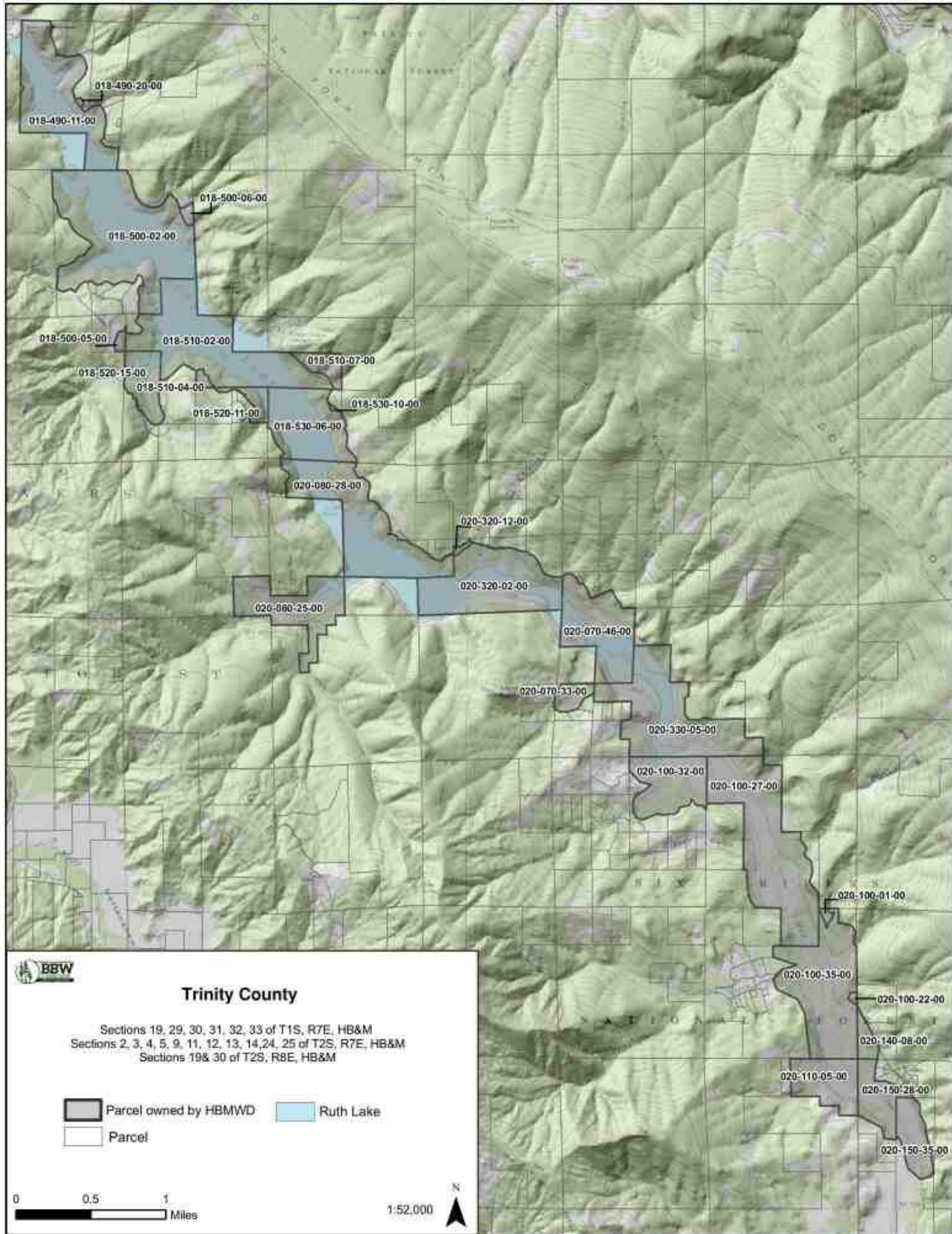
**Watercourse**

by THP Class

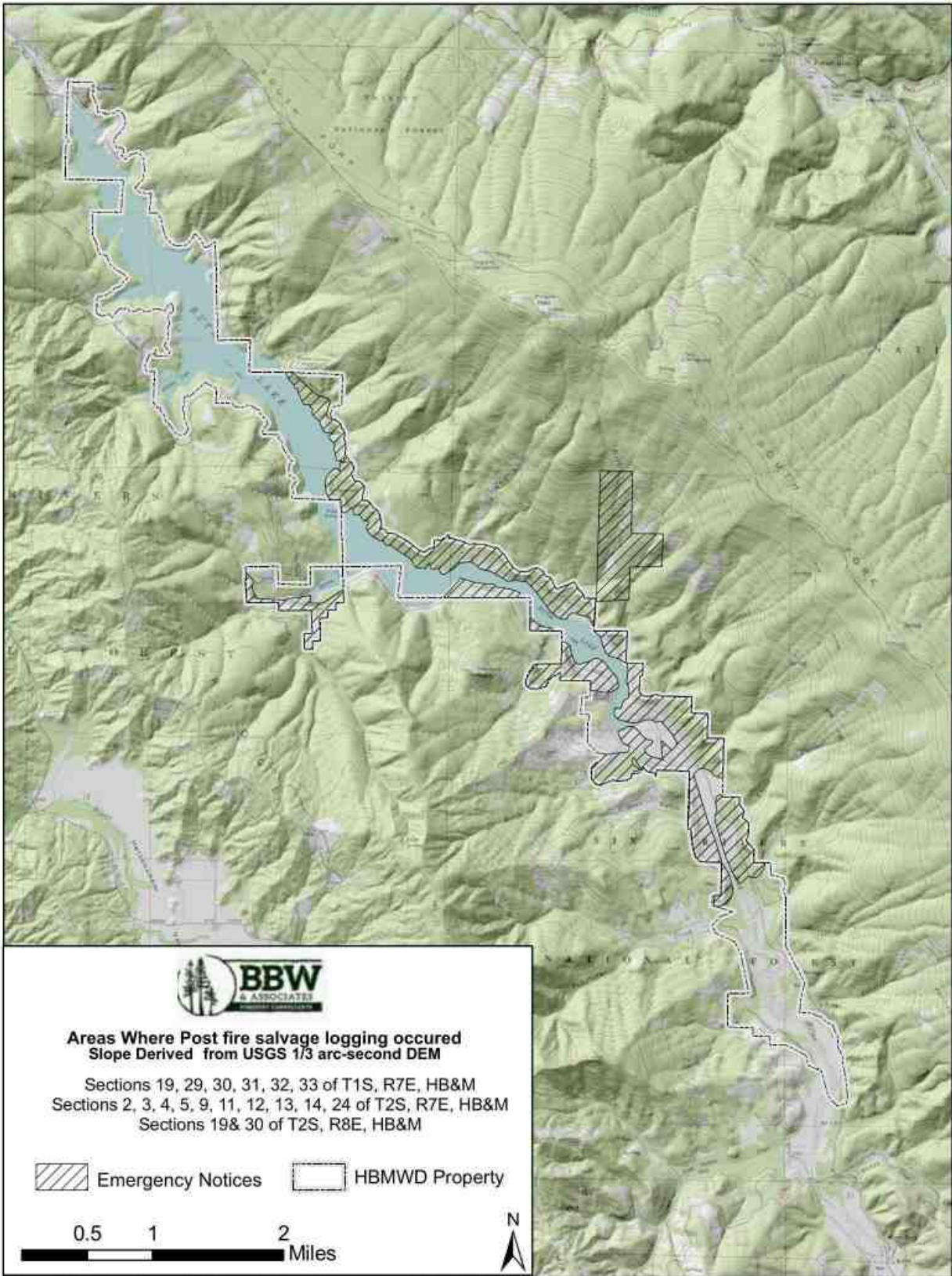
- 1
- 2
- 3
- 4
- 5
- 6

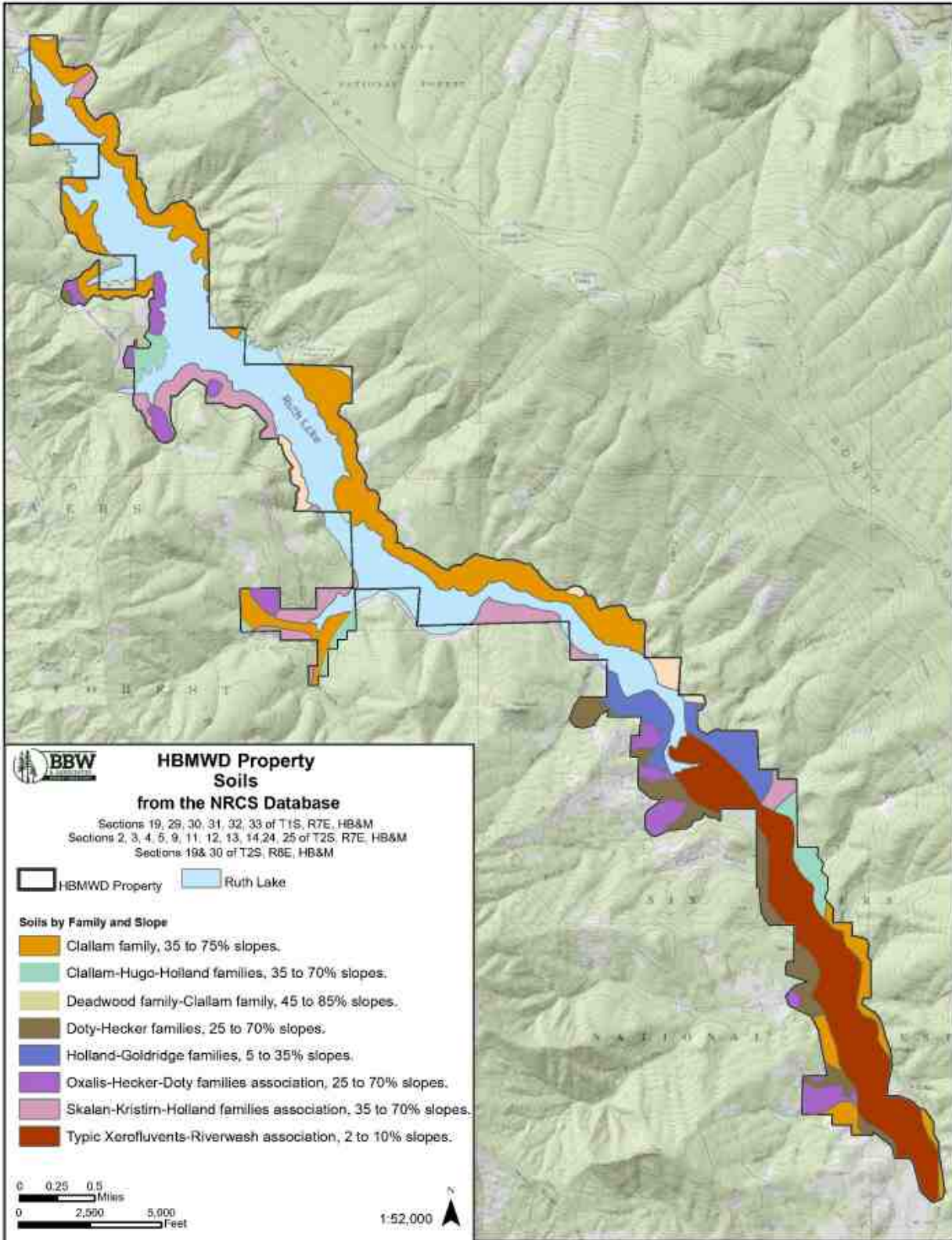
Parcel owned by HBMWD

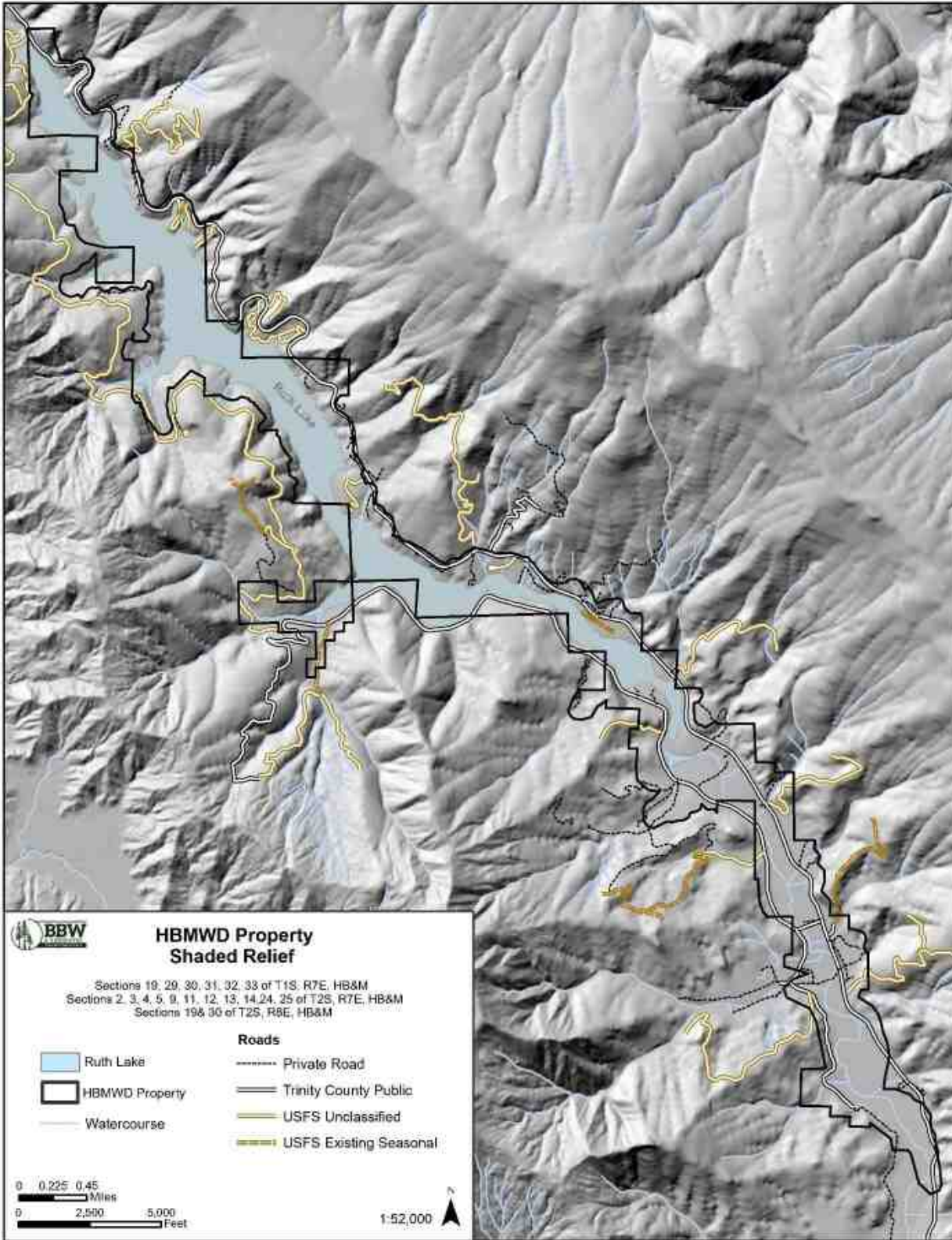
Ruth Lake

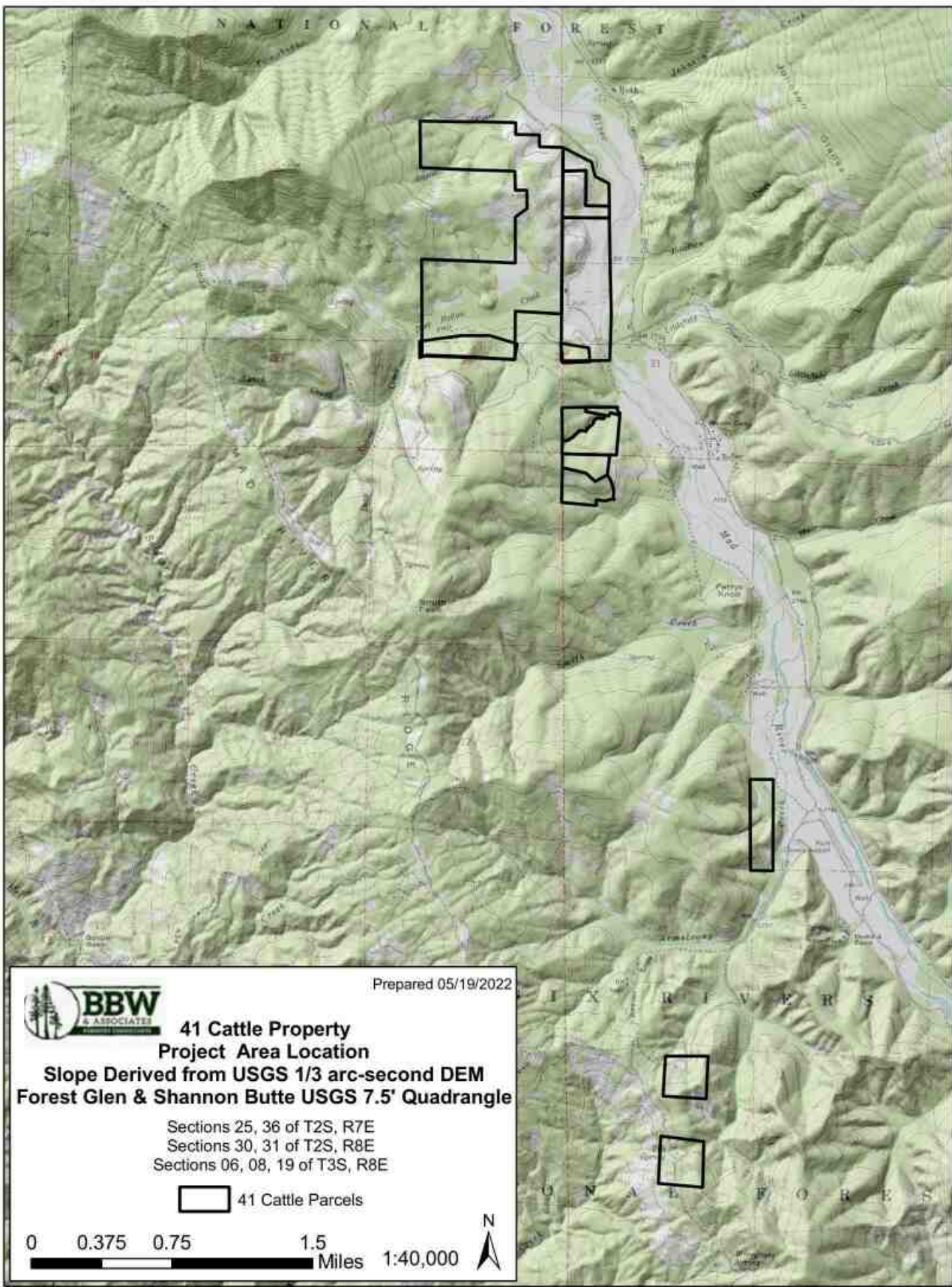


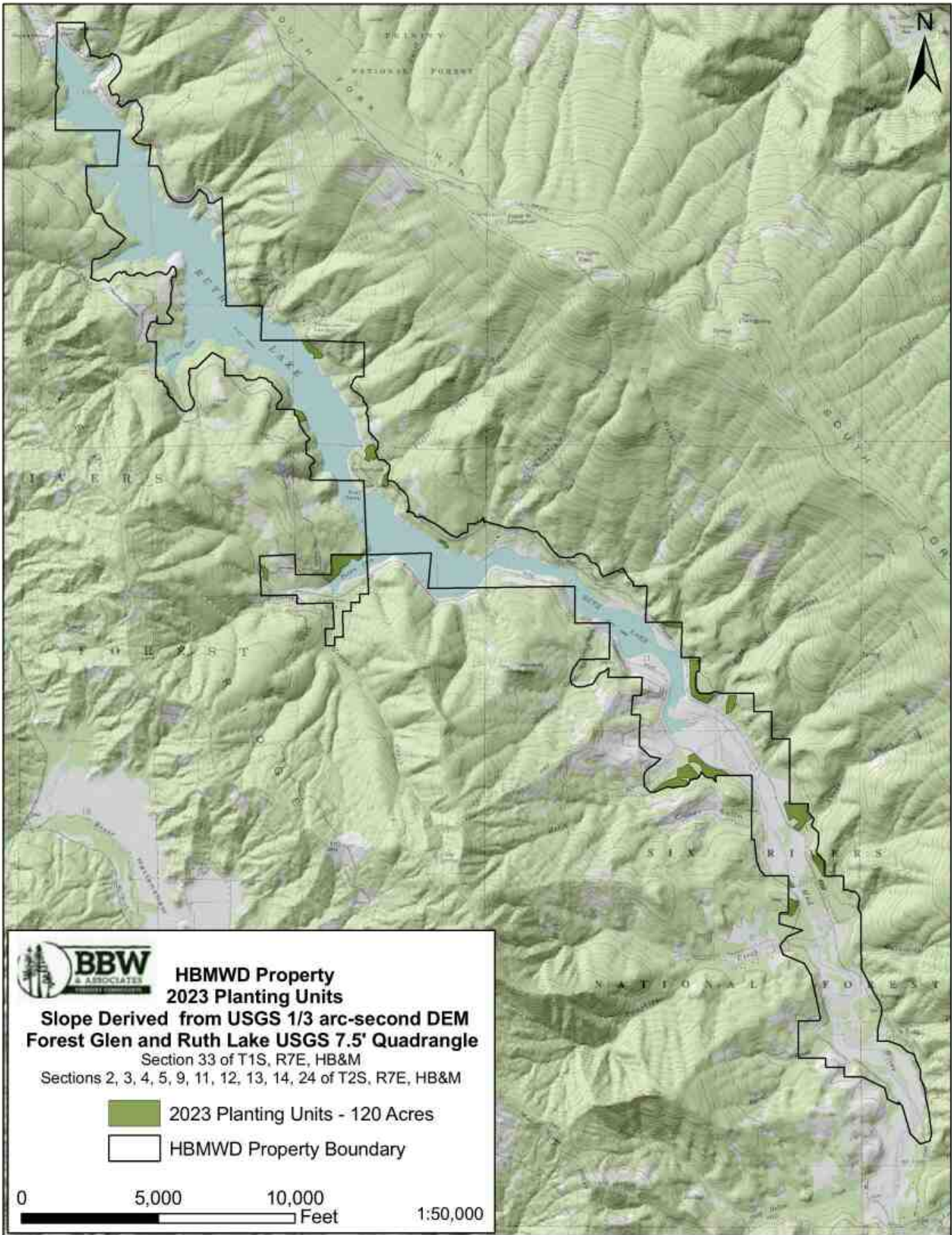




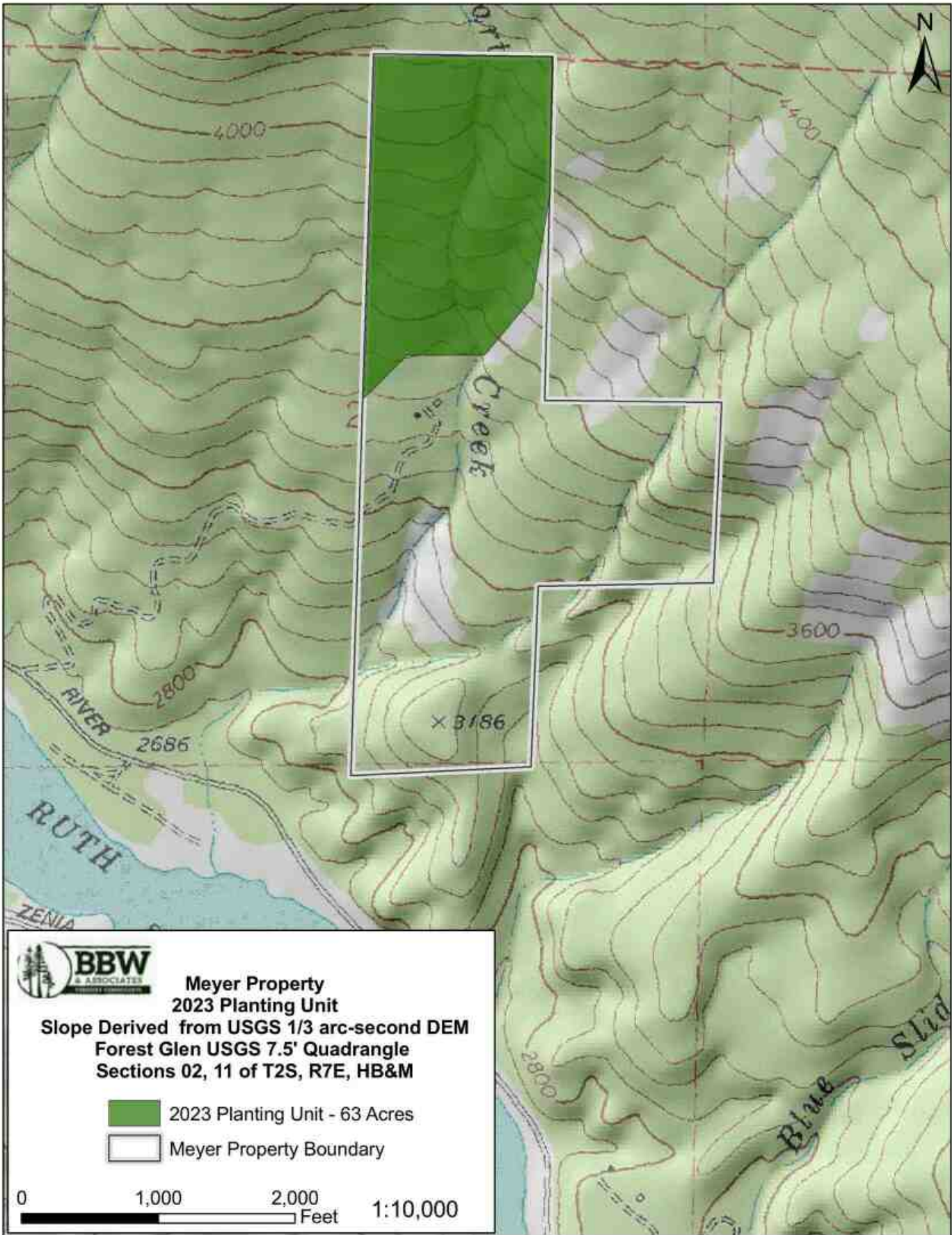


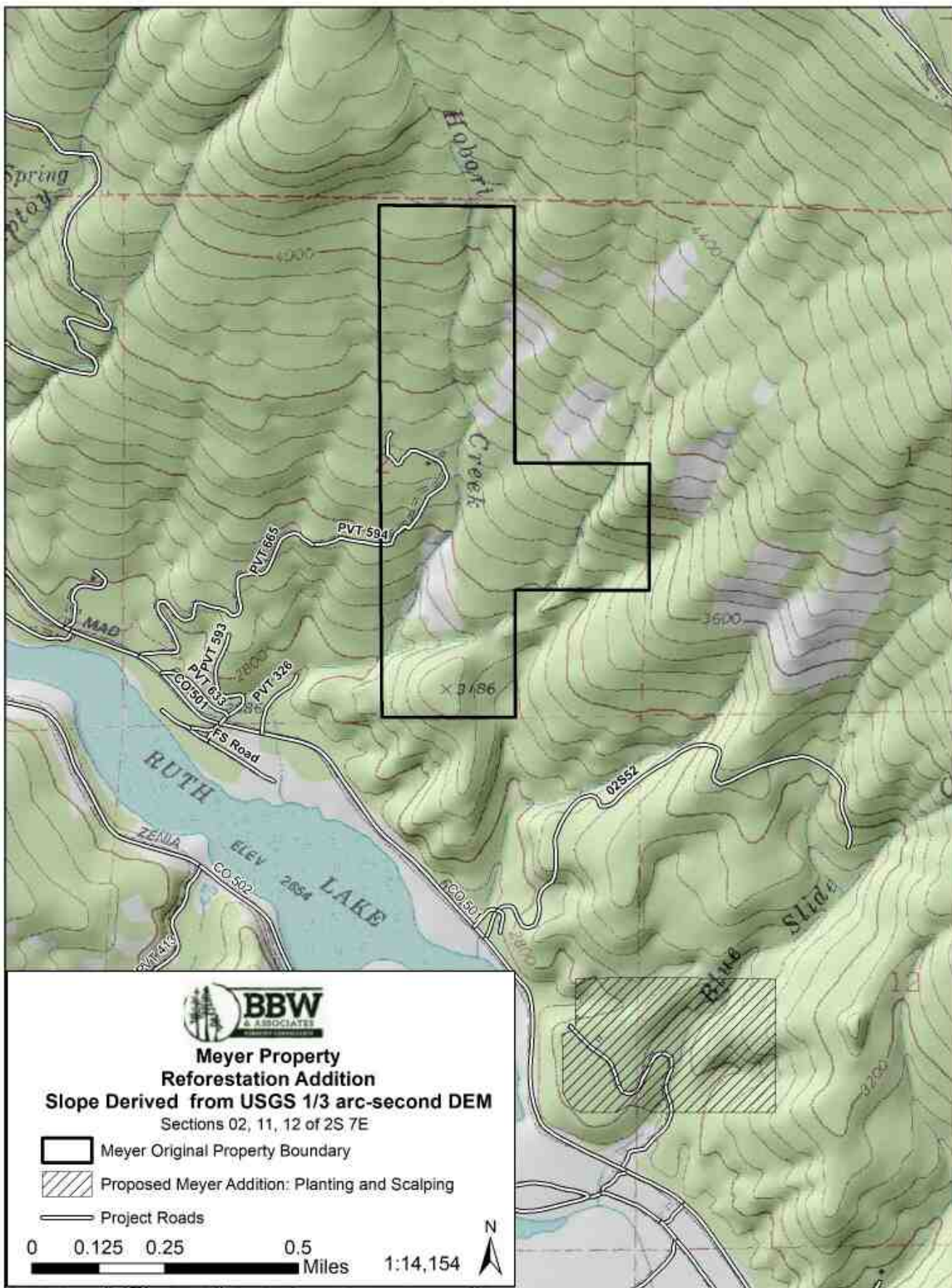




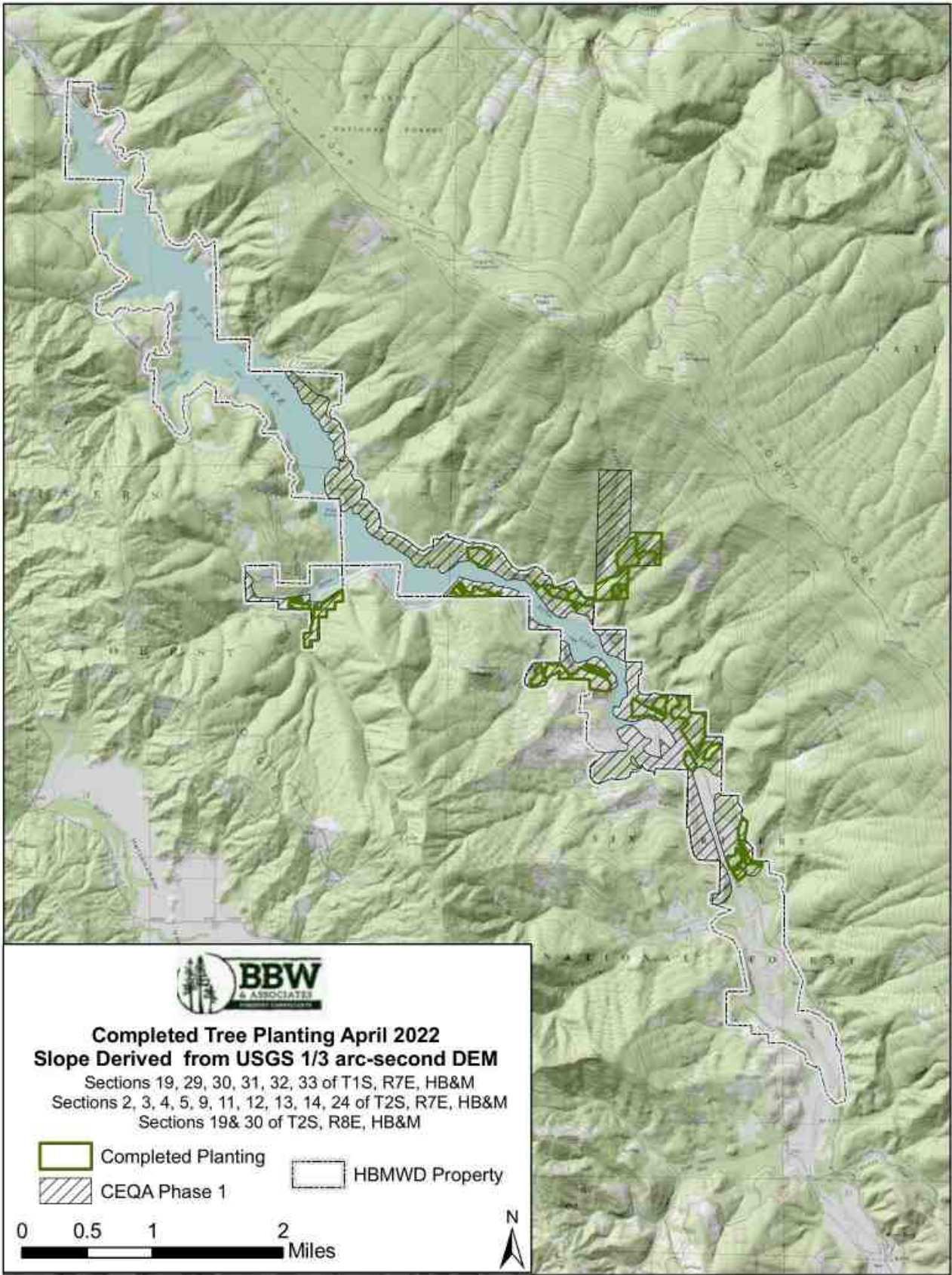


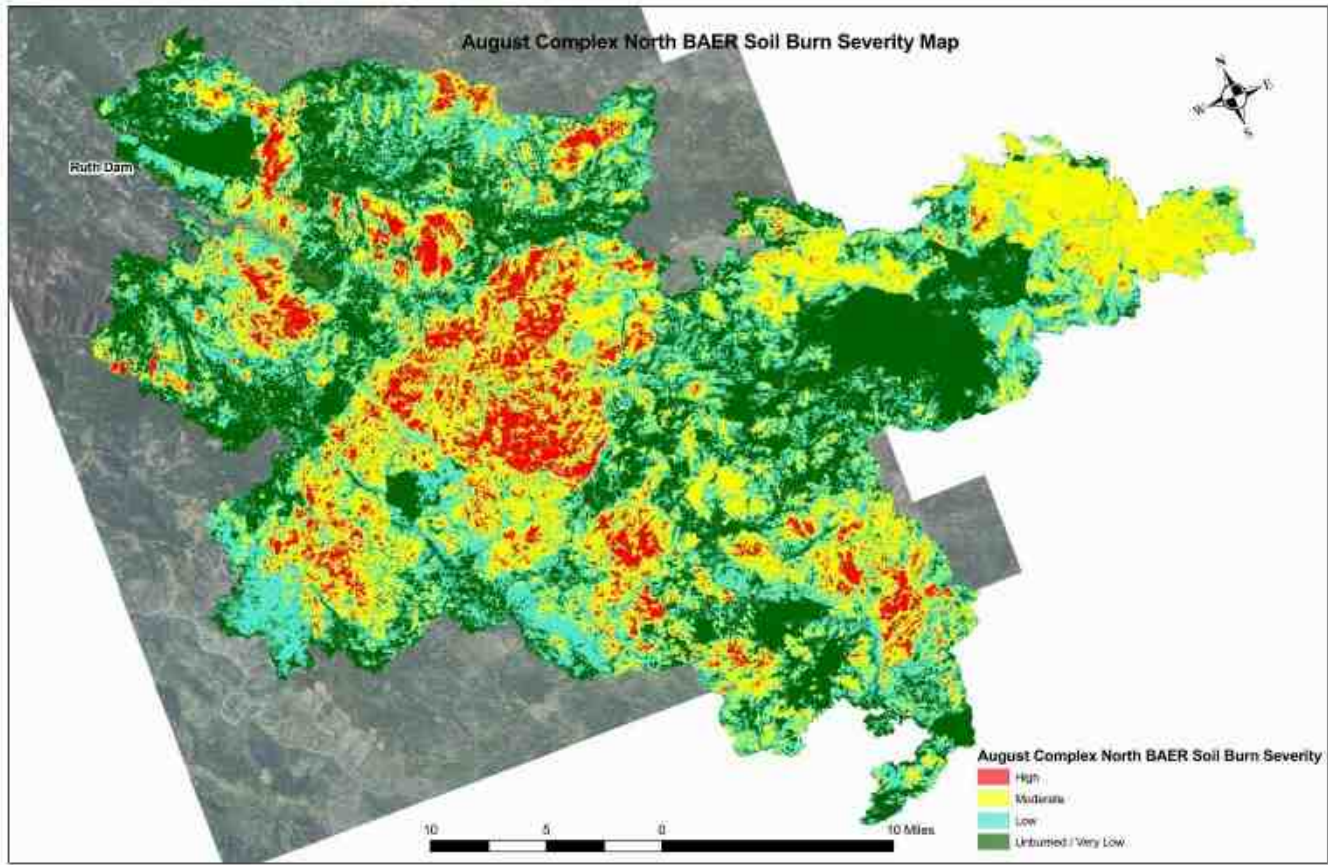








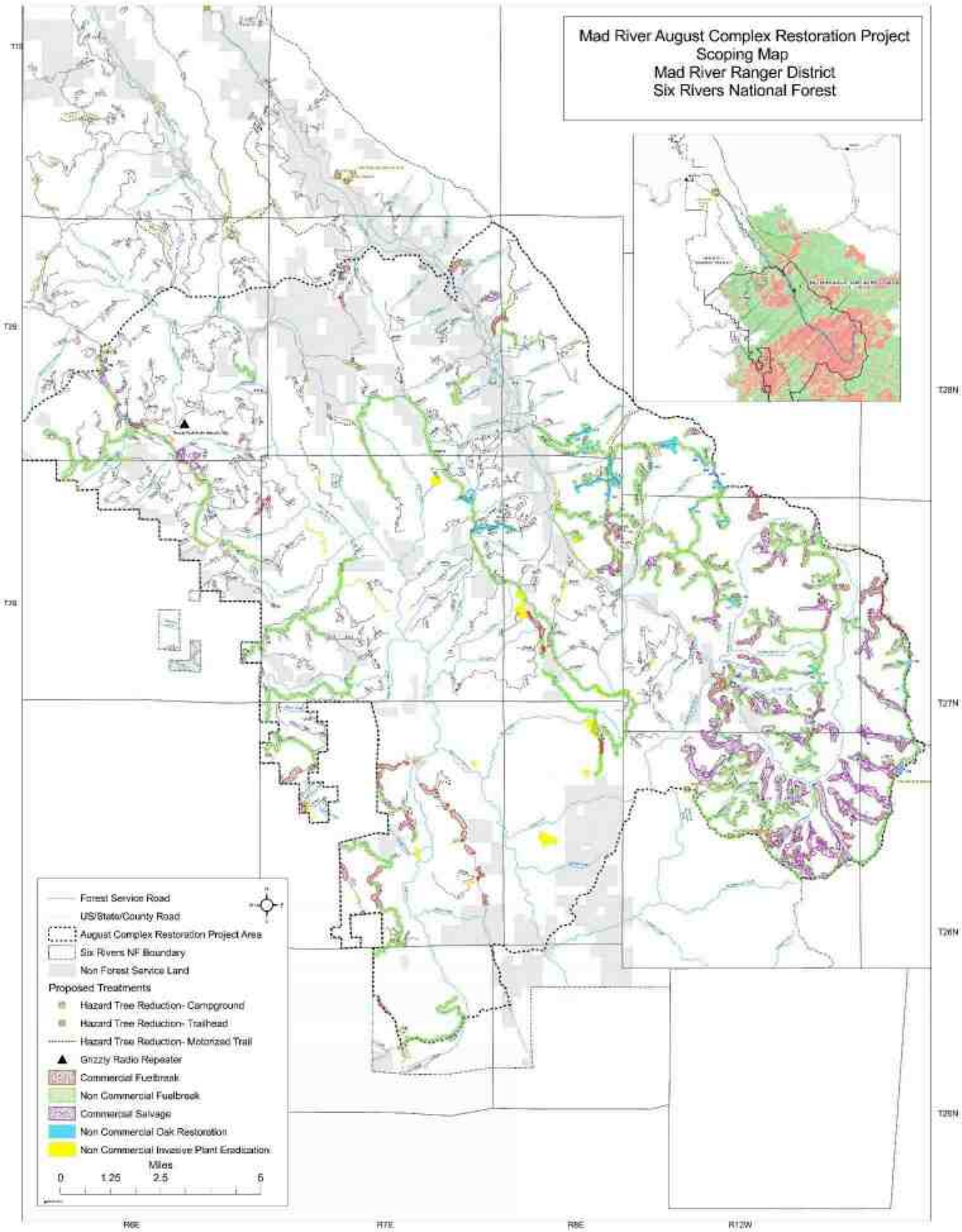




DRAFT



Mad River August Complex Restoration Project  
 Scoping Map  
 Mad River Ranger District  
 Six Rivers National Forest



Appendix D- Other Attachments

California Natural Diversity Database Summaries  
Erosion Hazard Rating Analysis

CALIFORNIA DEPARTMENT OF  
FISH and WILDLIFE **RareFind**

Query Summary:  
Quart 05 (Forest Glen (4012333))

[Print](#) [Close](#)

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Ancotrema voyanum</i>	hooded lancehead	Mollusks	IMGAS36130	173	3	None	None	G+G2	S1S2	null	null	Oldgrowth, Riparian forest, Talus slope
<i>Bombus caliginosus</i>	atacama bumble bee	Insects	IHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
<i>Bombus occidentalis</i>	western bumble bee	Insects	IHYM24250	308	1	None	None	G2G3	S1	null	USFS_S-Sensitive	null
<i>Cuscuta japonii</i>	Jepson's dodder	Dicots	FDCJUS011T0	28	1	None	None	G3	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, Upper montane coniferous forest
<i>Emys marmorata</i>	western pond turtle	Reptiles	ARAAD02030	1404	2	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
<i>Epilobium oregonum</i>	Oregon fleabw	Dicots	PDONA069P0	62	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Bog & fen, Lower montane coniferous forest, Meadow & seep, Ultramafic, Upper montane coniferous forest, Wetland
<i>Frasera unspquensis</i>	Umpqua green-gentian	Dicots	PDGEN050F0	6	6	None	None	G3	S1	2B.2	USFS_S-Sensitive	Chaparral, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest
<i>Haliaeetus leucocapillus</i>	bald eagle	Birds	ABNKC10010	332	1	Delisted	Endangered	G5	S3	null	BLM_S-Sensitive, CDFW_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth
<i>Hosackia yulabellemis</i>	Yolla Bolly Mtns. bin's-foot trefoil	Dicots	PDFAB2A1F0	11	1	None	None	G2	S2	1B.2	null	Meadow & seep, Upper montane coniferous forest
<i>Suaeda laevis</i>	California globe mallow	Dicots	PDMAL0K040	40	1	None	None	G2G3	S2	1B.2	SB_CalBGRSABO-California/Rancho Santa Ana Botanic	Chaparral, Lower montane coniferous

											Garden, USFS_S-Sensitive	forest, North coast coniferous forest, Riparian scrub
<i>Lasiorycteris noctivagans</i>	silver-haired bat	Mammals	AMACC02010	139	1	None	None	G3G4	S3S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Lower montane coniferous forest, Oldgrowth, Riparian forest
<i>Lasiurus cinereus</i>	hoary bat	Mammals	AMACC05030	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
<i>Lupinus elmeri</i>	South Fork Mountain lupine	Dicots	PDFAB2B1G0	15	3	None	None	G2	S2	1B.2	null	Lower montane coniferous forest
<i>Oncorhynchus mykiss irideus</i> pop. 36	summer-run steelhead trout	Fish	AFCHA0213B	20	1	None	Candidate Endangered	G5T4Q	S2	null	CDFW_SSC-Species of Special Concern	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters
<i>Oncorhynchus tshawytscha</i> pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	Fish	AFCHA02056	6	1	Candidate	Threatened	G5T2Q	S2	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters
<i>Pandion haliaetus</i>	osprey	Birds	ABNKC01010	504	3	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
<i>Pekania pennanti</i>	Fisher	Mammals	AMAJF01020	555	2	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
<i>Piperia candida</i>	white-flowered rein orchid	Monocots	PMORC1X050	222	2	None	None	G3?	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic
<i>Ptilidium californicum</i>	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	1	None	None	G4G5	S3S4	4.3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
<i>Rana boylei</i>	foothill yellow-legged frog	Amphibians	AAABH01050	2478	4	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
<i>Sanicula tracyi</i>	Tracy's sanicle	Dicots	PDAPH1Z0K0	80	1	None	None	G4	S4	4.2	USFS_S-Sensitive	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
<i>Sedum</i>	pale	Dicots	PDCRA0A0L2	67	2	None	None	G3	S3	4.3	null	Broadleaved

CALIFORNIA DEPARTMENT OF  
**FISH and WILDLIFE RareFind**

Query Summary:  
 Query 15 (Ruth Reservoir (4012334))

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Bombus caliginosus</i>	obscure bumble bee	Insects	IHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
<i>Emys marmorata</i>	western pond turtle	Reptiles	ARAAD02030	1404	1	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_S5C-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
<i>Erethizon dorsatum</i>	North American porcupine	Mammals	AMAFJ01010	523	2	None	None	G6	S3	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest
<i>Oncorhynchus mykiss irideus</i> (pop. 36)	summer-run steelhead trout	Fish	AFCHA0213B	20	1	None	Candidate Endangered	G5T4Q	S2	null	CDFW_S5C-Species of Special Concern	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters
<i>Pandion haliaetus</i>	osprey	Birds	ABNKC01010	504	9	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
<i>Pekania pennanti</i>	Fisher	Mammals	AMAFU1020	555	2	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_S5C-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
<i>Rana boylei</i>	footsill yellow-legged frog	Amphibians	AAABH01000	2478	3	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_S5C-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Sacramento/San Joaquin flowing waters
<i>Sanicula tracyi</i>	Tracy's sanicle	Dicots	PDAPF120K0	80	8	None	None	G4	S4	4.2	USFS_S-Sensitive	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
<i>Silene bolanderi</i>	Bolander's catchfly	Dicots	PDICAR012L0	30	1	None	None	G2	S2	1B.2	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadow & seep

CALIFORNIA DEPARTMENT OF  
**FISH and WILDLIFE RareFind**

Query Summary:  
 Quad IS (Shannon Butte (4012323))

CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter gentilis	northern goshawk	Birds	ABNKC12060	433	1	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1404	3	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Ptilidium californicum	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	1	None	None	G4G5	S3S4	4,3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Rana boylei	foothill yellow-legged frog	Amphibians	AAABH01050	2478	7	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
Sanicula tracyi	Tracy's sanicle	Dicots	PDAP1120K0	80	5	None	None	G4	S4	4,2	USFS_S-Sensitive	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
Triobopsis tehamana	Tehama chaparral	Mollusks	IMGASA2040	12	1	None	None	G2	S1	null	USFS_S-Sensitive	null



flavidum	yellow stonecrop												upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Silene hookeri	Hooker's catchfly	Dicots	PDCAR0U2M0	31	3	None	None	G4	S2	2B.2	null		Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic
Upland Douglas Fir Forest	Upland Douglas Fir Forest	Forest	CTT82420CA	15	1	None	None	G4	S3.1	null	null		North coast coniferous forest

**ESTIMATED SURFACE SOIL EROSION HAZARD**

<b>I. SOIL FACTORS</b>	<b>FACTOR RATING BY AREA</b>
------------------------	------------------------------

	<b>Shallow</b>	<b>Moderate</b>	<b>Deep</b>			
	<b>1"-19"</b>	<b>20"-39"</b>	<b>40"-60"(+)</b>			
<b>Rating</b>	<b>15-9</b>	<b>8-4</b>	<b>3-1</b>	<b>1</b>	<b>1</b>	<b>1</b>

**C. PERCENT SURFACE COARSE FRAGMENTS GREATER THAN 2MM IN SIZE INCLUDING ROCKS OR STONES**

**AVERAGE EROSION HAZARD RATING FOR THE PROJECT AREA**

	<b>Low</b>	<b>Moderate</b>	<b>High</b>				<b>FACTOR RATING BY AREA</b>		
	<b>(-) 10-39%</b>	<b>40-70%</b>	<b>71-100%</b>						
<b>Rating</b>	<b>10-6</b>	<b>5-3</b>	<b>2-1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>A</b>	<b>B</b>	<b>C</b>
<b>SUBTOTAL</b>							<b>23</b>	<b>28</b>	<b>24</b>

**II. SLOPE FACTOR**

<b>Slope</b>	<b>5-15%</b>	<b>16-30%</b>	<b>31-40%</b>	<b>41-50%</b>	<b>51-70%</b>	<b>71-80%(+)</b>			
<b>Rating</b>	<b>1-3</b>	<b>4-6</b>	<b>7-10</b>	<b>11-15</b>	<b>16-25</b>	<b>26-35</b>	<b>6</b>	<b>10</b>	<b>6</b>

**III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE**

	<b>Low</b>	<b>Moderate</b>	<b>High</b>			
	<b>0-40%</b>	<b>41-80%</b>	<b>81-100%</b>			
<b>Rating</b>	<b>15-8</b>	<b>7-4</b>	<b>3-1</b>	<b>12</b>	<b>12</b>	<b>8</b>

**IV. TWO YEAR, ONE-HOUR RAINFALL INTENSITY (Hundredths Inch)**

	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Extreme</b>			
	<b>(-) 30-39</b>	<b>40-59</b>	<b>60-69</b>	<b>70-80 (+)</b>			
<b>Rating</b>	<b>1-3</b>	<b>4-7</b>	<b>8-11</b>	<b>12-15</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>TOTAL SUM OF FACTORS</b>					<b>47</b>	<b>56</b>	<b>44</b>

**EROSION HAZARD RATING**

	<50	50-65	66-75	>75			
	LOW (L)	MODERATE	HIGH (H)	EXTREME (E)			
THE DETERMINATION IS					L	M	L

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