

**Initial Study-Mitigated Negative Declaration
for the proposed
Lassen County Wildfire Recovery Project
Lassen County, California**



Prepared by:

**Honey Lake Valley Resource Conservation District
Lassen County, CA**

May 2024

Contents

MITIGATED NEGATIVE DECLARATION	1
Introduction and Regulatory Context	1
Stage of CEQA Document Development.....	1
Introduction	1
Regulatory Guidance	1
Purpose of the Initial Study	2
Project Description and Environmental Setting.....	3
Project Location.....	3
Background and Need for the Project	3
Project Objectives.....	5
Project Start Date.....	5
Project Description	5
Environmental Setting of the Project Region.....	8
Description of the Local Environment	9
Current Land Use and Previous Impacts	9
Environmental Permits	12
Mitigation Measures	12
Summary of Findings	22
Initial Study-Environmental Checklist.....	23
Environmental Factors Potentially Affected.....	23
Determination	23
Environmental Checklist and Discussion.....	24
Aesthetics	24
Agricultural Resources	25
Air Quality.....	26
Biological Resources	27
Cultural Resources.....	54
Energy.....	55
Geology and Soils.....	56
Greenhouse Gas Emissions	59
Hazards and Hazardous Materials	61
Hydrology and Water Quality	63
Land Use and Planning.....	66
Mineral Resources	67

Noise.....	67
Population and Housing	68
Public Services	68
Recreation.....	70
Transportation.....	70
Tribal Cultural Resources.....	71
Utilities and Service Systems	73
Wildfire.....	74
Mandatory Findings of Significance	75
Appendix A: Mitigation Monitoring and Reporting Plan	77
Appendix B: Comments and Response to Comments.....	95
PREPARERS OF THIS DOCUMENT	113
EXPERTS CONSULTED	114
REFERENCES CITED	117
Figures:	
Figure 1: Project Vicinity.....	10
Figure 2: Project Location.....	11
Tables:	
Table 1: Watercourse classifications and Watercourse Lake Protection Zones (WLPZs).....	20
Table 2 Biological Assessment – Botany.....	34
Table 3:Biological Assessment – Wildlife.....	44

MITIGATED NEGATIVE DECLARATION

Introduction and Regulatory Context

STAGE OF CEQA DOCUMENT DEVELOPMENT

- Administrative Draft.** This California Environmental Quality Act (CEQA) document is in preparation by Honey Lake Valley Resource Conservation District (HLVRCD) staff.
- Public Document.** This completed CEQA document has been filed by the Honey Lake Valley Resource Conservation District (HLV RCD) at the State Clearinghouse on March 29, 2024, and is being circulated for a 30-day state agency and public review period. The review period ends on April 27, 2024.
- Final CEQA Document.** This final CEQA document contains the changes made by the RCD following consideration of comments received during the public and agency review period. The CEQA administrative record supporting this document is on file, and available for review, at Honey Lake Valley RCD, 170 Russell Ave., Susanville, CA 96130.

INTRODUCTION

This initial study-mitigated negative declaration (IS-MND) describes the environmental impact analysis conducted for the proposed project. This document was prepared by HLVRCD staff utilizing information gathered from a number of sources including research, field review of the proposed project area and consultation with environmental planners and other experts on staff at other public agencies. Pursuant to § 21082.1 of CEQA, the lead agency, HLVRCD, has prepared, reviewed, and analyzed the IS-MND and declares that the statements made in this document reflect HLVRCD’s independent judgment as lead agency pursuant to CEQA. HLVRCD further finds that the proposed project, which includes revised activities and mitigation measures designed to minimize environmental impacts, will not result in a significant effect on the environment.

REGULATORY GUIDANCE

This IS-MND has been prepared by HLVRCD to evaluate potential environmental effects that could result following approval and implementation of the proposed project. This document has been prepared in accordance with current CEQA Statutes (Public Resources Code §21000 *et seq.*) and current CEQA Guidelines (California Code of Regulations [CCR] §15000 *et seq.*)

An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment (14 CCR § 15063(a)), and thus, to determine the appropriate environmental document. In accordance with CEQA Guidelines §15070, a “public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when: (a) The initial study shows that there is no substantial evidence...that the project may have a significant impact upon the environment, or (b) The initial study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions will reduce potentially significant effects to a less-than-significant level.” In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the proposed project will not have a

significant effect on the environment and, therefore, does not require the preparation of an environmental impact report. This IS-MND conforms to these requirements and to the content requirements of CEQA Guidelines § 15071.

PURPOSE OF THE INITIAL STUDY

The purpose of this IS-MND is to present to the public and reviewing agencies the environmental consequences of implementing the proposed project and to describe the adjustments made to the project to avoid significant effects or reduce them to a less-than-significant level. This disclosure document is being made available to the public and reviewing agencies for review and comment. The IS-MND was circulated for public and state agency review and comment for a review period of 30 days as indicated on the *Notice of Intent to Adopt a Mitigated Negative Declaration* (NOI). The 30-day public review period for this project began on April 2, 2024 and ended on May 1, 2024.

The requirements for providing an NOI are found in CEQA Guidelines §15072. These guidelines require HLVRCD to notify the general public by providing the NOI to the county clerk for posting, sending the NOI to those who have requested it, and utilizing at least one of the following three procedures:

- Publication in a newspaper of general circulation in the area affected by the proposed project,
- Posting the NOI on and off site in the area where the project is to be located, or
- Direct mailing to the owners and occupants of property contiguous to the project.

HLVRCD elected to utilize posting the NOI on and off site in the area where the project is to be located, the second of the three notification options. An electronic version of the NOI and the CEQA document were available for review during the entire 30-day review period through their posting at: <https://www.honeylakevalleyrcd.us/>, and the project will be posted on <https://ceqanet.opr.ca.gov/>.

If submitted prior to the close of public comment, views and comments were welcomed from reviewing agencies or any member of the public on how the proposed project may affect the environment. Written comments must be postmarked or submitted on or prior to the date the public review period will close (as indicated on the NOI) for HLVRCD's consideration. Written comments may also be submitted via email (using the email address that appears below), but comments sent via email must also be received on or prior to the close of the 30-day public comment period.

Comments should be addressed to:

Kelsey Siemer, District Manager
Honey Lake Valley Resource Conservation District
170 Russell Ave., Suite C
Susanville, CA 96130
(530) 260-0067
kmarks@honeylakevalleyrcd.us

After comments are received from the public and reviewing agencies, HLVRCD will consider those comments and may (1) adopt the mitigated negative declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project.

Project Description and Environmental Setting

PROJECT LOCATION

The project area is located on +/-27,750 acres of non-industrial private timberlands, woodlands, and sagebrush scrub in Lassen County, CA impacted by the Hog Fire (2020), Sheep Fire (2020), Sugar Fire (2021), and Dixie Fire (2021). The project area is within the: Pine Lake (8637.310101); Upper Robbers Creek (5518.450102); Moonlight Pass (5518.450400); Papoose Creek (8637.200201); Goat Mountain (8637.200202); Lower Willard Creek (8637.200302); Cheney Creek (8637.200400); Upper Gold Run (8637.200803); Lower Gold Run (8637.200801); Lassen Creek (8637.200802); Sand Slough (8637.200901); Wales Canyon (8637.200904); McDermott Creek (8637.100.307); Clarks Creek (5518.550201); Bird Canyon (8637.100305); Downing Canyon (8637.100304); Willow Ranch Creek (8637.100303); Rhodesi Creek (8637.100301); Red Rock (8637.100308); and Raccoon Creek (8637.100202) watersheds.

Mount Diablo Base and Meridian (MDBM) Township 23N, Range 17E, portions of Sections 2-5, 8-10; T24N, R17E, portions of Sections 4,5,8-11, 13-16, 24-26, 34, & 35; T25N, R17E, portions of Sections 7, 17-20, & 29-33; T25, R16, portions of Sections 2,3,9-16, 22-26, & 36; T26N, R15, Section 13; T26N, R16E, portions of Sections 18-20, 28,29, 32-34; T27N, 13E, portions of Sections 1, 3,10,12 & 15; T27, R14, portions of Sections 5-8, 17, & 20; T28N, R13E, portions of Section 23, 26-27, & 36; T28, R14E, portions of Sections 30, 31; T29N, R10E, portions of Sections 1,22; T29N, R11E, portions of Sections 7,12, 22-26, 33 & 35; T29N, R12E, portions of Sections 19, 20, 22-24, & 27-34; T30N, R8E, portions of Sections 2,3,8; T30N, R10E, portions of Section 27; and T31, R7, portions of Sections 13,24, & 25.

The project area ranges in slope from flat to very steep with elevation ranges from 4,000 – 6,800 feet, and average annual precipitation of 12 inches at the lower elevations on the east side of the project to 55 inches in the higher elevations of the project. The project area lies within a wildland urban interface zone (WUI), which is an area where human habitation is mixed with areas of flammable wildland vegetation. The majority of the project area burned at medium to high severity during the Hog, Sheep, Sugar, and Dixie Fires in 2020 and 2021.

BACKGROUND AND NEED FOR THE PROJECT

The Hog Fire began on July 18, 2020 from an unknown source and was contained by Cal Fire on August 17, 2020. The wildfire burned 6,621 private acres and a little over 2,946 on federally-managed lands for a total of 9,567 acres. The Sheep Fire was a lightning-caused wildfire that burned 9,134 acres of federally-managed land in the Diamond Mountains and spread onto 19,023 acres of private land at the base of the mountains toward the city of Susanville, CA. The Sheep Fire began in the lightning siege on August 17, 2020 and spread across Plumas into Lassen County burning federal (Forest Service) and private land until September 4, 2020. The Sugar Fire started on July 2, 2021 and was part of the Beckwourth complex started by lightning strikes, and was contained on September 22, 2021. The combined fires burned 105,670 acres, and destroyed 33 homes in the community of Doyle, CA. The Dixie Fire began on July 13, 2021 by a PG&E powerline and was contained on October, 25,2021. The wildfire burned 963,309 acres. It was the largest single source wildfire in recorded California history. The communities of Greenville, Canyondam, and Warner Springs. The Lassen County Wildfire Recovery project areas were

primarily comprised of upland Eastside Pine (EPN) stands with Jeffrey and ponderosa pine as the dominant conifer vegetation along with Sierran Mixed Conifer (SMC) consisting of pine, Douglas fir, white fir, sugar pine, incense cedar, and Black oak. There are also areas of Montane Hardwood Conifer (MHC) consisting of ponderosa pine, incense cedar, and California black oak. Understory vegetation was thick in portions of the project area prior to the fire with brush including, bitterbrush (*Purshia tridentata*) and sagebrush (*Artemisia sp.*). Areas of unburned eastside pine and Sierran mixed conifer forest remain within the fire footprint and adjacent areas and are overly dense with high levels of ladder fuels, primarily white fir, in the understory. The project is needed to remove the abundant standing, fire-killed trees adjacent to these areas to reduce fire risk. Restoration of vegetation within the project is needed to remove dead and dying vegetation and restore these areas in a way that provides safe conditions for fire fighters and safety personnel to fight future catastrophic wildfires threatening the communities of Westwood, Lake Forest, Susanville, and Janesville.

The project is also needed to address the potential for increased surface runoff and erosion post-fires. The Plumas and Lassen National Forests prepared Burned Area Emergency Response (BAER) Reports reviewing the severity and likelihood of post-fire disasters. These reports are used as a proxy for post-fire conditions on all lands within the fire footprints. The majority of all the burned areas resulting from these burned at moderate to high soil severity. Due to hillslope gradient and loss of vegetation, the first, large runoff-producing storms resulted in increased surface flows in many streams within the fire footprints.

Threats to hydrologic function and water quality are considered very high due to the likelihood of: degraded channel condition and bank erosion from increased flows; the potential for significant sediment contributions; reduction in water quality; increased runoff resulting in higher concentrations of runoff on roads, resulting in exacerbated erosion of road fill slopes; and surrounding land; increased flooding and potential for debris flows.

Currently, the remaining fire-killed trees pose risk to life and property by increasing fuel loading. The project area has high densities of dead and dying trees, especially in areas of high-severity burn. Increased fuel loading may extend resident burn times, increase flame length, increase fire heat and soil damage, and increase firefighter labor to suppress the fire (difficulty moving in jack-strawed or dense downed wood material). If not felled and removed, these trees will elevate fire hazard and impede fire suppression. Management of activity-related slash and smaller fuels and removal of logs would reduce the severity and intensity of the next fire, create a safe and defensible space for firefighters in future advancing fires, and provide for safer ingress and egress. Delays in decision-making and implementation will likely lead to loss of the most intensely burned area to cycles of shrubs, hardwoods, and recurring fires for many decades (Sessions et al. 2004).

Not all downed logs and woody biomass pose a serious fire hazard or impede safe and effective fire suppression. Downed woody biomass provides both ecological and recreational values. Therefore, our objective is to remove enough of the dead/dying fuels to support low fire-hazard and low resistance-to-control conditions and to retain biomass and logs where soil cover or habitat is insufficient after fires.

An effective balance between these competing objectives may be met by felling, but not removing, some hazard trees in treated areas and by entirely foregoing treatment in other areas. In the areas selected for treatment, some felled hazard trees may be left on the forest floor, as long as downed

woody biomass does not constitute a residual safety hazard, increase fuel loading above desired levels, or pose a significant impediment to economic and operational efficiency.

PROJECT OBJECTIVES

The project objective is to restore areas on private non-industrial timber and woodlands that were damaged by the Hog Fire (2020), Sheep Fire (2020), and the Dixie Fire (2021), address erosion and hydrologic issues, and replant areas with conifer and oak seedlings.

PROJECT START DATE

Summer 2024

PROJECT DESCRIPTION

The project will result in up to 28,650 acres of private non-industrial timberlands and woodlands receiving site preparation to remove dead and dying trees and shrubs and regrowth of competing vegetation resulting from the Hog, Sheep, Sugar, and Dixie Fires, planting of seedlings to reforest areas prepped as a result of this project and other areas previously cleared by private landowners. The project proposes removal of standing dead biomass material for site preparation in burned stands of Eastside Pine (EPN), Sierra Mixed Conifer (SMC), and Montane Hardwood Conifer (MHC) habitats (*See Project Vicinity and Project Area Map*). Clearing dead and dying trees which will fall down over time and become a fuel hazard to the reforested area is a key step in ensuring successful regeneration and protecting the investment from reburning. Long-term, downed fire-killed trees inhibit reforestation treatments, increase watershed degradation, decompose and increase fuel loads for a highly probable reburn event. Both occurrences release excess greenhouse gases into the atmosphere. Projects will be implemented within the project area over several years as funding becomes available.

Site preparation will begin as soon as possible and will remain continuous as weather permits. Variable prescriptions will be applied to promote Habitat Retention Areas (HRA). HRAs will be established to preserve some snag and thicket structure where appropriate. Up to 10% of the total area would be left untreated as HRA. The largest tree snags (over 18" DBH) will be left onsite for habitat value. Steep areas (>40% slope) will not be treated. To complete site preparation, all areas cleared will have follow-up herbicide treatment to remove resprouting woody vegetation and grasses from competition with the new conifer seedlings. Herbicide treatments will occur in early summer to fall. Watercourses and springs will be buffered per herbicide label requirements.

The spring after site preparation, trees will be planted. Variable density silviculture prescriptions will be used to promote a mixture of tree sizes and structural diversity throughout the project area. "Islands" of area will be established using native plant seed. These seeded patches will vary in size, from two up to ten acres. The seed mix is certified weed free and composed of native grasses, forbs, and brush. Seed will be broadcast in the fall. Residual stands will be more open, increasing the amount of available soil moisture and sunlight for individual trees. Allowing some shrub cover in regenerating forests, in balance with tree seedlings, will increase the resilience and habitat diversity of reforested areas. Erosion control will be installed on disturbed areas and all roads used for hauling and yarding per Forest Practice Rules (14 CCR §943).

Much of the thinning activity and removal of trees >11” dbh will be conducted under California Forest Practice Exemptions. The balance of the treatment activities, including the mastication of brush and small trees, hand treatments of brush and small trees, prescribed fire, herbicide treatments, and tree planting will be conducted under this Notice of Exemption (NOE).

1.1. Mastication and Hand Treatment of Brush and Small Trees

Mastication and hand treatments involve the pulverization and removal of standing dead/dying biomass. Dead/dying trees and brush that are over 18” in height and less than 11” diameter at breast height (dbh) will be treated. Brush greater than 18” in height will be treated. Snags less than 12” dbh will be treated, unless they show signs of use by wildlife or are marked with an “L”, “W”, or tag identifying them as a “Wildlife Tree”. Woody debris less than 12” diameter which extends greater than 12” from the ground will be treated. Areas with concentrations of activity fuels (i.e. logging slash) will be treated. Treated materials will not extend greater than 12” from the ground.

Good form should be considered when selecting leave trees in order to reduce the number of trees with crooks, doglegs, multiple tops, or other defects. Trees exhibiting poor vigor, mechanical damage, or disease and or insect infestation shall not be retained unless they are the best available tree. Trees that have a likelihood of creating a “ladder” for fire to move into the crowns of overstory trees have a lower priority as leave trees. Trees that do not exceed the maximum size and that are within 10’ of roads that have the potential to affect vehicular traffic use or to allow a fire to spread across the road shall be treated. Leave trees will be prioritized in the following order: 1) incense cedar; 2) Douglas fir, 3) sugar pine, 4)ponderosa pine; 5)white fir, and 6) western juniper. Oaks and other hardwoods showing signs of stump sprouting will be retained.

1.2. Emergent Brush Treatments:

Emergent brush treatment involves the use of herbicides to treat emergent vegetation in order to remove competition from planted conifer seedlings and maintain forest spacing established by the mastication and hand thinning.

After brushfields and dense tree stands are cleared, native and non-native woody species aggressively reoccupy the site, regardless of the method of initial brush removal. The regrowth is typically from both old, vigorously sprouting plants and new dense stands of small seedlings, but in certain situations either seedlings or sprouts alone make up most of the regrowth. Control of this brush regrowth has been the most persistent and perplexing problem in converting dense stands of small diameter, unhealthy trees and shrubs that are subject to stand replacing and dangerous fire conditions to productive timber stands that can withstand a low to medium intensity fire and provide increased wildfire protection to communities. Sprouts from previously dormant buds on root crowns, stems, or roots left after initial brush removal have been most difficult to control. Herbicides have been shown to be an efficient cost-effective method of meeting this objective.

The following alternatives were considered, in addition to the one selected, and were disregarded for the following reasons:

- 1) Do Nothing. Loss of vegetation control investments, loss of property values due to associated fire hazard, and watershed impacts from anticipated wildfire.
- 2) Mechanical or Manual Treatment. Mechanical and manual treatments alone are not cost effective and would require multiple re-entries to re-treat the re-sprouting brush. This method

would result in scarification of additional weed seeds that would result in ongoing germinate brush.

3) Biological Treatment. There is no known effective biological treatment. Cattle and sheep are grazers and not browsers and would not effectively forage on the target brush species. Goats are browsers and could be used to forage on the target brush species; however, the brush would re-sprout resulting in the need for ongoing treatments. There are very few goat herds available for brush control in the region. Goats can be very selective on which brush species they will browse.

4) Other Herbicides. Of the herbicides registered for this use, these were determined to be the most appropriate when considering cost-effectiveness and safety to desirable crop trees and the environment.

All vegetation control shall be with the use of herbicides. The landowner does not have any other cost-effective alternative to consider. Herbicide use will be limited to late winter (February – March) prior to the flowering period, and fall (October – November), after the flowering period, in order to protect pollinators. Herbicides with the EPA bee hazard icon, or high residual toxicity to bees, will not be used, and flowering plants will be avoided.

1.3. Prescribed Fire

Prescribed fire is a very cost and time efficient management tool. The native species within the project boundary have all evolved with and are adapted to frequent fire intervals. Using low intensity, more frequent prescribed fires allows native species to thrive and can also reduce invasive species populations. Prescribed burning, in this project, will be used to reduce the fuel load of ground fuels, coarse woody debris, as well as a portion of the above ground biomass. The purpose of the fire is to reduce the risk of large damaging fires by creating conditions that increase effectiveness of fire suppression.

Through prescribed fire, land managers can have a say in the timing and intensity of the fire. Land managers can also lessen the impacts or provide benefits for other environmental resources. Fire hazard reduction may be an objective of prescribed fire; however, there are other objectives such as wildlife habitat improvement, range improvement, enhancement of the project areas appearance, and improved safety by reducing the amount of dead and dying vegetation. If a wildfire does happen to enter an area that was treated, the wildfire may be contained sooner with reduced area burned at high intensity. The reduced number of acres or fire intensity will have benefits to other resource, including environmental resources, public health, and public and firefighter safety.

All prescribed fires will be subject to local and state regulation to maintain air quality and reduce fire escape risk. Prescribed burning is regulated by the Lassen County Air Pollution Control District (LCAPCD) in compliance with the state smoke management plan, Title 17. Prescribed burn projects must submit a Smoke Management Plan to LCAPCD for review and approval. The plan is developed to minimize air quality impacts of the project. Burning is done on approved burn days as determined by LCAPCD. This process ensures that there are no significant smoke impacts to public health from the project.

The desired fire intensity is low to moderate. A prescribed burn plan will be developed for prescribed fires within the project area prior to implementation that outlines the parameters (timing,

weather, fuel moisture, etc.) necessary to implement the project to ensure that the fire remains low to moderate intensity and does not escape the project perimeter. In addition the plan will identify protocols should the fire escape. All prescribed fire activities carry a risk of fire escape, but the project design has reduced this risk below a significant level. By conducting burns in the off-season and with highly trained fire professionals (CAL FIRE) on site, the project reduces the risk of wildfire below the level of risk associated with the no-project alternative. Spotting outside of fire lines should not be a problem with correct firing methods and weather patterns as prescribed in the burn plan. By reducing fuels while leaving slope and other factors unchanged, the project will reduce, not exacerbate the effects of any future wildfire.

1.4. Erosion Control

Erosion control may include reseeded with native seed for stabilization of degraded areas and installation of brow logs to trap sediment from entering waterways. Erosion control will be installed on disturbed areas and all roads used for hauling and yarding per Forest Practice Rules (14 CCR §934 and §943).

1.5. Tree Planting

Bare root/containerized seedlings from the appropriate seed zone (523, 732, and 771) will be hand planted when soils are moist, not saturated or dry. Variable density silviculture prescriptions will be used to promote a mixture of tree sizes and structural diversity throughout the project area.

ENVIRONMENTAL SETTING OF THE PROJECT REGION

The project area is located in a region where the Southern Cascades Mountain Range, Northern Sierra Nevada Mountain Range, Modoc Plateau, and Great Basin ecoregions merge. These regions are the ancestral home of the Maidu, Northern Paiute, Pit River, and Washoe Tribes and represented today by several bands within the county and surrounding areas. Members of those bands continue to maintain a relationship with this landscape as a place of residence, ceremony, harvesting, stewardship, and other traditional activities. The region has cold winters, and hot summers with variability in annual precipitation as you move from mountainous forested regions on the west toward the dry, high desert to the east. The project area ranges in slope from flat to very steep with elevation ranges from 4,000 – 6,800 feet, and average annual precipitation of 12 inches at the lower elevations on the east side of the project to 55 inches in the higher elevations of the project. The wet season produces vegetation growth that may be subject to seasonal drought, and prone to fire. California native plants have evolved with relatively frequent fires, and in many cases require fire or fire byproducts to remain healthy or to reproduce. This fire history includes lightning and anthropogenic sources, and it is certainly true for the project area. Frequent burning by local Indigenous peoples created a landscape that was fire-maintained by low to moderate intensity fires that self regulated. Forest/Woodland conditions were historically open with grass and herbaceous undergrowth and scattered shrubs, which resulted in a fire resistant and resilient landscape. While fire suppression policies have been in place for more than a century, there is a history of wildfires and prescribed burns within the project area. The project recently burned in the Dixie Fire (2021), cause by faulty PG&E powerlines. The fires had variable effects on vegetation within the landscape, with the majority burning at high severity. The project area lies within a wildland urban interface zone (WUI), which is an area where human habitation is mixed with areas of flammable wildland vegetation. The purpose of this CEQA evaluation is to analyze the potential environmental impacts of restoring forest and woodland habitat impacted by the Dixie Fire.

DESCRIPTION OF THE LOCAL ENVIRONMENT

Portions of the project area have high densities of drought- and fire-killed standing trees in forest stands that generally were denser than the natural range of variation. In the proposed treatment area, a mosaic burn pattern resulted from the recent fires including unburned to low severity, low severity, with the majority of the project area burning at moderate severity to high fire severity. As a result, in some areas, tree mortality is 100 percent, while other areas still support a green forest. This range of fire severity leaves the existing landscape with a wide range of potential fire behavior depending on vegetation burn severity, fuel loading changes from dead and dying trees, and the regrowth of non-forest vegetation over time.

Literature indicates that post-disturbance fuel loadings are expected to be extreme in many portions of the project area. A recent study (Fettig et al. 2019, updated by Homicz 2022) of ponderosa pine stands in the central and southern Sierra Nevada found significant increases in fuel loadings caused by severe drought followed by western pine beetle outbreak. The study included plots on the Eldorado, Stanislaus, Sierra, and Sequoia National Forests. Fallen dead trees were the largest class size of surface fuels and were the primary driver of fuel load increases. These data indicated extreme surface fuel loadings in these areas prior to recent wildfires or treatment. The Eldorado had a total average of 279 to 384 tons per acre; the Stanislaus had 292 to 340 tons per acre; the Sierra was the highest at 376 to 428 tons per acre; and the Sequoia had 269 to 276 tons per acre.

In dry forest such as in the Sierra Nevada, high to extreme fire hazard potential exists when downed coarse woody debris (materials with a diameter of 3 inches or greater) exceeds 30 to 40 tons per acre. The range of woody debris larger than 3 inches in diameter considered optimal is between 5 and 20 tons per acre. This balances acceptable risks of fire hazards and fire severity while at the same time providing desirable quantities of ground cover for soil productivity, soil protection, and wildlife needs. A wildfire with fuel loadings greater than this range could create control problems, higher suppression costs, and higher smoke emissions (Brown et al. 2003).

CURRENT LAND USE AND PREVIOUS IMPACTS

Until the late nineteenth century, the site was primarily used by Indigenous peoples as part of their daily lives. They maintained open, sunny mixed conifer/oak woodland conditions with regular, low-intensity fire. Brush communities were maintained in a fine grain mosaic interspersed with grasses and forbs. Collectively, these fire maintained areas achieved numerous ecocultural objectives including high-quality food, medicine, and fiber. The tending to these places was disrupted by American settlement. In the late 1800s and 1900s, the site was considered valuable timberland, as well as cattle and sheep ranching land. . Lands within the project area are used for full and part time residence, recreation, timber management, agriculture, wildlife habitat, and watershed protection.

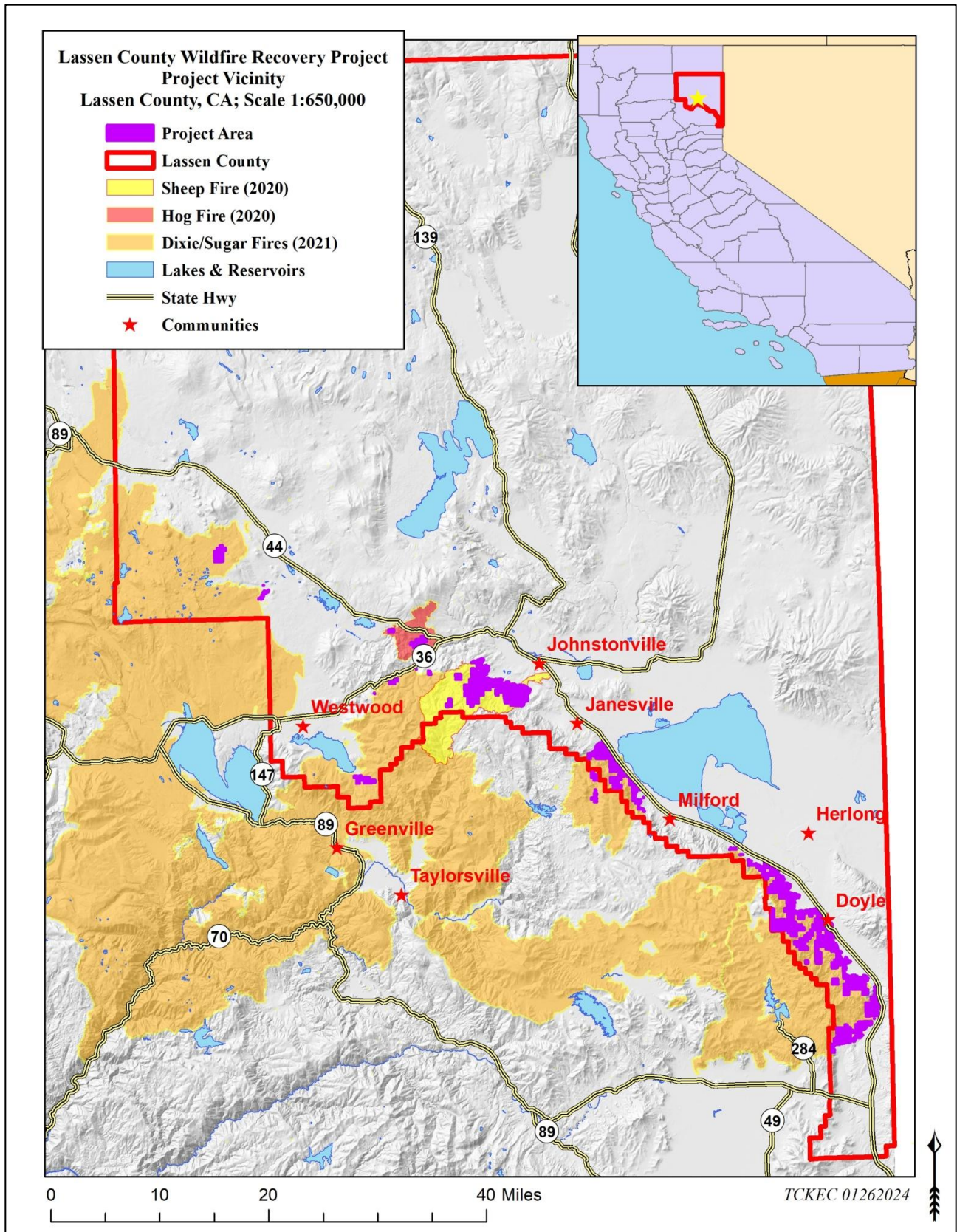


Figure 1: Lassen County Wildfire Recovery Project Vicinity

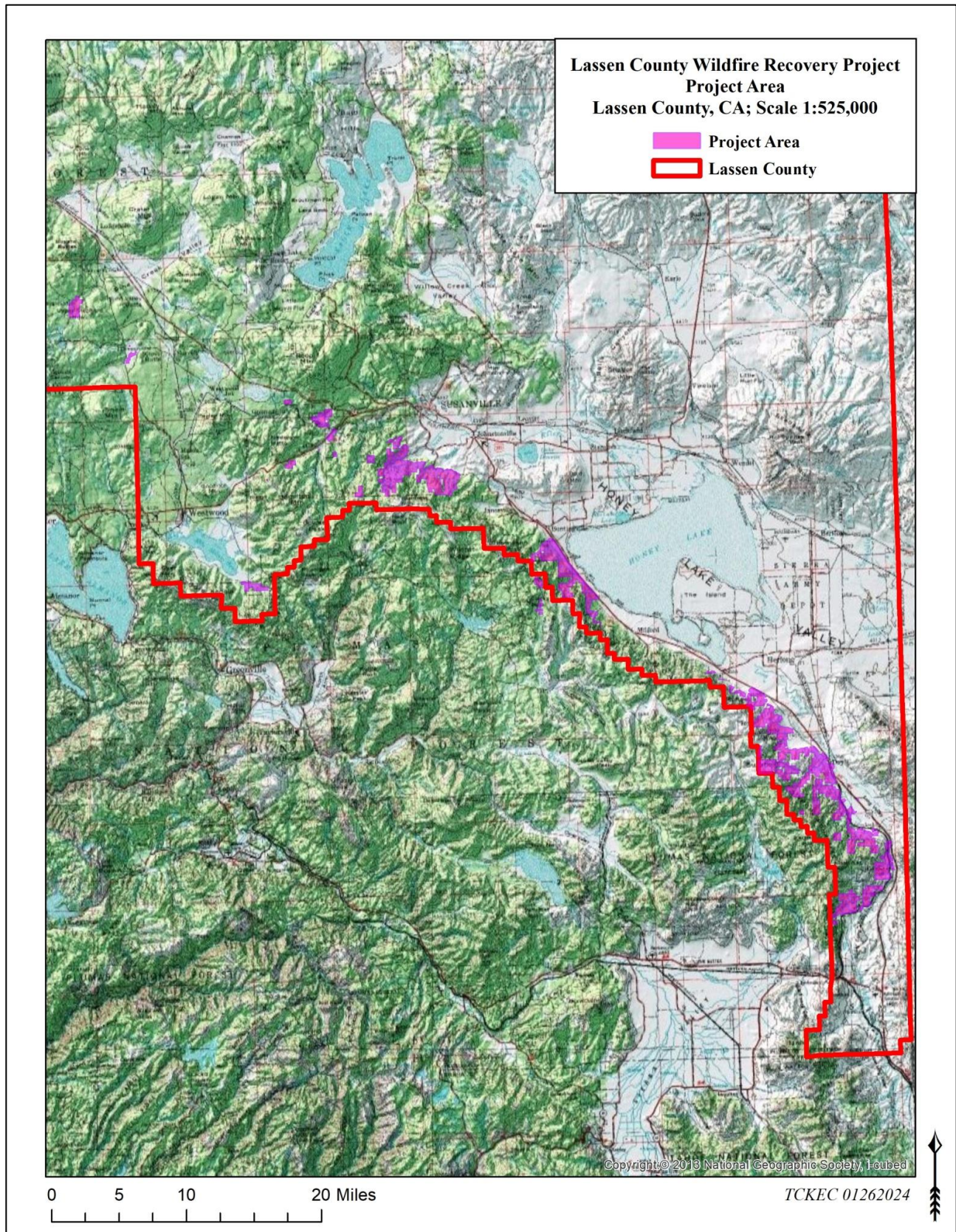


Figure 2: Lassen County Wildfire Recovery Project Location.

ENVIRONMENTAL PERMITS

No other permits are needed to implement this project.

MITIGATION MEASURES

Mitigation measures applicable to the project to minimize or eliminate potential negative effects or to comply with laws, regulations, and policy are described below (Mitigation Measures). More restrictive measures may be applied if determined necessary by the responsible official. Implementation of these mitigation measures will reduce the environmental impacts of the proposed project to a less than significant level.

Botany:

Mitigation Measure BIO-BOT-1: *Sensitive Plants* - Known populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) sensitive plant, lichen, or fungi species shall be flagged for avoidance. Ground-disturbing activities and spreading chips or slash materials shall be prohibited within flagged areas. When necessary, hand felling of trees and end-lining of logs may be conducted within occurrences if it is determined by a botanist that effects would be minimal or there will be beneficial effects based on the site or habitat conditions. Piles and fire lines shall be located outside of flagged areas.

Mitigation Measure BIO-BOT-2: *New Sensitive Plant Discoveries* - In the event any new populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and sensitive (California Native Plant Society Rare plants Ranks 1 and 2) plant, lichen or fungi species are discovered during pre-construction surveys using California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines or during project implementation, the area will be flagged and avoided until a botanist is consulted for mitigation measure applicability.

Mitigation Measure BIO-BOT-3: *Felling Adjacent to Sensitive Plant Populations* – Dead/dying trees adjacent to flagged populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) plant, lichen, or fungi species will be directionally felled away from the flagged area to avoid disturbing the population. Only remove directionally felled trees if ground disturbance within the flagged area can be avoided. If directional felling cannot be done due to safety concerns, fell as necessary and leave on-site. This requirement may be waived by a botanist depending on the species present and its phenology. Flagging will be used to delineate avoidance boundaries.

Mitigation Measure BIO-BOT-4: *Felling within Flagged Sensitive Plant Populations* – Dead/dying trees located within flagged avoidance areas may be felled but must be left on-site to avoid ground disturbance unless removal can occur with minimal effects in consultation with a botanist. Flagging will be used to delineate avoidance areas.

Mitigation Measure BIO-BOT-5: *Special Plant Habitats* - Special habitat types which support unique plant communities (such as serpentine, lava caps, pumice flats, rock outcrops, and seeps and springs) will be avoided. This requirement may be waived by a botanist if ground disturbance can be avoided.

Non-Native Invasive Species:

Mitigation Measure BIO-INV-1: *Cleaning of Equipment* - All equipment to be used off-road would be cleaned using either washing or high-pressure air and visually inspected before moving into the project area to ensure equipment is free of soil, plant propagules, or other debris that may contain invasive plant seeds. All equipment working in infested areas will be cleaned prior to leaving the infested area.

Mitigation Measure BIO-INV-2: *Weed Free Materials* - Any source that provides material such as rock, gravel, or boulders to be used in the project area would be inspected and determined to have limited potential for the spread of invasive plants. Material stockpiles must be noxious weed free.

Mitigation Measure BIO-INV-3: *Weed Free Straw* - Any straw or seed placed within the project area must be California-certified weed-free and the seed mix approved by a botanist. Other materials to be used as mulch, for which a state inspection protocol does not exist (such as wood chips, local materials) would be inspected by a botanist to determine the potential for spread of invasive plants. Post-project monitoring would occur in areas where imported materials are used.

Mitigation Measure BIO-INV-4: *Equipment and Flagged Sites* - Equipment, vehicles, and personnel will avoid working within flagged invasive plant sites. Flagging will be used to delineate avoidance boundaries. If infestation cannot be avoided, consult with a botanist for risk minimization strategies.

Mitigation Measure BIO-INV-5: *Invasive Discoveries* - Any additional infestations discovered during pre-implementation surveys or during project implementation would be flagged and avoided. Report new infestations to a botanist.

Fisheries and Aquatics:

Mitigation Measure BIO-AQUA-1: *Burn pile placement* - No burn piles shall be placed within the Watercourse and Lake Protection Zone (WLPZ) for watercourses, lakes, meadows, fens, or springs.

Mitigation Measure BIO-AQUA-2: *Water drafting sites* - Identify water sources on project implementation maps. Consult with the Registered Professional Forester to obtain approval for use of additional water drafting locations and to determine whether the location represents suitable habitat for sensitive aquatic species.

Mitigation Measure BIO-AQUA-3: *In-Channel drafting sites* - In-channel water drafting locations shall include rocking of approaches, barrier rock, straw bales, or other measures to prevent overflow and leaks from entering the watercourse.

Mitigation Measure BIO-AQUA-4: *Water drafting site survey and approval*- Survey all proposed water drafting locations for sensitive and listed amphibians and receive approval from a biologist prior to use. Use drafting devices with 2 millimeter or less screening, and place hose intake into bucket in the deepest part of the pool. Use a low velocity water pump, do not exceed 50% of the flow, and do not pump ponds to low levels beyond which they cannot recover quickly (approximately 1 hour).

Mitigation Measure BIO-AQUA-5: *Water drafting in fish-bearing streams* - For fish-bearing streams, the water drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 4 cubic feet per second, nor exceed 20 percent of surface flows for streamflow less than 4 cubic feet per second. For non-fish-bearing streams, the drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 2 cubic feet per second, nor exceed 50 percent of surface flows. Water drafting should cease when bypass surface flows drop below 1.5 cubic feet per second on fish-bearing streams and 10 gallons per minute on non-fish-bearing streams.

Mitigation Measure BIO-AQUA-6: *Dust Abatement in Riparian Areas with Sensitive Species* - Only use water as dust abatement in riparian areas known to be occupied with sensitive status species.

Mitigation Measure BIO-AQUA-7: *Hazardous spills* - Any hazardous spills will be immediately cleaned up and reported to the responsible party.

Mitigation Measure BIO-AQUA-8: *Western pond turtle* - Within areas identified as high-quality western pond turtle habitat by the biologist during pre-implementation surveys, avoid placing piles in open, grassy patches. Do not fell trees across these habitats wherever practical.

Mitigation Measure BIO-AQUA-9: *Vernal Pools* - Activities within 250 feet of vernal pools will occur only once the ground surface is completely dry (typically June 1 to October 31 but will vary year to year). No activity will occur within the vernal pool. A biologist will be present for ground- and vegetation-disturbing activities conducted within 250 feet of vernal pool habitat. Personnel will utilize existing roadways within 250 feet of vernal pools whenever possible. If not using an existing roadway, only rubber-tired vehicles will be utilized within vernal pool upland areas. Driving through vernal pools at any time of year will be avoided. Any trees felled within 250 feet of a vernal pool will be directionally felled away from the vernal pool.

Mitigation Measure BIO-AQUA-10: *Fiber netting and Frogs* - Tightly woven fiber netting, synthetic materials, or similar material shall not be used for erosion control or other purposes within suitable habitat to ensure the foothill yellow-legged frog, Sierra Nevada yellow-legged frog, or cascade frog do not get trapped, injured, or killed.

Mitigation Measure BIO-AQUA-11: *Stream Crossings and Water Drafting Sites* - Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water drafting sites to avoid adverse effects to in-stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.

Mitigation Measure BIO-AQUA-12: *Frogs and Rain* - Foothill yellow-legged frog, Sierra Nevada yellow-legged frog, and Cascade Frog: For all activities in occupied or suitable habitat, if there is a 70 percent or greater forecasted rain event of 0.25-inch or greater, work activities will be postponed until site conditions are dry enough to avoid potential impacts.

Mitigation Measure BIO-AQUA-13: *Buffers for Frogs* - Foothill yellow-legged frog, Sierra Nevada yellow-legged frog, and Cascade Frog: Within the riparian areas with known or suspected

occupancy or their designated or proposed critical habitat, use handheld equipment (chainsaws) and walk in and out using the same pathway. Do not create any skid trails or burn piles within these areas. Areas of occurrence for all species include reaches 0.3 miles upstream and downstream plus all associated wet meadows. Areas of occurrence are as follows into the uplands areas: California red-legged frog: 0.3 mile Sierra Nevada yellow-legged frog and Mountain yellow-legged frog: 82 feet Foothill yellow-legged frog: 100 feet (distance may change) Yosemite toad: 0.78 mile

Wildlife:

Mitigation Measure BIO-WILD-1: Large downed woody material - To the greatest extent possible, retain downed woody material with a large end diameter greater than 30 inches, or of the largest size class available, that was present prior to the wildfire. Do not buck up, and avoid moving these large, pre-existing downed logs during treatment wherever practicable.

Mitigation Measure BIO-WILD-2: Pre-Fire Snags and Downed Logs - Unless a hazard to a road, structure, or a threat to human safety, retain all snags and downed logs that were present prior to the recent fires. If large diameter pre-fire, old-growth, legacy trees (old trees that have been spared during harvest or have survived stand replacing natural disturbance), or snags are fallen as hazards, retain them whole as downed logs and do not buck or pile. If the downed log is a safety threat, move it to a safe location as intact as possible. Large-diameter (>30" dbh at stump height) and old-growth conifer snags or legacy trees with deformities such as cat faces, broken tops, hollows, or cavities are prioritized for retention when evaluating fuel levels.

Mitigation Measure BIO-WILD-3: Hardwood snags - Unless a hazard to a road, or human safety retain all hardwood snags (larger than 16 inches diameter at breast height).

Mitigation Measure BIO-WILD-4: Downed Logs - Unless a hazard to a road, structure, or human safety where available retain an average of 5 to 8 downed logs per acre in uplands and 4 to 6 downed logs per acre in riparian areas of the largest size class (larger than 20 inches diameter at breast height, over 10 feet in length). Preference is to retain logs within riparian areas and away from roads. Numbers of downed logs can vary on any particular acre and should be an average for the landscape or treatment area.

Mitigation Measure BIO-WILD-5: Bald Eagle: Dead/dying trees located within 0.25 mile of active bald eagle territory will be evaluated by a biologist prior to felling to establish whether they contain nests or are important pilot or perch trees. If a tree contains a nest, or is an important pilot tree, it will not be felled between January 1 and August 31 unless it is an immediate threat to human safety. No project actions that result in loud or continuous noise above ambient levels within 0.5 mile of an active bald eagle nest will occur from January 1 through August 31 or an occupied bald eagle winter roost from November through March 1.

Mitigation Measure BIO-WILD-6: Sensitive Bats: Where caves or mines are located within 250 feet of the project boundaries, a Registered Professional Forester, in coordination with a biologist, would be consulted and a buffer flagged on the ground identifying an equipment exclusion zone. The following protective measures would apply: No noise generating or habitat modification activities will take place within 250 feet from caves, mines, and mine adits to protect known or potential sensitive bat species (Townsend's big-eared bat, pallid bat, and fringed myotis) roost sites. Options for pile burning and felling around caves or mines include the following: pile burning and felling imminent safety threats only outside the March 1 through August 31 breeding season or pile

burning during the March 1 through August 31 breeding season only under prevailing wind conditions that disperse smoke away from cave and mine entrances.

Mitigation Measure BIO-WILD-7: Limited Operating Periods (LOPs) - Limited operating period is a period of time to protect species from disturbance that could result in loss of fecundity (this year's young would not be conceived or birthed, young or eggs would be kicked out of den or nest, or otherwise be disturbed and not successfully survive to a juvenile or adult state) or a loss of life (migration).

Limited operating period timeframes examples (not all inclusive; others are listed in other mitigation measures):

- Fisher: March 1 to June 30
- Marten: May 1 to July 31
- Sierra Nevada red fox: January 1 to June 30

The limited operating period could be lifted if one of the assumptions is met:

- Species is not within the area as determined by protocol level surveys
- Area no longer has appropriate habitat or habitat components for the species to reproduce in the area (post-fire no longer meets species needs)

Mitigation Measure BIO-WILD-8: Marten and Fisher - Retain some slash piles for marten escape cover and prey habitat, where biologists have determined that cover and/or connectivity could benefit marten or fisher habitat (i.e., along outer edges of canopy openings and riparian buffers). The number and location of slash piles will vary and will be determined by biologists on a site-specific basis. When feasible, piles should contain large and small diameter logs, have enough interstitial space to allow for marten or fisher occupancy, and be at least 6 feet by 8 feet in diameter. Piles would be clearly marked to not be burned. Pile specifications will be adapted to on-the-ground conditions.

Mitigation Measure BIO-WILD-9: Marten Dens - Maintain a 100-acre buffer from May 1 to July 31 for all active marten den sites. Protect marten den site buffers from disturbance from vegetation treatments with a limited operating period from May 1 through July 31 as long as habitat remains suitable or until another regionally approved management strategy is implemented. The limited operating period may be waived for individual projects of limited scope and duration, when a biological evaluation documents that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location.

Mitigation Measure BIO-WILD-10: Fisher: In high quality reproductive and potential fisher denning habitat, implement hazard mitigation options other than complete removal for conifer snags larger than 35 inches diameter at breast height and hardwood snags larger than 27 inches diameter at breast height when it is safe to do so. Such options include cutting the hazard tree as high as possible to leave a portion of the trunk (10 to 20 feet tall) standing to provide potential microsites. Leave 15 to 20 feet of the thickest part of the trunk behind as a large log, particularly if it is decayed. When hazard tree removal creates continuous areas with canopy cover less than 40 percent, leave 1 to 2 large trees (larger than 30 inches diameter at breast height) per acre on the ground as coarse woody debris to enhance habitat quality and connectivity. This will facilitate crossing by fishers and limit the potential for habitat fragmentation.

Mitigation Measure BIO-WILD-11: Fisher Dens - Protect any known fisher den site buffers from vegetation treatments disturbance with a limited operating period from March 1 through June 30, as

long as habitat remains suitable or until another regionally approved management strategy is implemented. The limited operating period may be waived for individual projects of limited scope and duration, when a biological evaluation documents that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location. Avoid fuel treatments within any known fisher den site buffers to the extent possible. If areas within den site buffers must be treated to achieve fuels objectives for the urban wildland intermix zone, limit treatments to hand clearing of fuels. Use piling to treat surface fuels during initial treatment. Burning of piled debris is allowed in fall and winter.

Mitigation Measure BIO-WILD-12: Fisher Habitat - In high and moderate quality reproductive fisher habitat (Thompson et al. 2021; habitat model) in low severity and unburned areas, apply a limited operating period during the denning season (March 1 through June 30). Use the programmatic biological opinion definitions for potential and high-quality denning habitat for areas that the habitat model does not cover. The limited operating period may be waived for individual projects of limited scope and duration if pre-project surveys document absence of denning fisher (Tucker et al. 2020). In areas of moderate burn severity (25 to 75 percent basal area loss), a biologist will assess the area to determine if potential habitat remains and the limited operating period should be applied.

Mitigation Measure BIO-WILD-13: Sierra Nevada red fox: A biologist will validate detection of a Sierra Nevada red fox. When verified sightings occur, conduct an analysis to determine if activities within 5 miles of the detection have a potential to affect the species. If necessary, apply a limited operating period from January 1 to June 30 to avoid adverse impacts to potential breeding. Evaluate activities for a 2-year period for detections not associated with a den site.

Mitigation Measure BIO-WILD-14: Gray wolf: To determine whether gray wolves have been documented in or in the vicinity of a treatment area, Project Proponents will contact CDFW before implementation of project activities to obtain general information about documented gray wolf activity within the vicinity and the need for protection measures.

- A limited operating period (LOP) restricting all noise or smoke generating activities would be instated from April 1 through July 15 within one mile of the den site. Further discussions and coordination with CDFW and the Service may result in a modified distances or more flexible dates for this specific conservation measure. In addition, if the den or rendezvous sites are clearly separated from project-generated disturbances by topographic features or terrain, seasonal restrictions may be adjusted or eliminated, as approved by the Service. These conservation measures would avoid or minimize disturbance at active den or rendezvous sites that could disrupt reproductive success or result in adverse effects. Dens that are known to be used in consecutive years but not used in the current year may require a LOP if CDFW or the Service determines it is necessary.
- Early rendezvous sites are typically close to dens: implementing a LOP within 1 mile of den sites will generally mitigate effects to early rendezvous sites when pups are still vulnerable. Coordination with CDFW and the Service prior to implementation would be done to ensure protection of all known and/or newly discovered den and rendezvous sites.
- If a den is discovered during implementation of the proposed project, the LOP shall be implemented and coordination with CDFW and the Service shall be pursued.

Mitigation Measure BIO-WILD-15: Snags - Retain four of the largest snags per acre larger than 15 inches diameter at breast height following plan direction, and where possible, retain 5 to 10 tons

per acre of the largest downed logs. Preference is to retain the largest downed logs present prior to the fire at least 20 inches in diameter and more than 10 feet in length. If areas are deficient in logs, retain these large, downed logs whole in stands and do not buck or pile. Within perennial stream riparian buffers retain large, downed woody material for wildlife. Follow all relevant plan direction.

Mitigation Measure BIO-WILD-16: *LOPs for Northern Goshawks and CA Spotted Owls* - Maintain a seasonal limited operating period within 0.25-mile of known **California spotted owl and northern goshawk** nests during the breeding season (March 1 to August 15 for spotted owls; February 15 to September 15 for goshawks) unless surveys confirm they are not nesting. The limited operating period would prohibit mechanical activities such as tree felling, machine piling, major road maintenance, or other operations that generate loud or continuous noise within approximately 0.25-mile of the nest site, unless surveys confirm that California spotted owls or northern goshawks are not nesting.

Mitigation Measure BIO-WILD-17: *Great gray owl:* Apply a limited operating period, prohibiting vegetation treatments within 0.5 mile of an active great gray owl nest stand, during the nesting period (typically March 1 to August 15). The limited operating period may be waived for vegetation treatments of limited scope and duration, if a biologist determines that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location. Where a biologist concludes that a nest site would be shielded from planned activities by topographic features that would minimize disturbance, the limited operating period buffer distance may be reduced.

Mitigation Measure BIO-WILD-18: *Sandhill Cranes* - If **sandhill cranes** are observed within the project area during pre-implementation surveys or during project implementation, a limited operating period will be in effect from April 1 through August 1 within one-half mile from occupied areas. If surveys indicate that cranes are not nesting, then the limited operating period for that year would not be required. Surveys of potential meadows are needed each year to establish nesting status.

Mitigation Measure BIO-WILD 19: *Western bumblebee* - Suitable bumblebee habitat within treatment areas, including areas of woodlands, grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows will be surveyed prior to implementation using "June 2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" as a guide. Nest sites or hibernacula discovered during implementation shall be protected with equipment exclusion buffers of 25 feet.

Mitigation Measure BIO-WILD-20: *Herbicides and pollinators* – Herbicide use will be limited to late winter (February – March) prior to the flowering period, and fall (October – November), after the flowering period, in order to protect pollinators. Herbicides with the EPA bee hazard icon, or high residual toxicity to bees, will not be used, and flowering plants will be avoided.

Mitigation Measure BIO-WILD-21: Pre-implementation surveys – Surveys will be conducted for the species identified in the BIO-WILD mitigation measures, and BIO-AQUA #12 and #13 (Frogs) prior to project implementation using California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines. <https://wildlife.ca.gov/Conservation/Survey-Protocols>

Cultural Resources:

Mitigation Measure CUL-1: *Avoidance of Cultural Resources:* Cultural resources present within the project area have not been formally evaluated to determine eligibility for listing on the CRHR. For the purposes of this project these cultural resources will be assumed potentially eligible for state and federal registers and will be avoided. Project proponents will ensure that cultural resources are not adversely affected by ground disturbing activities. If cultural resources cannot be avoided and ground disturbance will occur within the recorded site limits than the site(s) will be formally evaluated to determine if they meet the regulatory criteria for eligibility to the CRHR.

Mitigation Measure CUL-2: *Unanticipated Discovery of Cultural Resources:* If a cultural resource is discovered within a project area after the project has been approved, the following procedures apply:

1. Project activities within 100 feet of the newly discovered cultural resource shall be immediately halted.
2. A qualified professional archaeologist or RPF with CALFIRE Archaeological Training Certification, as well as the Susanville Indian Rancheria (SIR) Tribal Historic Preservation Officer (THPO) shall be immediately notified.
3. The archaeologist shall evaluate the new discovery and develop appropriate protection measures in consultation with the SIR THPO.
4. The archaeologist shall ensure that the newly discovered site is recorded and its discovery and protection measures are documented in the project files.
5. If the newly discovered site is a Native American Archaeological or Cultural Site, the Archaeologist shall notify the appropriate Native American tribal group, the NAHC, and the SIR THPO, if appropriate.

Mitigation Measure CUL-3 *Encountering Native American Remains:* Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner, a qualified archaeologist, and the SIR THPO must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a “Most Likely Descendant” can be designated and further recommendations regarding treatment of the remains is provided.

Geology and Soils:

Mitigation Measure GEO-1: *Detrimental disturbance* – Limit total soil detrimental disturbance (compaction, displacement, and total porosity loss) to less than 15 percent of an activity area.

Mitigation Measure GEO-2: *Slopes* – Limit all mechanical operations to slopes less than 35 percent.

Mitigation Measure GEO-3: *Soil Moisture* - Operate mechanical equipment when soil moisture is less than 20 percent by weight.

Mitigation Measure GEO-4: *Pivoting of Machinery* – Pivoting of machinery should be avoided to prevent soil displacement in high soil burn severity areas.

Mitigation Measure GEO-5: *Slash* – Activity generated slash may be machine or hand piled on slopes less than 35 percent; and hand piled on slopes greater than 35 percent.

Mitigation Measure GEO-6: *Soil Cover* - During management activities, maintain (or add to the extent feasible in deficient areas) an average of 50 percent effective soil cover in treatment areas that is well-distributed and generally in the form of fine organic matter. Where feasible, maintain 85 percent or more effective soil cover in riparian areas and on slopes greater than 25 percent, and 70 percent effective soil cover on areas with high soil burn severity. Management activities in areas with ecological types that cannot normally support 50 percent soil cover shall be considered individually for soil cover needs.

Mitigation Measure GEO-7: *Woody debris* – Maintain coarse woody debris for soil organisms based on ecological type and in consultation with wildlife and fuels specialists.

Hydrology:

Mitigation Measure HYD-1: *Project Best Management Practices (BMPs)*: Protect water quality through the use of best management practices (BMPs) to prevent water quality degradation and to meet state water quality objectives relating to non-point sources of pollution. Best management practices utilized for this project are procedures and techniques that are incorporated in project actions and have been determined by the State of California to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

Watercourse and Lake Protection Zones (WLPZ) will be classified based on the California Forest Practice Rules §936.5 – Procedures for Determining Watercourse and Lake Protection Zones Widths and Protective Measures. WLPZs shall be identified on the ground with flagging prior to implementation of treatments. These zones will be:

Table 1: Watercourse classifications and Watercourse Lake Protection Zones (WLPZs)

Watercourse Classification	Slope 0-30%	Slope 30-50%	Slope >50%
Class I	75'	100'	150'
Class II (including all springs with surface water)	50'	75'	100'
Class III	25'	50'	50'

The standard best management practices for protecting water quality include:

- Within the WLPZ, at least 50% of the total canopy covering the ground shall be left in a well-distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers.
- No heavy equipment shall operate within the WLPZ except on existing roads and crossings. Light weight equipment, including a mini-excavator, mini-chipper, and/or skid steer, may operate within the WLPZ when conditions are dry within the WLPZ. Equipment within the WLPZ will not turn around within the WLPZ, but will make minimal tracks perpendicular to the watercourse. Any other types of light equipment that are used will not exceed the weights of those listed above. Exposed soils within WLPZ shall be 90% covered with operational slash or hay/straw to a minimum 2” depth prior to the winter period (Nov. 15 – April 1). This will occur after the conclusion of each individual operation and prior to each

winter period for the life of the Project.

- No equipment shall refuel, be cleaned, or lubricated within the WLPZ.
- Road based equipment being used for project implementation shall not be used during any time of the year when soils are saturated and excessive damage can occur as well as the potential discharge of sediment to watercourses.
- There will be no mechanical fireline construction within the WLPZ.
- No ignitions of broadcast (prescribed) burns would occur within the WLPZ. Broadcast burning would be allowed to back burn into the WLPZ, but in order to maintain stream temperatures and avoid sediment discharge to Class I and II streams piles and broadcast prescribed burns are restricted within the WLPZ to the following distances from the stream.

Mitigation Measure HYD-2: *Tree Cutting* –Trees providing bank stability on fish-bearing streams should not be cut where possible (where they don't pose an imminent threat to life and safety). Trees will be directionally felled away from streambank where possible and as safety allows or unless otherwise approved by an aquatics specialist or designee.

Mitigation Measure HYD-3: *Streambed Alteration Permit* – Before any riparian vegetation removal or work within the bed bank or channel of a stream, creek, or river, including temporary watercourse crossings, project proponents will coordinate with the California Department of Fish and Wildlife to ensure compliance with Section 1602 of the Fish and Game Code.

Mitigation Measure HYD-4 *Timber waiver*, Proposed activities will abide by the Lahontan Regional Water Quality Control Board (LRWQCB) Timber Waiver program, and project proponents will consult with the LRWQCB if there are proposed activities that could potentially impact water quality.

Mitigation Measure HYD-5 *Protection of Caltrans and County Assets*, The project proponent and project contractors shall protect Caltrans and Lassen County assets, including but not limited to, road culverts and drainage inlets and water channels within road easements and right of way on roads down-slope of the project site or roads used to access the project site. This may include, but is not limited to, adding temporary debris control features to keep drainage assets from clogging.

Wildfire:

Mitigation Measure FIRE-1: *Prescribed (Rx) burn plan*: Mitigation measures will include and be dependent upon:

- Rx burns and pile burns can be scheduled for fall months into spring. Burn days will be dependent upon California Air Resources Board (CARB) forecasts, Cal Fire approval and will comply with all local and state regulations.
- Rx broadcast burns will coincide with ecological emergence to promote a heterogeneous forest structure, reduce the abundance of invasive and limit impact to desired native species.
- To reduce impacts to surrounding community's Rx burn timing, planning and implementation will all be dictated by smoke management mitigations through CARB.
- Prescribed burns will be coordinated with other planned burns in the area to avoid cumulative impacts to air quality and wildfire safety.

SUMMARY OF FINDINGS

This IS-MND 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-MND, it has been determined that the proposed project will not have any significant effects on the environment after implementation of mitigation measures. This conclusion is supported by the following findings:

1. The proposed project will have no effect related to Agriculture Resources, Energy, Land Use Planning, Mineral Resources, Population and Housing, Public Facilities, Recreation, and Utilities.
2. The proposed project will have a less than significant impact on Aesthetics, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Noise, Transportation, and Wildfire.
3. Mitigation is required to reduce potentially significant impacts related to Biological Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, and Tribal Cultural Resources.

The Initial Study-Environmental Checklist included in this document discusses the results of resource-specific environmental impact analyses that were conducted by the District. This initial study revealed that potentially significant environmental effects could result from the proposed project. However, project proponents have revised project plans and have developed mitigation measures that will eliminate impact or reduce environmental impacts to a less than significant level. Honey Lake Valley RCD has found, in consideration of the entire record, that there is no substantial evidence that the proposed project as currently revised and mitigated would result in a significant effect upon the environment. The IS-MND is therefore the appropriate document for CEQA compliance.

INITIAL STUDY-ENVIRONMENTAL CHECKLIST

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a potentially significant impact as indicated by the checklist on the following pages.

Environmental Factors Potentially Affected

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

Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.
- I find that although the proposed project COULD have a significant effect on the environment, there WOULD 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 would be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- 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.
- 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Name: Jesse Claypool
Title: HLVRCD Chairman

Date 1/30/2025

Environmental Checklist and Discussion

AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Except as provided in Public Resources Code § 21099, would the project have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Scenic vistas were already impacted by the Dixie Fire (2021). Portions of the project area have high densities of drought- and fire-killed standing trees in forest stands that generally were denser than the natural range of variation. A mosaic burn pattern resulted from the fires and included areas of unburned, very low, low, moderate, and high fire severity. As a result, in some areas, tree mortality is 100 percent, while other areas still support a green forest. In moderate- and high-severity burn areas, the landscape has been dramatically altered. Treatments will result in better scenic vistas in the long-term as burned stands are restored to productive forest.

Direct and Indirect Effects: In moderate- and high-severity burn areas, the landscape has been dramatically altered. By treating dead and dying trees, slash and activity fuels, vegetation would regrow that provides visually pleasing contrast to surrounding features and landforms. The overall result of the proposed treatments would be an improved visual quality. The majority of what can be perceived as negative effects to the visual resource (flush cut stumps, hand or machine piles, treatment edges, ground disturbance, and untreated slash) occurs during implementation. This initial phase is short term in duration and does not represent the completed treatment. At the conclusion of treatment, visual signs of activity (such as cut stumps or track and tire marks) may still be evident in the short term but would be anticipated to dissipate over time. Evidence of burning on trees and ground would be naturally occurring in forests where wildfire regimes are common. When growth of shrubs, grasses, and forbs is underway, most of the evidence left behind by management activities would not be anticipated to be evident to the casual forest visitor.

Cumulative Effect: Cumulative scenic quality effects were evaluated from multiple viewpoints. It is anticipated that proposed management activities would appear visually subordinate to the characteristic landscape. All viewsheds would be natural or near natural-appearing. It is unlikely that the incremental effects from this project and any additional future foreseeable project would have a significant impact on the scenery of the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Except as provided in Public Resources Code § 21099, would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway were previously impacted by the Dixie Fire. Treatments will remove dead/dying trees, and restore areas to more aesthetically pleasing conditions.

<p>c) Except as provided in Public Resources Code § 21099, <u>in non-urbanized areas</u>, would the project 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 publicly accessible vantage point.) If the project is <u>in an urbanized area</u>, would the project conflict with applicable zoning and other regulations governing scenic quality?</p>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Existing visual character or quality of public views of the site and its surroundings will be improved by proposed treatments as dead/dying trees are removed, and natural vegetation is restored.

<p>d) Except as provided in Public Resources Code § 21099, would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</p>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Prescribed fire activities associated with the project could create a faint temporary glow on some nights, but the glow will not be substantial and affect day or nighttime views of the area.

AGRICULTURAL RESOURCES

<p>a) Would the project 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?</p>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is not located on land identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland).

<p>b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?</p>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is consistent with the existing zoning and Williamson Act contracts.

<p>c) Would the project conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?</p>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Much of the project area is zoned for timberland production. The project is consistent with existing zoning.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Dead and dying trees will be removed from forests substantially impacted by the Dixie Fire (2021), and will continue to be managed as forest land.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project takes place entirely onsite and requires no improvement or expansion of auxiliary facilities; therefore, the project has no foreseeable indirect, offsite, or cumulative impacts that could degrade or convert forestlands or agricultural lands.

AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project prescribed burning would produce PM10. Prescribed burning is regulated by the Lassen County Air Pollution Control District (LCAPCD 2023) in compliance with federal and State Clean Air Acts. Prescribed burn projects must submit a Smoke Management Plan to LCAPCD for review and approval. The plan is developed to minimize air quality impacts of the project. Burning is done on approved burn days as determined by LCAPCD. This process ensures that there are not any significant smoke impacts to public health from the project. The primary effect to air quality in the region is from smoke produced by wildland fires. Prescribed burning is regulated by the air districts, whereas uncontrolled wildfires are not regulated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lassen County is currently in attainment for all federal and state ambient air quality standards.

There are no class I airsheds within the project area.

Effects to air quality and visibility could result from prescribed burning; and a very small increase in air pollutants could result from equipment use under the proposed action.

Effects to air quality could result from fugitive dust caused by project implementation. Best management practices (BMPs) will be implemented in order to minimize impacts. Fugitive dust generally quickly settles back down to the ground and typically does not spread far downwind.

Potential adverse effects from equipment used in project implementation would be very small as the equipment would mostly operate in remote areas that are not occupied. Limited amounts of equipment would be used over a broad area and equipment emissions would disperse quickly.

Effects to visibility from project prescribed burning would be temporary and minimized by burning only during designated burn days when adequate weather conditions would disperse smoke quickly. Most prescribed burning would occur on a single day or over several days. Fire managers are required by the air district to plan for controlling smoke emissions through contingency planning as part of the smoke management plans.

Project emissions would temporarily increase air pollutants in the airshed and Lassen County. However, their direct, indirect and cumulative effects would be regulated by the LCAPCD in order to prevent adverse impacts and exceedances of health standards. The proposed prescribed fire treatments would reduce future potential wildfire smoke.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Due to the above factors and the remoteness of the location, the project will not expose sensitive receptors to substantial pollutant concentrations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not result in emissions other than those mentioned above.

BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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 the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A biological assessment was conducted to analyze the effects of the project on several categories of sensitive species. This includes federally threatened, endangered, proposed, and candidate species, as well as California threatened, endangered, species of special concern, and rare plant species. Species listed as endangered by the U.S. Fish and Wildlife Service (Federal) and California

Department of Fish and Wildlife (State) are species currently in danger of extinction throughout all or a significant portion of their range. Species listed as threatened are likely to become endangered within the foreseeable future throughout all or a significant portion of their range. A proposed species is any species that is proposed in the Federal Register to be listed as a threatened or endangered species under the Endangered Species Act (50 CFR 402.03). A candidate species is a species for which the U.S. Fish and Wildlife Service has on file enough information to warrant or propose listing as endangered or threatened. California species of special concern are wildlife species at risk of becoming threatened or endangered. The California Native Plant Society (CNPS) has developed an inventory of rare plants that is widely accepted as the standard for information on the rarity and endangerment status of California flora.

An assessment of potential threatened, endangered, and rare (California Native Plant Society Rank 1 and 2) vascular plants, bryophytes, lichens, and fungi was conducted including a CNDDDB 2-mile search around the project area and a nine-quad search for rare plants using the California Department of Fish and Wildlife (CDFW) BIOS system (<https://wildlife.ca.gov/Data/BIOS>) (i.e. the 7.5' quadrangles where the project is primarily located along with the eight surrounding quads). The Calflora (<https://www.calflora.org/>), and California Native Plant Society inventory of rare plants (<http://www.rareplants.cnps.org/>) were also used, as well as consideration to past experience in the area.

All federal and state threatened endangered, proposed, candidate or sensitive wildlife, aquatic, and fisheries species that could potentially occur within the project area were considered by reviewing the CNDDDB 2-mile search and search of the BIOS system, to ensure threatened and endangered and sensitive species or their designated critical habitat that might be affected by the proposed action were adequately considered. A 2-mile buffer was used as the analysis area for wide ranging species as a known observation may not be within the project area but still may be utilizing the project area. For fish species, the subwatershed was used for analysis.

See Tables 2 and 3 for a complete list of species considered in this analysis.

Botanical Resources – Threatened, Endangered, Rare, and Sensitive:

Recent wildfires greatly altered the forested landscape in and around the project area. Impacted areas are in a state of change in terms of soil nutrients, watershed function, understory vegetation, canopy cover, and tree survival. The fires killed many trees outright, resulting in a reduced forest canopy cover compared to pre-fire conditions. This change decreased shading, changed growing conditions for many sensitive plants, increased solar penetration to the forest floor, and created suitable habitat for invasive plants to establish and spread.

Currently, the nature or extent of effects to sensitive plant populations from the fires and fire suppression activities is not known, but it is likely some plants were killed. It is also likely that sensitive plant habitat was degraded or lost in some areas. Invasive plants often establish or spread on disturbed ground after wildfire events, depending on the species involved and fire severity. An increase in invasive plants would indirectly adversely affect sensitive plants by increasing competition between different species and habitat loss through displacement.

Activities that have affected baseline conditions for sensitive and invasive plants and their habitat within the project area include wildfires, fire suppression, fuels management, livestock grazing,

mining, timber harvest, road construction and maintenance, off-highway vehicle use, utility line installation, recreation, and nonnative plant introductions. These activities have altered the present landscape to various degrees, with varying effects to species.

Climate change may be shifting species to higher elevations and cooler aspects (Chen et al. 2011, Dukes and Mooney 1999). Although the effects of climate change on sensitive plants and nonnative invasive plants are uncertain at this time, some researchers predict that the increase in temperature and moisture may cause a shift in suitable habitat for some species. Nonnative invasive plants such as cheatgrass and spotted knapweed may experience a shift in range that leads to both an expansion and a contraction depending on moisture and temperature (Bradley 2009). It has also been shown that some species may move downhill due to increases in water availability (Crimmins et al. 2011). There is evidence indicating a potentially longer growing season, with increases in summer photosynthetic capacity. Kelly and Goulden (2008) found that rapid shifts in the distribution of plants can be expected with climate change and that global climate change may already be impacting vegetation distribution.

If climate change is severe enough to turn the moister areas into hot dry sites, nonnative invasive plants would likely thrive because many thrive in hot dry conditions. Models for climate change predict that habitat is vulnerable to nonnative invasive plant establishment and spread (Julius et al. 2013). Literature suggests that climate change is likely to increase the range and abundance of nonnative invasive species, as these species are not as limited by dispersal and pollination as are native plants (Dukes and Mooney 1999). However, the issue is complex and there is uncertainty about future invasion risk at the local level. Such changes would be incremental and may only be obvious over several years (Bradley et al. 2010).

Approximately 59 percent of the project area burned at moderate to high severity in these large wildfires. Prior to the fires, the dominant forest types were Sierra Mixed Conifer (SMC), white fir (WTF) and Eastside pine (EPN). Based on known and potential occurrence in the project area, 83 sensitive plant species were evaluated. Table 2 lists sensitive plant species, effects determinations, and rationale for the project area.

Approximately 6 invasive plant species have been documented in the project area. Species with the largest infestations mapped include: *Centaurea solstitialis* (Yellow star-thistle), *Centaurea stoebe ssp. micranthos* (Spotted knapweed), *Cirsium arvense* (Canada thistle), *Lepidium latifolium* (Broadleaved pepperweed), *Rubus armeniacus* (Himalayan blackberry) and *Taeniatherum caput-medusae* (Medusahead). The full effects of the Dixie Fire (2021) on populations of sensitive plant species in the proposed action area will not be known for several years, as response to fire is highly variable and dependent on a species' life history, the severity and intensity of the burn, time since last fire, pre-fire vegetation assemblages, colonization by nonnative invasive species, and a multitude of other factors.

Mitigation measures **BIO-BOT #1-5** and **BIO-INV #1-5** have been proposed to reduce the impact to sensitive plant species to less than significant.

Aquatics and Fisheries Resources:

Portions of the project area were riparian habitat prior to the fires, and large portions of these burned at high severity and no longer constitutes riparian habitat. In addition to removal of riparian habitat, these fires likely decreased riparian canopy cover, altered current large woody debris

(variation is expected depending on burn severity, but likely generally increased), reduced future woody debris supply, and increased sediment delivery. Aquatic species in the zone therefore have experienced habitat loss as well as a likely reduction in remaining habitat quality. The zone contains 6 endangered, threatened, and sensitive species including one fish, four amphibians, and the western pond turtle (*See Table 3*).

Mitigation Measures **BIO-AQUA #1-13** and **HYD-#1-5** have been proposed to reduce impacts to aquatic and fisheries sensitive species to less than significant.

Wildlife Resources:

Fire is a natural process that can be beneficial for a diverse ecosystem and for species associated with post-fire habitats such as primary cavity excavators (such as woodpeckers) or species associated with early seral shrub and herbaceous vegetation. But, very large fire events, also known as mega-fires, with large extents and proportions of high severity fire can be devastating for wildlife species associated with closed canopy, mixed conifer, late-successional habitat such as California spotted owl, northern goshawk, fisher, and marten, which can be greatly affected by the loss and fragmentation of habitat.

The recent wildfires impacted a variety of habitat types, including a large proportion of mature and late successional mixed conifer habitat, and resulted in very large, homogeneous blocks of high severity fire. Because of the enormous amount of change in the quantity, quality, and distribution of habitat across the recent fire areas, behavior patterns of many of the species in these areas have been substantially disrupted. For many of the species that historically occupied the project areas, their habitat use patterns have been disrupted and they have been displaced, so these species are dispersing to new areas and may be using marginal, lower quality habitat, at least in the short term if that is the only available option. This may include foraging in areas of fire-affected edge habitat. For these species, habitat that provides enough cover from predators and a sufficient microclimate, as well as foraging opportunities, is likely to be used until such time as new territories are established in presumably higher quality habitat; a process that may take multiple years, during which time their reproductive efforts may be lost.

Habitat for California spotted owls, American goshawk, Sierra marten, Pacific fisher, sensitive bat species, riparian obligate birds, amphibians, reptiles, and invertebrates was heavily impacted by the recent wildfires. Where the fires burned at a high and moderate intensity, many, if not all, of the important habitat features were consumed, such as herbaceous vegetation, shrub cover, downed logs and woody debris, stumps, leaf litter and other ground cover, in addition to the overstory canopy needed for shade and moisture retention.

Thirty-six (36) terrestrial endangered, threatened, candidate, or sensitive wildlife species (CA Species of Special Concern and Region 5 Forest Sensitive Species) have potential to occur in the proposed action area. These species have been analyzed in detail in the project Wildlife Biological Assessment to establish whether the proposed action is likely to result in a loss of species viability or create significant trends toward federal listing under the Endangered Species Act.

When considering effects to endangered, threatened, candidate, and sensitive species, the primary factors of change and impact include those factors that influence habitat suitability, habitat use, or species behavior. Effects from the proposed action were evaluated using a combination of qualitative and quantitative indicators. These indicators help determine the degree (magnitude,

duration, and intensity) to which the proposed action may affect individuals or their habitat components, including predicted changes in an individual species' response to a disturbance or habitat manipulation, or changes in habitat function at relevant spatial scales.

Areas that have burned at high intensity do not contain enough cover or structure to be suitable habitat for the endangered, threatened, candidate, and sensitive species that may have been present in the analysis area prior to the fires. In the many areas of very large, homogeneous blocks of high severity fire, any species that requires moderate or high canopy cover and structural diversity for protection from predators and temperature regulation, and whose prey requires ground vegetation and woody debris, would not persist in these areas in the first several years following the fire. Species such as spotted owls, goshawks, great gray owls, and Sierra marten, are highly unlikely to venture into these very large, open, homogeneous, severely burned areas, which make up the majority of the treatment areas. Species that require ground cover and structure in order to regulate temperature and moisture levels, such as terrestrial salamanders, are also intolerant of these very open and dry sites.

In addition, fire-killed trees are unlikely to be used by these endangered, threatened, candidate, and sensitive species in the time period immediately following the fire because these trees tend to be "case hardened" whereby the outer bark is charred and the tree has been killed by the intense heat of the fire, but the internal wood is still sound. These trees do not yet contain the defect, decay, or enough internal rot to be easily excavated by primary cavity excavators (such as woodpeckers) (Hutto 1995) and so do not contain cavities or other features that would be used for denning, nesting, or roosting, as would be present in older, pre-fire snags. So, while there is an abundance of fire-killed trees currently on the landscape following these widespread fires, their relative value to the endangered, threatened, candidate, and sensitive species that may have occurred in the fire areas is very limited until the overstory canopy recovers and natural processes occur that break down the fire-killed trees, which can take many years (Hutto 1995; Peterson et al. 2009). As these processes occur across the burned areas, there will be no shortage of fire-killed snags across the landscape due to the extremely large areas of forest that burned at high severity. Although where large snags occur close to high-use roads, they can be of a lower value to wildlife due to fragmentation and increased disturbance generally associated with roads, particularly for more heavily used roads. Therefore, the removal of fire-killed trees in the first few years following these fires, particularly from within very large blocks of high severity burn areas, is not expected to have meaningful or measurable impacts to listed or sensitive species, because these species do not require or utilize these wide expanses of high burn severity in a meaningful way.

Where currently suitable unburned, or low burn severity habitat occurs within treatment areas, it may be somewhat degraded with the removal of dead/dying trees, by removing important elements of the habitat (snags). Dead/dying trees in these areas are assumed to exist as the occasional single tree, or in scattered small pockets of trees. Felling these trees may reduce potential nesting, roosting, and denning sites from within suitable habitat. But mitigation measures specifying more conservative marking guidelines when within riparian areas as well as for retaining extra-large, old-growth and legacy trees and snags would reduce impacts to these habitats, as well as benefit the current and future habitat in the analysis areas. Because, if these trees and snags pose a hazard and need to be felled, these important habitat elements will be kept on the landscape as downed logs and much of their value for the development of future stand is retained. So, felling of these scattered trees and dispersed small groups of hazard trees surrounded by suitable habitat would leave the remaining stand intact and would not change the function of the habitat. Therefore, because only a

minimal number of scattered individual or small pockets of dead/dying trees within unburned or low burn severity areas would be felled, this action is unlikely to cause adverse, population-level impacts to the endangered, threatened, candidate, and sensitive species, or their habitats that may occur in the analysis areas.

Several mitigation measures were also created to benefit endangered, threatened, candidate, and sensitive species and help to reduce fragmentation and provide ground-level structure within severely burned areas. For example, certain slash piles will be retained and left unburned specifically for marten or fisher escape cover and prey habitat, which would improve connectivity between habitat patches, particularly along outer edges of canopy openings and riparian corridors. These mitigation measures in combination with the retention of old-growth, legacy, and extra-large trees and snags as down logs would benefit species such as marten and fisher, or prey species that could use the subnivean spaces created by retained logs and piles in these areas in winter. Also, in order to avoid removing high value habitat elements where possible, for treatments located in high quality fisher habitat, options other than complete tree removal for trees or snags greater than 35 inches diameter at breast height and hardwood snags larger than 27 inches diameter at breast height would be considered. Such options may include cutting the dead/dying tree as high as possible to leave a portion of the trunk (10 to 20 feet tall) standing and leaving 15 to 20 feet of the thickest part of the trunk behind, particularly if it is decayed, to provide potential microsites for denning or resting.

There is potential for the proposed actions to disturb or disrupt reproductive behaviors and normal activity patterns of the wildlife species that may occur adjacent to, or near, treatment areas. Increased noise, ground disturbance, human activity, and smoke are all associated with project activities, and can result in negative impacts to any wildlife species in the area. To reduce the potential for negative impacts, mitigation measures would be implemented to protect these species during their reproductive time periods, as this is when species are most vulnerable and disturbances can cause the loss of the year's reproductive effort. Mitigation measures with protective measures such as limited operating periods, equipment exclusion zones, no-treatment buffers, smoke mitigations, and pre-implementation surveys are designed to minimize or avoid detrimental impacts to wildlife species.

So, while habitat for endangered, threatened, candidate, and sensitive species has been greatly impacted by the recent wildfires, in areas burned at high severity, which have a limited value to these species in the years directly following the fires, as well as the numerous mitigation measures for the protection of endangered, threatened, candidate, and sensitive species and their habitats, no population-level impacts or impacts to the viability of the species are expected beyond what the fires have already done.

The proposed action including mitigation measures **BIO-WILD #1-18** would avoid or minimize impacts to threatened, endangered, and sensitive terrestrial wildlife species to less than significant.

Cumulative effects to Biological Resources:

The existing condition reflects the changes of all activities that have occurred in the past. The analysis of cumulative effects evaluates the impact on sensitive species from the existing condition within the analysis area. To understand the contribution of past actions to the cumulative effects of the proposed action, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior

human actions and natural events that have affected the environment and might contribute to cumulative effects to threatened, endangered, and sensitive wildlife, plants, and their habitats.

The spatial bounding for the cumulative effects analysis for most of the species analyzed the area within 0.25 mile of the treatment units. This spatial bounding would capture the physical change to the habitat within the approximate area where noise or smoke from implementation may impact threatened, endangered, and sensitive species outside or within the treatment unit itself. Where relevant, the discussion of effects may consider past, current, ongoing, and reasonably foreseeable actions outside of this bounding.

Actions within this spatial and temporal bounding that may occur in the foreseeable future that overlap both in space and time with the proposed actions were analyzed for their potential to result in additive impacts to threatened, endangered, and sensitive species or their habitats within the project Biological Assessment.

On federal land, ongoing actions with the potential to affect terrestrial wildlife species and their habitats include timber harvest and fuels reduction, fire management (suppression, post-fire repair and prescribed fire), watershed restoration, road and facility maintenance, nonnative invasive plant management, special use permit implementation (such as utility corridors, rights-of-ways), recreation, water diversions, livestock grazing, and ongoing minerals exploration and mining activities. Additional ongoing and planned federal actions within the analysis area include Federal Energy Regulatory Commission relicensing and Federal Highway Administration projects. Ongoing or future actions initiated by federal agencies would be designed or mitigated to minimize effects to threatened, endangered, and sensitive wildlife species and their habitats, and would therefore, avoid cumulative impacts where that potential may exist, as required under various laws such as the National Forest Management Act and the Endangered Species Act.

On lands of other ownership, planned and ongoing actions include vegetation management (for example, timber projects and fire suppression), State highway projects and maintenance, agriculture, livestock grazing, private and county road maintenance, and building and development. State and local regulations will provide some protections for threatened, endangered, and sensitive wildlife species and their habitats including stream and riparian habitats. Ground-disturbing and noise-generating activities may worsen human disturbance within the project area in the short term where the activities overlap in space and time with the proposed federal activities.

Overall, given the broad geographical scope of the project, but relatively small, spatially intermittent treatments, paired with applied mitigation measures **BIO-BOT #1-5, BIO-INV #1-5, BIO-AQUA #1-13, and BIO-WILD #1-18** and best management practices, cumulative impacts to threatened, endangered, and sensitive species and their habitats from the proposed action, in combination with planned and ongoing activities and climate change are expected to be minor or negligible.

Table 2: Biological Assessment – Botany

Federal and CA Endangered, Threatened, and/or Candidate Species, and CA Rare Plants (CNPS Rank 1 and 2)

Scientific Name	Common Name	Federal Status	State Status	Flowering Period	Elevation (m)	Habitat/Ecology	Impact	Rationale
<i>Alisma gramineum</i>	Grass alisma	None	2B.2	June-Aug	1200-1800	Occurs in wetlands; wetland-riparian; Ponds	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Allium atrorubens</i> var. <i>atrorubens</i>	Great Basin onion	None	2B.3	May-June	1200-1400	Rocky or sandy soil in Great Basin scrub and pinyon/juniper woodland	No	Found in Great Basin scrub north and east of Honey Lake
<i>Arnica fulgens</i>	Hillside arnica	None	2B.2	Apr-May	1495-2700	Open, damp depressions in sagebrush or grassland	No	Treatments not likely to occur in preferred habitat; Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Artemisia tripartita</i> ssp. <i>tripartita</i>	Threetip sagebrush	None	2B.3	Aug	2200-2600	Rocky, volcanic; Upper montane coniferous forest (openings)	No	Open areas at higher elevations not affected by proposed project.
<i>Astragalus pulsiferae</i> var. <i>pulsiferae</i>	Pulsifer's milk-vetch	FS Sensitive	1B.2	May-June	1300-1900	Sandy or rocky soil, often with pines, sagebrush	No	Mitigation Measures BIO-BOT #1-5 should minimize and avoid impacts to habitat. Found east of the project area in Great Basin scrub.
<i>Astragalus pulsiferae</i> var. <i>suksdorfii</i>	Suksdorf's milk-vetch	FS Sensitive	1B.2	May-Aug	1300-2000	Loose, often rocky soil, often with pines, sagebrush	No	Mitigation Measures BIO-BOT #1-5 should minimize and avoid impacts to habitat.
<i>Astragalus geyeri</i> var. <i>geyeri</i>	Geyer's milk-vetch	None	2B.2	May-Aug	1200	Sandy areas; Great Basin scrub; Shadescap scrub	No	No habitat within treatment areas. Found east of Honey Lake.
<i>Astragalus lemmonii</i>	Lemmon's milk-vetch	FS Sensitive	1B.2	May-Aug	1007-2200	Moist alkaline meadows, lake shores	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

<i>Astragalus lentiformis</i>	Lens-pod milk-vetch	FS Sensitive	1B.2	May-July	1460-1910	Volcanic, sandy soils; Great Basin scrub; Lower montane coniferous forest	No	Nearest occurrence 5 miles west of project area.
<i>Atriplex gardneri</i> var. <i>falcate</i>	Falcate saltbush	None	2B.2	May-Aug	1200-1700	Open, generally alkaline soils, sagebrush scrub, chenopod scrub	No	Found east and north of Honey Lake; No habitat within project area
<i>Betula glandulosa</i>	Dwarf resin birch	None	2B.2	May-June	1300-2300	Streams, bogs and fens, meadows and seeps, marshes and swamps, meadow edges in Lower montane coniferous forest up to sub-alpine coniferous forest.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Boechea constancei</i>	Constance's rock cress	None	1B.1	May-July	975-2025	Rocky, serpentine slopes, ridges in chaparral, lower and upper montane coniferous forest	No	No habitat within the project area.
<i>Botrychium ascendens</i>	Upswept moonwort	FS Sensitive	2B.3	July-Aug	1500-3200	Moist meadows, open woodlands near streams and seeps	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Botrychium crenulatum</i>	Scalloped moonwort	FS Sensitive	2B.2	June-Sept	1500-3600	Saturated hard water seeps and stream margins, moist meadow, seeps, bogs, fens	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Botrychium montanum</i>	Western goblin	FS Sensitive	2B.1	July-Sept	1500-2100	Shady conifer woodland, especially under <i>Calocedrus</i> along streams	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Botrychium pinnatum</i>	Northwestern moonwort	FS Sensitive	2B.3	July-Oct	1770-2040	Moist fields, shrubby slopes	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat Nearest occurrence 15 miles southwest of project area.
<i>Brasenia schreberi</i>	Watershield	None	2B.3	June-Sept	<2200	Wetlands; Wetland-riparian; Ponds; slow streams; marshes; swamps	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

								habitat
<i>Carex davyi</i>	Davy's sedge	None	1B.3	May-Aug	1400-3300	Usually in wetlands; sub-alpine and red fir forests	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat; usually found higher than project area.
<i>Carex lasiocarpa</i>	Woolly-fruited sedge	None	2B.3	June-July	1700-2100	Lake, pond shores, generally standing water	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Carex limosa</i>	Mud sedge	None	2B.2	June-Aug	1200-1700	Spaghnum bogs	No	No habitat within the project area.
<i>Carex petasata</i>	Liddons sedge	None	2B.3	May-July	600-3320	Dry to wet meadows, open forest	No	Known occurrences north of project area. Treatments will not occur in preferred habitat
<i>Carex sheldonii</i>	Sheldon's sedge	None	2B.2	May-Aug	1200-2000	Wetlands; riparian; Lower montane coniferous forest (mesic); marshes and swamps	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Castilleja lasseensis</i>	Lassen paintbrush	None	1B.3	July-Sept	955-3120	Volcanic soils in meadows and seeps and subalpine coniferous forest	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Chylismia claviformis ssp. cruciformis</i>	Cruciform evening-primrose	None	2B.3	March-May	600-1400	Clay soils in chenopod and Great Basin scrub	No	Nearest occurrences east and north of Honey Lake
<i>Claytonia umbellate</i>	Great Basin claytonia	None	2B.3	May-Aug	1900-3500	Talus slopes, stony flats, rock crevices	No	Treatments unlikely to occur with preferred habitat.
<i>Dalea ornate</i>	Ornate dalea	None	2B.1	June	1365-1700	Open, rocky hillsides in juniper woodland	No	Nearest occurrence near Shaffer Mtn. 15 miles northeast of project area.
<i>Downingia laeta</i>	Great Basin downingia	None	2B.2	May-July	1200-2200	Mesic soils in ditches, ponds, streams, and vernal pools in Great Basin scrub and pinyon/juniper woodlands	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

								habitat
<i>Drosera anglica</i>	English sundew	None	2B.3	June-Sept	1300-2255	Mesic soils in bogs, fens, swamps, peatlands, meadows and seeps often with Sphagnum	No	No habitat within project area; Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Eremothera minor</i>	Nelson's evening-primrose	None	2B.3	Apr-July	1200-1380	Sandy slopes, flats, and sagebrush scrub and chenopod scrub	No	Nearest occurrence 14 miles east of project area.
<i>Erigeron eatonii</i> var. <i>nevadincola</i>	Nevada daisy	None	2B.3	May-July	1400-2900	Open grassland, rocky flats, generally in sagebrush or pinyon/juniper scrub	No	Habitat not likely to occur within treatment areas.
<i>Erigeron lassenianus</i> var. <i>deficiens</i>	Plumas rayless daisy	None	1B.3	June-Sept	1360-1750	Serpentine, disturbed soils; gravelly disturbed sites, lower montane forests	No	Habitat not likely to occur within treatment areas.
<i>Erigeron nivalis</i>	Snow fleabane daisy	None	2B.3	July-Aug	1735-2900	Volcanic rocks, meadows, and seeps in sub-alpine coniferous forests , alpine boulder, and rock fields	No	Found at higher elevations than project area.
<i>Eriogonum microthecum</i> var. <i>schoolcraftii</i>	Schoolcraft's buckwheat	FS Sensitive	1B.2	July-Sept	1300-1750	Sandy to rocky soils; Great Basin scrub and pinyon/juniper woodlands	No	Treatments not likely to occur in preferred habitat.
<i>Eriogonum nutans</i> var. <i>nutans</i>	Dugway wild buckwheat	None	2B.3	May-Sept	1200-3000	Sand in chenopod and Great Basin scrub	No	No habitat within treatment areas; nearest occurrence 15 miles to the east of project area
<i>Eriogonum ochrocephalum</i> var. <i>ochrocephalum</i>	Ochre-flowered buckwheat	None	2B.2	May – June	1300-1700	Volcanic or clay; Great Basin scrub, pinyon and juniper woodland	No	No observations within the project area. Nearest occurrence in Herlong 30 miles east of the project area.
<i>Eriogonum ovalifolium</i> var. <i>depressum</i>	Depressed buckwheat	None	2B.1	June-Aug	1725-1740	Dry playas	No	No habitat within treatment areas.
<i>Eriogonum spectabile</i>	Barron's buckwheat	FS Sensitive	1B.2	July-Sept	2010-2050	Rocky, gravelly, sandy glaciated andesite soils in upper coniferous forests	No	Found at higher elevations; not likely to occur within treatment areas.
<i>Geum aleppicum</i>	Aleppo avens	None	2B.2	June-Aug	1000-1600	Meadows in sagebrush scrub and ponderosa pine forest	No	Mitigation Measures BIO-BOT #1-5, and

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

								HYD-1 should minimize and avoid impacts to habitat
<i>Hymenoxys lemmonii</i>	Alkali hymenoxys	None	2B.2	June-Aug	240-3390	Roadsides, open areas, meadows and seeps (sub-alkaline), slopes, drainage areas, stream banks in Great Basin scrub and lower montane coniferous forest.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat; Treatments not likely to occur within preferred habitat.
<i>Ivesia aperta</i> var. <i>aperta</i>	Sierra Valley ivesia	FS Sensitive	1B.2	Jun-Sept	1500-2300	Dry, rocky meadows, generally volcanic soils, in sagebrush scrub, pinyon-juniper or juniper woodland	No	Treatments not likely to occur in preferred habitat.
<i>Ivesia baileyi</i> var. <i>baileyi</i>	Bailey's ivesia	None	2B.3	May-Aug	1340-2600	Volcanic crevices in Great Basin scrub and lower montane coniferous forest.	No	Nearest occurrence to project area South of Frenchman Lake
<i>Ivesia sericoleuca</i>	Plumas ivesia	FS Sensitive	1B.2	May – Oct	1300-2320	Vernally mesic, generally volcanic meadows, vernal pools, Great Basin scrub, lower montane coniferous forest, freshwater wetlands, wetland-riparian	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Ivesia webberi</i>	Webber's ivesia	Threatened	1B.1	May-July	1000-2075	Rocky clay (volcanic ash) in Great Basin scrub, lower montane coniferous forest, and pinyon/juniper woodland	No	Occurrence half-mile east of southern portion of project area. No known occurrences within project area.
<i>Juncus dudleyi</i>	Dudley's rush	None	2B.3	July-Aug	<2000	Wet areas in montane coniferous forest	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	FS Sensitive	1B.2	Apr-July	300-2040	Wet, sandy soils of seeps, meadows, vernal pools, streams, roadsides, chaparral, lower montane coniferous forest	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Ladeania lanceolata</i>	Lance-leaved scurf-pea	None	2B.3	May-July	<2500	Alluvial plains, sand in Great Basin schrub	No	Not found in the project area. Nearest occurrence east and north of Honey

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

								Lake.
<i>Lomatium roseanum</i>	Adobe lomatium	FS Sensitive	1B.2	June-July	1460-2250	Openings, gravelly or rocky; Great Basin scrub; Lower montane coniferous forest	No	Habitat not likely to occur in treatment areas. Mitigation Measures BIO-BOT #1-5 should minimize and avoid impacts to habitat
<i>Lomatium foeniculaceum</i> ssp. <i>macdougalii</i>	MacDougal's lomatium	None	2B.2	June-July	1390-1800	Sagebrush scrub, pine woodland	No	Nearest occurrence 6 miles east of the southern portion of the project area.
<i>Lomatium ravenii</i> var. <i>paiutense</i>	Paiute lomatium	None	2B.3	Apr-June	880-1680	Flats, slopes, ridges, generally alkaline soils; sagebrush; pinyon/juniper woodland	No	Nearest occurrence in Nevada
<i>Lomatium ravenii</i> var. <i>ravenii</i>	Raven's lomatium	None	1B.3	Apr-June	1615-1775	Flats, generally alkaline soils, sagebrush	No	Nearest occurrence in Karlo, 20 miles northeast of the project area.
<i>Lupinus pusillus</i> var. <i>intermontanus</i>	Intermontane lupine	None	2B.3	May-June	1220-2060	Open, sandy areas, sagebrush scrub	No	No habitat within the project area; Nearest occurrences east and north of Honey Lake.
<i>Meesia ulginosa</i>	Broad-nerved hump moss	FS Sensitive	2B.2	Oct	1210-2804	Damp soils in bogs, fens, meadows, seeps in upper montane and sub-alpine forests	No	Nearest occurrence to project area at Lake Davis 20 miles east of the southern portion of the project. Protected within WLPZ.
<i>Mertensia longiflora</i>	Long bluebells	None	2B.2	Apr-June	1500-2200	Open, generally spring-moist, drying places of plains, foothills, especially sagebrush or sparse ponderosa pine forest	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	None	1B.1	Apr-July	<1700	Vernal pools, meadows, and seeps.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Oruttia tenuis</i>	Slender orcutt grass	Threatened	Endangered	May-Sept	35-1760	Vernal pools, often gravelly	No	Treatments unlikely to occur within preferred habitat; Mitigation

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

								Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Oreostemma elatum</i>	Tall alpine-aster	FS Sensitive	1B.2	June-Aug	1005-2100	Mesic soils in bogs, fens, peatlands, marshy areas, wet meadow, upper montane coniferous forest	No	Treatments unlikely to occur within preferred habitat; Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Orthocarpus bracteosus</i>	Rosy orthocarpus	None	2B.1	June-Aug	1030-1850	Moist meadows and seeps	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Packera indecora</i>	Rayless mountain ragwort	None	2B.2	July-Aug	1450-2000	Damp areas along streams, meadows, woodlands	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Penstemon janishiae</i>	Janish's beardtongue	None	2B.2	May-July	1065-2350	Generally igneous-clay soils in sagebrush scrub, juniper/shrub savanna, ponderosa pine forests	No	Closest observation on Diamond Mountains south of the project area.
<i>Phacelia inundata</i>	Playa phacelia	FS Sensitive	1B.3	May – Aug	1300-2000	Alkaline flats, dry lake margins in Great Basin scrub, lower montane coniferous forests, and playas.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Phlox muscoides</i>	Squarestem phlox	None	2B.3	Jun-Aug	1400-2700	Open rocky area; alpine rock	No	Habitat within project area will not be disturbed by project activities.
<i>Polycatenium williamsiae</i>	William's combleaf	None	1B.2	Mar-July	1347-2700	Vernal pools, playas, marshes and swamps in pinyon/juniper woodland and Great Basin scrub	No	Nearest occurrence in Mud Flat 18 miles northeast of the project area. Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Polygala</i>	Spiny	None	2B.2	May-Aug		Sagebrush scrub	No	Nearest occurrence in

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

<i>subspinosa</i>	milkwort							Viewland, 14 miles northeast of project area.
<i>Polygonum polygaloides ssp. esotericum</i>	Modoc County knotweed	None	1B.3	May-Sept	885-1690	Vernal pools, seasonally wet places, pinyon/juniper woodlands	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Potamogeton epihydrus</i>	Nuttall's ribbon-leaved pondweed	None	2B.2	July-Sept	370-2170	Shallow water, ponds, lakes, streams	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Pyrocoma lucida</i>	Sticky pyrocoma	FS Sensitive	1B.2	July-Oct	700-2050	Alkaline clay flats; sagebrush scrub; openings in lower montane coniferous forest; meadows and seeps	No	No known occurrences within the project area; habitat not likely to occur in treatment area.
<i>Ranunculus macounii</i>	Macoun's buttercup	None	2B.2	June-July	1200-1500	Wet meadows, shallow water	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Rhamnus alnifolia</i>	Alder buckthorn	None	2B.2	May – July	1370-2130	Wetlands, red fir, lodgepole pine, wetland-riparian	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Rorippa columbiae</i>	Columbia yellow cress	FS Sensitive	1B.2	May-Sept	1200-1800	Streambanks, lake or pond margins, meadows, wet fields, vernal pools	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Rumex venosus</i>	Winged dock	None	2B.3	May-June	1200-1800	Dry, sandy places; Great Basin scrub	No	Lack of suitable habitat in project area.
<i>Scheuchzeria palustris</i>	American scheuchzeria	None	2B.1	July-Aug	1370-2000	Floating mats, bogs, lake margins	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat. No known occurrences in Lassen Co.
<i>Schoenoplectus</i>	Water bulrush	None	2B.3	June-Aug	750-2250	Fresh lakes, streams low in nutrients	No	Protected within the

Initial Study-Mitigated Negative Declaration for the Proposed Lassen County Wildfire Recovery Project

<i>subterminalis</i>								WLPZ. No known occurrences in Lassen Co.
<i>Scutellaria galericulata</i>	Marsh skullcap	None	2B.2	June-Sept	1000-2100	Wetlands in pine forest, freshwater wetlands, wet meadows, wetland-riparian	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Stanleya viridiflora</i>	Green-flowered princes plume	None	2B.3	May-Aug	1300-1600	Cliffs, shale, clay knolls, steep bluffs, white ash deposits in Great Basin scrub.	No	Nearest occurrence in Karlo 20 miles northeast of project area.
<i>Stellaria longifolia</i>	Long-leaved starwort	None	2B.2	May-Aug	900-1830	Bogs, fens, mesic areas in riparian woodland and upper montane coniferous forest.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Stipa exigua</i>	Little ricgrass	None	2B.3	June	2345-2420	Rocky slopes in sagebrush scrub	No	Treatments not likely to occur in preferred habitat. Occurs at higher elevations than project area.
<i>Stuckenia filiformis ssp. alpine</i>	Northern slender pondweed	None	2B.2	May-July	300-2150	Shallow clear water of lakes, drainage channels, marshes and swamps.	No	Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat
<i>Suaeda occidentalis</i>	Western seablite	None	2B.3	July-Sept	<2200	Dry, saline, or alkaline wetlands	No	No habitat within the project area; Nearest occurrence 15 miles north and east of project area.
<i>Thelypodium milleflorum</i>	Many-flowered thelypodium	None	2B.2	Apr-June	1300-2500	Sandy soils in Great Basin scrub and chenopod scrub	No	Nearest occurrence 15 miles east of project area.
<i>Trichodon cylindricus</i>	Cylindrical trichodon	None	2B.2	moss	35-2075	Broad-leaved upland forest, upper montane coniferous forest; Occurs on a variety of moist soil types, including sandstone, clay, mineral, silty soils, on road-cuts, ocean bluffs, near springs, open grassy fields, in coastal scrub, and on soil	No	Treatments not likely to occur within preferred habitat; Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat

						on a rock outcrop		
<i>Trifolium gymnocarpon ssp. plummerae</i>	Plummer's clover	None	2B.3	May-June	1500-1800	Sagebrush scrub, juniper woodland	No	Occurrences adjacent to project area in the southern portion of the project area; Mitigation Measures BIO-BOT #1-5 should minimize and avoid impacts to habitat
<i>Utricularia intermedia</i>	Flat-leaved bladderwort	None	2B.2	July-Aug	1200-2700	Shallow water, <1 m	No	Treatments will not occur within preferred habitat ; Mitigation Measures BIO-BOT #1-5, and HYD-1 should minimize and avoid impacts to habitat No known occurrences in Lassen Co.

State Status - CNPS Rare Plant Rank

- 1B – Plant rare, threatened, or endangered in CA and elsewhere
- 2B – Plant rare, threatened, or endangered in CA, but common elsewhere
- 3 - More information needed
- 4 - Watch list – Plants of limited distribution

- .1 - Seriously threatened in CA
- .2 – moderately threatened in CA
- .3 – not very threatened in CA

Table 3 – Biological Assessment – Wildlife

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
Insects						
<i>Bombus occidentalis</i>	Western bumblebee	FS Sensitive	Candidate Endangered	Three basic habitat requirements: suitable nesting sites for the colonies, nectar and pollen from floral resources available throughout the duration of the colony period (spring, summer and fall), and suitable overwintering sites for the queens. Nests occur primarily in underground cavities such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees.	Yes	Although impacts to individuals may occur, they are not expected, and suitable habitat for this species is not targeted for treatment. Therefore, population level impacts to this species are not expected.
Fish						
<i>Castomus lahontan</i>	Lahontan mountain sucker	None	Species of Special Concern (SSC)	Mountain suckers are characteristically found in shallow water and have a high tolerance for organic pollution and warm temperatures. Mountain suckers, unlike most stream-dwelling fishes in western North America, spawn in summer (June to early August) rather than spring. In California, adults have been observed moving into small streams during later July to feed on algae and to spawn. Spawning probably occurs at night in riffles located immediately below pools. Mountain suckers feed primarily on algae and diatoms but will feed on aquatic invertebrates as well.	Yes	Mitigation Measures BIO-AQUA #1-13, and HYD-1 should minimize and avoid impacts to habitat.
Amphibians						
<i>Rana sierrae</i>	Sierra Nevada	Endangered	Threatened	Associated with streams, lakes and ponds in montane riparian, lodgepole	Yes	Project would create short-term increase in sediment. Individuals could be crushed or

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
	yellow-legged frog			pine, subalpine conifer, and wet meadow habitats at elevations from 4,500 - 11,980 ft. Aquatic species usually found within a few feet of water. Eggs are usually laid in shallow water attached to gravel or rocks. Tadpoles may require up to two over-wintering periods to complete their aquatic development.		disturbed in the upland areas. Mitigation measures for soils, watershed, and fisheries/aquatic species would minimize the potential for direct and indirect effects, including EEZs and LOPs during wet weather would reduce potential for individuals to be crushed or disturbed (BIO-AQUA-23 and BIO AQUA-24).
<i>Rana boylii, pop. 2</i>	Foothill yellow-legged frog	Threatened	Endangered	They inhabit partially shaded, rocky perennial streams and their life cycle is synchronized with the seasonal timing of streamflow conditions. They breed in streams with riffles containing cobble-sized or larger rocks as substrate. These frogs need perennial water where they can forage through the summer and fall months. Usually found within a few feet of water.	Yes	Project would create short-term increase in sediment. Individuals could be crushed or disturbed in the upland areas. Mitigation measures for soils, watershed, and fisheries/aquatic species would minimize the potential for direct and indirect effects, including EEZs and LOPs during wet weather would reduce potential for individuals to be crushed or disturbed (BIO-AQUA-12 and BIO AQUA-13).
<i>Rana cascadae</i>	Cascades frog	FS Sensitive	Candidate – Endangered	This species can be found in water and surrounding vegetation in mountain lakes, small streams, and ponds in meadows up to timber line. It is closely restricted to water. Individuals are active during late spring and summer.	Yes	Species ranges throughout Cascades with many extant populations. Common in areas, although declining in others. Recorded occurrences fall within the project area. Mitigation measures including EEZs, limits on stream crossings, and protections for sediment delivery, would limit direct and indirect effects to species and its habitat within treatments.
<i>Ambystoma macrodactylum sigillatum</i>	Southern Long-Toed Salamander	None	SSC	Adults spend much of their lives underground, often utilizing the tunnels of burrowing mammals such as moles and ground squirrels. Transformed adults are rarely found	Yes	Common in areas, although declining in others. Recorded occurrences fall within the project area. Mitigation measures including EEZs, limits on stream crossings, and protections for sediment delivery, would

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
				outside of the breeding season. They are mostly found under wood, logs, rocks, bark and other objects near breeding sites which can include ponds, lakes, and streams, or when they are breeding in the water.		limit direct and indirect effects to species and its habitat within treatments.
Reptiles						
<i>Emys marmorata</i>	Western pond turtle	Proposed Threatened	SSC	This species lives in and near large slow-water pools where basking spots are available. Eggs are laid uphill of the water up to 100 yards away.	Yes	Species has large range, but distribution and abundance have declined. Recorded occurrences fall within the proposed treatment area. While some direct effects may occur, mitigation measures, especially EEZs would protect the turtles while using aquatic habitat. Mitigation measure BIO-AQUA-8 will substantially limit the risk of direct effects to turtles while nesting or overwintering in upland habitat.
Birds						
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Delisted	Endangered	Occupy various woodland, forest, grassland, and wetland habitats. Large nests are normally built in the upper canopy of large trees, and snags typically conifers near water sources with fish.	Yes	There are no known nests within the project areas and nesting habitat is not targeted for treatment. Protection buffers and seasonal restrictions, implemented for activities within .25 miles of bald eagle nest sites, if discovered, would avoid or minimize adverse direct and indirect effects to the species and its habitat.
<i>Strix occidentalis occidentalis</i>	California Spotted Owl	FS Sensitive; Proposed Threatened	SSC	This species is closely related to the Northern spotted owl and has a similar life history utilizing mature forests for habitat.	Yes	Mitigation measures such as LOPs on noise generation activities within 0.25 miles of nests or PACs during the breeding season and restrictions on treatments within PACs, would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Strix nebulosa</i>	Great gray	FS Sensitive	Endangered	Prefer forest and meadow associations	Yes	There are no confirmed observations within

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
	owl			across their range and nest in mature old growth coniferous and deciduous forests		Lassen County in the last 20 years. Mitigation measures such as LOPs on noise generation activities within 0.5 miles of nests during the breeding season would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Asio otus</i>	Long-eared owl	None	SSC	Frequents dense, riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats, as well as dense conifer stands at higher elevations.	Yes	Nest location south of Doyle, CA will be monitored and protected per FPR §939. Mitigation measures such as LOPs on noise generation activities, if a nest is located, would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Accipiter atricapillus</i>	American Goshawk	FS Sensitive	SSC	Generally, prefer dense forests with large trees and relatively high canopy closures like late successional forest stands.	Yes	Mitigation measures such as LOPs on noise generation activities within 0.25 miles of nests during the breeding season would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Aquila chrysaetos</i>	Golden Eagle	None	Fully Protected (FP), Watch List (WL)	Live in open and semi open country; avoid developed areas and uninterrupted stretches of forest. Canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nest on cliffs and steep escarpments in grasslands, chaparral, scrublands, forest, and other vegetated areas.	Yes	No known nest sites within the project area; may forage or fly over. Mitigation measures such as LOPs on noise generation activities within 0.5 miles of nests during the breeding season would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Buteo swainsoni</i>	Swainson's hawk	None	Threatened	Open desert, grassland, or cropland containing scattered, large trees or small groups	Yes	Known nest sites in the Doyle, CA area will be monitored and protected per FPR §939. Mitigation measures such as LOPs on noise generation activities within 0.25 miles of nests during the breeding season would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Circus</i>	Northern	None	SSC	Found in flat, or hummocky, open	Yes	Habitat will not be impacted by proposed

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
<i>hudsonius</i>	harrier			areas of tall, dense grasses, moist or dry shrubs, and edges for nesting, cover, and feeding.		project activities. Mitigation Measures, including EEZs would avoid or minimize adverse direct or indirect effects to the species and its habitat.
<i>Antigone canadensis tabida</i>	Greater Sandhill Crane	FS Sensitive	Threatened, FP	Winter in the Central Valley and nest in six northeastern CA counties. Nest in healthy undisturbed wetland ecosystems.	Yes	No known nesting areas located within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Empidonax traillii</i>	Willow Flycatcher	FS Sensitive	Endangered	A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats at 600-2500 m (2000-8000 ft) in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Nesting site usually near languid stream, standing water, or seep.	No	No known nesting areas located within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Setophaga petechia</i>	Yellow warbler	None	SSC	Breeds in riparian woodlands, montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush	Yes	No known observations within the project area Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Riparia riparia</i>	Bank Swallow	None	Threatened	A neotropical migrant found primarily in riparian and other lowland habitats in California west of the deserts during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting	No	Known nesting colony south of Doyle. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
				holes. Predominantly a colonial breeder.		
<i>Agelaius tricolor</i>	Tricolored Blackbird	None	Threatened	Forms the largest breeding colonies of any North American landbird. Breeding sites are open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony.	No	No known nesting areas within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird	None	SSC	Breed almost exclusively in marshes with tall emergent vegetation, such as tules (<i>Scirpus sp.</i>) or cattails (<i>Typha sp.</i>), generally in open areas and edges over relatively deep water	Yes	No known nesting areas within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Coturnicops noveboracensis</i>	Yellow rail	FS Sensitive	SSC	Require densely vegetated sedge marshes/meadows with moist soil or shallow standing water.	Yes	No known nesting areas within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Progne subis</i>	Purple martin	None	SSC	Frequents old-growth, multi-layered, open forest and woodland with snags in breeding season. Forages over riparian areas, forest, and woodland. Found in a variety of open habitats in migration	Yes	No known nesting areas within the project area. Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Contopus cooperi</i>	Olive-sided flycatcher	None	SSC	Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes, or other open terrain. Extent and density of forest habitat less important than the	Yes	Proposed treatments will not impact preferred habitat.

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
				amount of air space that can be scanned from its highest perches		
Mammals						
<i>Martes cuarina sierra</i>	Pacific marten	FS Sensitive	None	Habitat with limited human use is important. Martens require a variety of different-aged stands, particularly old-growth conifers and snags, which provide abundant cavities for denning and nesting. Tend to travel along ridgetops, and rarely move across large areas devoid of canopy cover. Small clearings, meadows, and riparian areas provide foraging habitats, particularly during snow-free periods.	Yes	Mitigation measures that restrict activities near den sites and an overall lack of impacts to suitable habitat would result in relatively minor impacts to this species. The proposed action would not contribute to a significant additional decline in suitable habitat beyond what has already occurred from the wildfires.
<i>Pekania pennanti</i>	Fisher	FS Sensitive	SSC	High cover and structural complexity in large tracts of mature and old growth forests	No	Mitigation measures that restrict activities near den sites and an overall lack of impacts to suitable habitat would result in relatively minor impacts to this species. The proposed action would not contribute to a significant additional decline in suitable habitat beyond what has already occurred from the wildfires.
<i>Vulpes vulpes necator</i>	Sierra Nevada Red Fox	FS Sensitive	Threatened	High mountains of the Sierra Nevada in open conifer woodlands and mountain meadows near treeline.	No	Mitigation measures that restrict activities near den sites and an overall lack of impacts to suitable habitat would result in relatively minor impacts to this species. The proposed action would not contribute to a significant additional decline in suitable habitat beyond what has already occurred from the wildfires.
<i>Canis lupus</i>	Gray Wolf	Endangered	Endangered	Wolves have historically occupied diverse habitats in North America, including tundra, forests, grasslands,	Yes	Gray wolves are highly mobile and have a broad range of habitat tolerances. Noise disturbance could create a temporary

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
				and deserts (Mech 1970). As a consequence, and because they travel long distances and require large home ranges, wolves are considered habitat generalists (Paquet and Carbyn 2003).		change in behavior. Mitigation measures include no activity within 1 mile of an active den or rendezvous site from April 1 to July 15 (LOP). CDFW actively monitors wolf packs within the area and project proponents will ensure that no disturbance to the den will occur during the LOP (BIO-WILD-14).
<i>Gulo gulo</i>	Wolverine	Proposed Threatened	Threatened	In Northern Sierra Nevada, have been found in mixed conifer, red fir, and lodgepole habitats, and probably use subalpine conifer, wet meadow, and montane riparian habitats at elevations from 4,300 – 7,300 ft. Prefers areas of low human disturbance	Yes	The nearest wolverine sighting is 2.5 miles south of the project area. Proposed treatments are not expected to affect the suitability of habitat for wolverine, as they are somewhat generalist and use a variety of conditions.
<i>Taxidea taxus</i>	American badger	None	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils	Yes	Based on the species preferred habitat, not likely to be impacted by the current project.
<i>Aplodontia rufa californica</i>	Sierra Nevada Mountain Beaver		SSC	Not related to true beavers, this nocturnal rodent prefers moist cool deciduous and coniferous forests. Burrows usually consist of a network of tunnels built in deep soil. Burrow entrances often contain clumps of wilted vegetation which the animal likely uses as a kind of food cache as well as a source of nesting material. .	Yes	Habitat for this species is not targeted for treatment and mitigation measures in place for riparian species and habitats would provide protections for this species.
<i>Antrozous pallidus</i>	pallid bat	FS Sensitive	SSC	Wide variety of habitats is occupied, including grasslands, shrublands, woodlands, and forests from sea level up through low elevation mixed conifer forests. Most common in open, dry habitats with rocky areas for	Yes	Mitigation measures that protect roost sites will be implemented to avoid adverse direct and indirect effects to the species and its habitat.

Scientific Name	Common Name	Federal Status	State Status	Habitat	Habitat in the Project Area	Potential Impact
				roosting. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings.		
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	SSC	Found in all but subalpine and alpine habitats. Most abundant in mesic habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting and nesting.	Yes	While no caves or mines are known to exist within or near proposed activities, if caves are found, protection measures that limit activities within 250 feet of caves or mines will be implemented to protect this species and habitat.
<i>Lasiurus frantzii</i>	Western red bat	None	SSC	Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Roosts and nests primarily in trees, often in edge habitats adjacent to streams, fields, or urban areas that have trees for roosting and open areas for foraging.	Yes	No known roosting sites within the project area and no activity detected. Mitigation measures that protect roost sites will be implemented to avoid adverse direct and indirect effects to the species and its habitat.
<i>Myotis thysanodes</i>	Fringed myotis	FS Sensitive	None	Maternity colonies of up to 200 individuals are located in caves, mines, buildings, or crevices. Adult males are absent from maternity colonies, which are occupied from late April through September. Maternity group members may remain together during hibernation. Uses open habitats, early successional stages, streams, lakes, and ponds as foraging areas.	Yes	Mitigation measures that protect roost sites will be implemented to avoid adverse direct and indirect effects to the species and its habitat.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Portions of the project area were riparian habitat prior to the fires. Approximately 20% of this burned at high severity and no longer constitutes riparian habitat. In addition to removal of riparian habitat, these fires likely decreased riparian canopy cover, altered current large woody debris (variation is expected depending on burn severity, but likely generally increased), reduced future woody debris supply, and increased sediment delivery. Aquatic species in the zone therefore have experienced habitat loss as well as a likely reduction in remaining habitat quality.

Mitigation Measures **BIO-AQUA #1-13** and **HYD-#1-5** have been proposed to reduce impacts to riparian habitat, vernal pools, and aquatic and fisheries sensitive species to less than significant.

c) Would the project 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project area does encompass some wetlands, vernal pools, meadows and springs.

Mitigation Measures **BIO-AQUA #1-13** and **HYD-#1-5** have been proposed to reduce impacts to wetlands, vernal pools, and aquatic and fisheries sensitive species to less than significant.

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed project area does not 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. There may be short-term impacts to mule deer migration, but will not impede the overall migration of the herd.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project does not conflict with any local policies or ordinances protecting biological resources.

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project is located in the ancestral home of Maidu, Northern Paiute, Pit River, and Washoe Tribes represented today by several bands within the county and surrounding areas.

Early settlers in the 19th century transmitted diseases that had a catastrophic effect on native peoples. The mass insurgence of Euroamericans during the Gold Rush in 1848-9 led to additional waves of disease spread, violence, and environmental destruction. By the mid 19th century, Native Americans were forced to move on reservations.

Three historic themes relevant to the history of the project area include: lumber and logging, homesteading, and livestock ranching. The Gold Rush (1848-9) brought a wave of immigrants to California. The Homestead Act of 1862 accelerated the settlement of the western territory by granting families 160 acres of surveyed public lands for settlement. Claimants were required to “improve” the plot by building a dwelling and cultivating the land and after 5 years the original filer was entitled to the property, free and clear, except for a small registration fee. Many of these homesteaders conducted livestock ranching

Direct and Indirect Effects: The affected environment refers to the current condition of cultural sites and their setting prior to implementation of proposed treatments. The values placed on cultural sites by living communities, and their physical ability to portray significant historic events, people, craftsmanship and serve as meaningful sources of scientific information, are fundamental considerations of their National Register of Historic Places eligibility. Management efforts are directed toward protecting the important values and physical characteristics of National Register listed, eligible and unevaluated cultural sites.

Direct effects to cultural resources are those that physically alter, damage, or destroy all or part of a resource; alter characteristics of the surrounding environment that contribute to the resource’s significance; introduce visual or audible elements out of character with the property or that alters its setting; or neglect a resource to the extent that it deteriorates or is destroyed.

Not all treatment areas have been surveyed and not all cultural sites are known. At least 9 pre-historic and 29 historic sites have been identified in the project area, and 6 pre-historic sites and 11 historic sites adjacent to the project area have been identified by past survey efforts. Most of these have not been evaluated. Damage and destruction to some cultural sites from the wildfires and emergency suppression has been documented, but the full nature or extent of these effects to sites in the project area is not known.

Surveys, tribal consultation, and other methods will be used to identify cultural resources at risk in advance of project implementation. New sites will be documented, and the post-wildfire conditions of more sites will become known. Measures to protect cultural resources from project impacts will be incorporated into implementation methods. The controlled felling of hazardous trees in and near cultural sites will reduce the risk of damage or loss that might occur under natural conditions. The potential for unnatural fuel accumulations to develop in and near cultural sites that increases their risk of damage from future wildfires and suppression responses will be reduced. Indirectly and cumulatively, more sites in the project area will become known through identification surveys and thus better protected and considered by future management actions and emergencies.

Mitigation measures **CUL-1** through **CUL-3** have proposed to reduce impacts to cultural and historic resources to less than significant.

Cumulative Effects: Successful utilization of standard protection measures will result in no significant cumulative impacts to heritage resources within the project area.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input checked="" type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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See answer above to question (a).

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input checked="" type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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Mitigation Measures **CUL-1** through **CUL-3** have been proposed to avoid impacts to human remains that may be encountered during project implementation.

ENERGY

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?	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"/>
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The project is in a remote location and will require transport of personnel and equipment to the project site. The project will not result in wasteful or inefficient energy use because equipment can be securely left on site overnight and between project phases, saving on travel fuel. The project is likely to result in slowing the rate of wildfire spread and providing a defensible space where crews can stop fire before it spreads to neighboring communities; therefore, the project could reduce the overall amount of energy and fuel spent combating wildfires. The project will not violate or obstruct any State or local renewable energy or energy efficiency plan; all operations will comply with law.

There will be minimal impact to energy resources from this project and potentially energy savings resulting

from a reduction in wildfire fighting energy needs due to the resulting fuel break. Biomass generated by the project may be used to develop energy at local cogeneration facilities.

	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"/>

The project will not violate or obstruct any State or local renewable energy or energy efficiency plan; all operations will comply with law. The project will result in renewable energy as biomass from thinning operations will be chipped and delivered to local cogeneration facilities.

GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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 California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No activities associated with this project are substantial enough to rupture a known earthquake fault.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Although the project is in a seismically active area (as is true for all of Northern California), the project does not include any blasting, new construction, or any other impact strong enough to influence seismic activity.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Although the project is in a seismically active area (as is true for all of Northern California), the project does not include any blasting, new construction, or any other impact strong enough to influence seismic activity.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Land management operations associated with the project are unlikely to increase the risk of landslide in the area. Small landslides and slumps are a normal part of the local landscape. The remote location further decreases the impact of any possible landslide. Mitigation measure **GEO-2: Slopes** has been proposed to limit mechanical operations to slopes less than 35%, and mitigation measure **GEO-6: Soil Cover** has been proposed to maintain soil cover on steep slopes and sensitive areas. These mitigation measures should reduce the potential for the project to directly or indirectly cause a landslide.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Past management activities and natural processes including recent fires have impacted and shaped existing soil conditions in the project area. The primary means of discussing post-fire conditions of soils is soil burn severity, which was mapped following the fires. Burn severity describes the fire-caused damage to the soil and is a measure of the effects of fire on soil conditions including how water moves into and through the soil (hydrologic properties). Together with slope, burn severity influences the amount of soil erosion following a fire.

The dominant soil texture within the project area is sandy loam. The dominant parent materials in the zone are residuum weathered from basalt and granite.

Past activities have impacted the productivity of the soil. Much of the area within the proposed treatment areas were previously harvested using ground-based equipment. These areas treated in the past are assumed to be in “fair” soil condition (USDA Forest Service 2017) based on soil disturbance from those past activities and also effects from the recent fires. Some localized areas may be in “poor” soil condition based on past activities and soil burn severity, especially if recent activities occurred in areas where high soil burn severity levels exist. The majority of the proposed treatment areas burned at moderate to high soil burn severity (59 percent).

Direct and Indirect Effects: Localized areas with detrimental levels of soil compaction, displacement, and other physical disturbances would reduce the ability of soils to exchange oxygen and carbon dioxide, thus affecting the ability of soil organisms to survive. However, large areas (greater than 100 square feet) of detrimental levels of soil disturbance are not expected because of mitigation measures.

Expected impacts to soil condition are greater on slopes above 25 percent where soil burn severity is high (Beschta et al. 2004; Wagenbrenner et al. 2015). Where these conditions exist, residual cover following treatments would be greater and buffer widths to sensitive locations would also increase, per the mitigation measures. In addition, favorable habitat for soil organisms would be maintained. Any reduction of productivity attributable to soil organisms would be short-term (less than 5 years). Mastication treatments are also proposed in the project areas. Effects of mastication would include fuel rearrangement and increased soil cover, temperature, and moisture and microbe activity.

Although performed with ground-based equipment, mastication generally occurs over an existing slash mat created during the mastication process. This material on the surface reduces the risks of compaction.

Burning slash piles could create extremely high temperatures in concentrated areas and would lead to volatilization of nitrogen and loss of phosphorus and potassium (DeBano 1981). However, because litter layers and organic matter would be kept intact throughout the rest of the stand (per mitigation measure **GEO-6: Soil Cover**) nutrient losses due to slash burning would be minimal and localized.

Per the mitigation measures, limiting total soil detrimental disturbance to less than 15 percent of an activity area, avoiding turning machinery in areas with high soil burn severity, leaving extra cover on areas with high soil burn severity, conducting treatments during times of low soil moisture, and maintaining effective soil cover would ensure that the soil functions remain intact in good or fair condition. These mitigation measures should provide adequate protection for erosive soils. The recovery of organic matter following fire is key to restoring ecosystem productivity (Beschta et al. 2004).

Following a fire, soil can become water-repellent (hydrophobic), which can increase runoff and erosion. These characteristics tend to develop on sites with moderate to high fire severity (Neary et al. 2005; McIver and Starr 2000; DeBano 2000). Water repellency in soils can occur under natural conditions as well (Robichaud et al. 2000) and generally is eliminated within the year following fire events (Wagenbrenner et al. 2015; Neary et al. 2005); therefore, in areas that burned prior to 2021, fire-induced hydrophobicity would be near background levels.

Wildfires can also increase soil erosion potential. This is especially important in the proposed treatment area on steeper slopes where fire consumed the protective forest floor layer, leaving the soil vulnerable to erosion because there is nothing left to catch the sediment (Neary et al. 2005). Keeping debris on-site can decrease soil loss by up to 95 percent (McIver and Starr 2000). Generally, increased erosion because of wildfire occurs during the year following the fire, but as vegetation recolonizes sites, erosion decreases (Neary et al. 2005). Proposed activities would take place at least 1 year after the fire. As noted above, the recovery of organic matter following fire is key to restoring ecosystem productivity (Beschta et al. 2004).

Cumulative Effect: Recent wildfires likely compromised soil conditions within the project and surrounding areas. Present, ongoing, or proposed activities within and adjacent to the wildfires are not expected to further impair soil conditions because projects are largely restorative. Due to proposed mitigation measures vegetation treatments proposed under this project would likely lead to reduced soil erosion within the project area.

f) Would the project 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Potentially Significant Impact <input type="checkbox"/>	Less Than Significant with Mitigation Incorporated <input checked="" type="checkbox"/>	Less Than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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Land management operations associated with the project are unlikely to increase the risk of landslide in the area. Small landslides and slumps are a normal part of the local landscape. The remote location further decreases the impact of any possible landslide. Mitigation measure **GEO-2: Slopes** has been proposed to limit mechanical operations to slopes less than 35%, and mitigation measure **GEO-6: Soil Cover** has been

proposed to maintain soil cover on steep slopes and sensitive areas. These mitigation measures should reduce the potential for the project to directly or indirectly cause a landslide.

g) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There is no building construction involved with this project.

h) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not involve the installation of septic tanks or alternative waste water disposal systems.

i) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no known unique paleontological resources/sites or unique geologic features within the project area.

GREENHOUSE GAS EMISSIONS

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Across the project area, the primary factors related to climate change include: (1) the effects of greenhouse gas emissions in wildland fire smoke to climate, and (2) the effects of climate change to forest ecosystems. Recent wildfires produced large amounts of greenhouse gases. Prior to the wildfires, a significant drought period from 2012 to 2016 and during 2021, concurrent insect mortality, warmer winters, smaller snowpacks, and earlier runoff periods resulted in high levels of tree mortality and heavy fuel loads across the region.

Prolonged drought can promote drought-tolerant species, including invasive species. Additionally, drought can either positively or negatively affect pathogens and insects, depending on their life history requirements and the characteristics of the drought. Moderate drought, for example, can reduce bark beetle outbreaks, whereas long-term, severe droughts can weaken trees enough to cause an increase in outbreaks. The climatic features of drought (such as high temperatures, low relative humidity, higher minimum temperatures) can also change the fuel characteristics of an area. Examples of these drought-induced changes include increased dead fuels, lower live and dead fuel moisture, and lower soil moisture. Further, a drought may change the overall vegetation structure and composition that can lead to changes in fire behavior (Vose et al. 2016).

Wildfires in untreated areas (no action) would produce more greenhouse gases than treated areas (proposed action). In addition, in untreated areas, heavy fuel loads combined with more frequent and severe droughts would increase the intensity of wildfires and increase damage to forest ecosystems.

The Sierra Nevada region, which includes the project area, has already begun experiencing climate change in the form of higher nighttime temperatures, lower proportions of precipitation falling as snow rather than rain, decreased snowpack, and earlier peak flow in snow-fed streams. Climate models predict that these trends will continue and likely accelerate. By the end of the 21st century, temperatures in the Sierra Nevada are predicted to increase by as much as 6 to 10 degrees Fahrenheit. While climate models forecast a less dramatic change in total precipitation over this region, they indicate a shift toward greater extremes, including an increase in both the number of dry days and the amount of precipitation from the largest storms (Stephens and Frederick 2020).

Although uncertainties abound, multiyear severe drought conditions in the Sierra Nevada correlate with an increase in both wildfire size and severity, a trend that is consistent throughout the Western United States. Drought conditions, which can perhaps more accurately be characterized by measures of climate water deficit, depend on the interplay between temperature, precipitation, and evapotranspiration demand. Some researchers hypothesize that snowpack drives the relationship between drought and fire, where higher spring temperatures cause earlier and more rapid snowmelt. Rapid snowmelt is thought to contribute to a decrease in water uptake, lower live fuel moisture, and cause longer periods of dry soil conditions. Other researchers suggest that the timing of snowmelt is less important in determining fire activity than the direct effect of higher temperatures (and lower precipitation) in drying both live and dead fuels during the fire season. Warming and drying effects due to climate change were found to be a major factor in the 8-fold increase of summertime forest-fire area acres burned in California since the 1970s, although the best metric to evaluate wildfire effects over time is fire severity because it describes forest mortality patterns (Stephens and Frederick 2020).

This information suggests that droughts are increasing in occurrence and severity in the project area and would increase mortality in dense green forest stands and stress and mortality to fire-damaged and unhealthy trees. Future fuel loadings would increase in the project area along with increases in wildfire intensity and extent.

Direct and Indirect Effects: The primary effect of the proposed action to climate change would be greenhouse gases produced from burning slash piles. However, wildfires in treated areas (proposed action) would produce less greenhouse gases than untreated areas (no action).

Equipment use over the project implementation timeframe would include dozens of gasoline or diesel fuel powered vehicles, chainsaws, and transportation trucks on any given day. The emissions the equipment would produce would be minor. In most circumstances, vehicle and equipment emissions disperse rapidly and in the potential concentrations caused by only dozens of vehicles or equipment would not cause National Ambient Air Quality Standards exceedances.

Concerning the effects of climate change to future wildfire severity, some researchers and fire managers suggest that weather conditions have become more important than fuels in driving fire behavior. Steel et al. (2015) examined the relationship between fuels and fire behavior by examining how fire suppression has affected fire severity in different forest ecosystems in California. The authors tested the hypothesis that fire behavior is limited by fuel availability in some California forests where climatic conditions during the fire season are nearly always conducive to burning and the primary limiting factor for fire ignition and spread is

the presence of sufficient fuel. In fuel-limited ecosystems, fire suppression results in increased fuels, leading to an increase in fire severity. The authors used time since last fire and fire return interval a surrogate for fuels accumulation resulting from fire suppression. They found that both are strongly positively related to fire severity in yellow pine and mixed conifer forests, and to a lesser extent in mixed evergreen and bigcone Douglas-fir forests, demonstrating that fire severity in these forest types is still driven by fuels. On the other hand, they found that time since last fire and fire return interval were not related to fire severity in red fir and redwood forest types and the Klamath Mountains bioregion where fire may be more limited by factors other than fuel loads, such as climatic conditions or ignition rates.

This research shows that in yellow pine, mixed conifer, and mixed evergreen forest types there is a strong correlation between fuel accumulation and wildfire severity (fuel limited), and less so in the bigcone Douglas-fir forest type. It also shows that climate is the main driver of fire severity in red fir and redwood forest types and the Klamath Mountains bioregion. In both fuel-limited and climate-limited project areas, removing and reducing fuels would reduce wildfire severity and reduce some greenhouse gas emissions.

Cumulative Effects: This project, in combination with current and future proposed fuels projects and continued interagency collaborative efforts to address fuels, could reduce the risk of recurring damaging wildfires in the future. Frequent prescribed fire and other fuels reduction and ecosystem maintenance treatments in and around the project area would cumulatively move the areas toward meeting desired conditions for fuels and greenhouse gas emissions.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

HAZARDS AND HAZARDOUS MATERIALS

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project operations would involve the routine transportation, use, or disposal of gasoline, oil and diesel used in the power equipment and as a fuel for torches, and herbicides for noxious weed treatments. Operations will follow all applicable state and federal laws.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Equipment used to implement the project will be fueled with diesel fuel. A spill of this fuel could be hazardous to the environment. **Mitigation Measures BIO-AQUA #2-7, and HYD-1** are proposed to ensure that an accidental spill will not harm the environment.

All personnel will wear the appropriate personal protection equipment. Equipment used on this project will not be serviced in locations where grease, oil, or fuel could pass into a watercourse. The project does not present any unusual risks because all fuels will be handled safely and in accordance with standard best practices. Furthermore, even in a worst-case spill scenario, the impacts of a spill of 10-100 gallons of diesel or gasoline, the maximum likely to be present on site at any time, in a remote area far from human habitation are not likely to be significant.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No project activities are planned within ¼ miles of an existing or proposed school.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is not located on a hazardous materials site.

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is not inside the Airport Overlay for any airport under the Lassen County General Plan, and it is not within 2 miles of any airport.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Only a few people would be on the project site, so their evacuation would only add one or two vehicles to the remote rural roads that service the area. This increase in evacuation traffic would be insignificant. The project is intended to slow future wildfire rate of spread, giving community residents *more* time to evacuate during any future wildfire event.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project involves some prescribed fire, i.e., intentional fire ignition. However, the ignitions will take place under such controlled conditions and with such advanced levels of professional supervision that the risk of wildfire escape is not significant. While about 1-1.5% of prescribed fires do escape control, the vast majority of human-caused wildfires do not start as prescribed fires. Furthermore, the project will decrease future wildfire hazards. This is because the thinner, patchier fuel profile post-project is expected to slow future wildfire rate of spread, *decreasing* the exposure of people and structures to risks from wildfire.

HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Post-fire soil erosion and sediment delivery are framed in terms of risk because the probability of sediment delivery is linked to weather events, which are unpredictable. For example, a burned watershed may see extensive hillslope erosion on high and moderate burn severity areas in the event of high-intensity precipitation but may not have measurable sediment inputs if storms are mild for the first few years following the fire.

Sediment delivery risk falls over time, with most subwatersheds dropping to pre-fire conditions within 3 years on low soil burn severity areas and typically within 5 to 10 years on high soil burn severity areas.

Direct and Indirect Effects: Post-fire watersheds are at high risk of increased soil erosion and sediment delivery to streams until ground cover (vegetation, duff, and leaf litter) recovers. Wildfires typically result in increases in overland flow because organic matter and other vegetation consumed by fire no longer capture soil-water. This leads to higher streamflow and stream sediment, which could benefit or harm streams and water quality, depending on the quantity and duration. For example, higher baseflows can ameliorate effects of the current drought, whereas higher peak flows could increase sediment delivery and transport. Wildfires also increase coarse and large wood to streams over time. This is also largely beneficial, unless wood volumes are so high, they lead to fuel loadings outside the historical range, and set up the landscape for adverse soil burn severities from future fires. A wide range of conditions is found throughout the project area.

Over time, dead and dying trees will fall to the ground and contribute to coarse and large wood volumes on the forest floor and within stream channels. The timeframe is highly variable; some trees will fall relatively quickly, while some may take many years. Initially, downed woody material can help stabilize hillslopes and riparian areas and help store sediment in stream channels. Wood recruitment is a natural and beneficial process; however, in excess can have adverse consequences. If the project is not implemented, an accumulation of excess fuels is likely. Where post-fire wood creates excessive fuel, it could lead to adverse

fire effects in the event of a subsequent wildfire, such as high burn severity, elevated hydrophobicity (water repellency), and accelerated erosion

Recent studies have shown that when successive high-severity fires occur, the negative impacts can be long-lasting and even lead to shrub replacement of forest cover types (Coppoletta et al. 2020; Steele et al. 2021). The long-term effects of forest conversion on sediment delivery are not easily predicted, but forest conversion to shrubland is generally not desired. A forest floor, when functioning properly, provides much needed needle cast, leaf litter, duff, and ground cover vegetation to protect soils during disturbances. In the absence of treatments, there is a higher probability that successive wildfires would lead to adverse effects to watershed processes. The absence of treatment would likely contribute to the build-up of fuels, which could lead to accelerated soil erosion after subsequent fires.

Equipment exclusion zone buffers protect streams from hillslope erosion resulting from project activities. Streams within and downstream of the project area are at very low risk of accelerated erosion and sediment delivery from treatments due to proposed mitigation measures. Thus, sediment delivery from treatments would be minor and short-term due to project-specific mitigation measures developed specifically for the post-fire condition.

If the project is not implemented, road sediment delivery would continue, consistent with the existing condition. Wildfires would contribute to higher stream sediment, down wood, and debris that could increase the risk of culvert plugging and/or road failure in the absence of treatment. The long-term benefit of the proposed action is that fuels reduction can reduce the risk of detrimental impacts from successive high-severity wildfires. Additional beneficial impacts would occur where long-term improvements to the road network are applied (for example, adding aggregate or installing drainage features). Sediment increases would be reduced by applying mitigation measures, such as avoiding wet weather and improving road drainage at high delivery road segments.

Mitigation measures **BIO-AQUA #1-13**, **GEO #1-7** and **HYD #1-5** have been proposed to reduce impacts to ground and surface waters to less than significant.

Cumulative effects: The existing condition reflects the changes of all activities that have occurred in the past. The analysis of cumulative effects evaluates the impact on hydrology and water quality from the existing condition within the analysis area. To understand the contribution of past actions to the cumulative effects of the proposed action, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects to hydrology and water quality. Direct and indirect effects from proposed vegetation treatments are minimal and short in duration, and therefore long term cumulative effects are not expected.

Implementing best management practices and project mitigation measures such as streamside equipment exclusion zones would effectively protect streams from excessive project generated sediment, assuring that cumulative effects of the project do not adversely affect beneficial uses of water.

The design of this project is such that minimal effects to hydrology resources would be expected from the proposed action as discussed above. Possible effects to water quality and riparian areas depend upon the extent and intensity of the treatments particularly those involving ground disturbances. Potential effects on water quality and cumulative watershed effects may include increases in sediment delivered to streams. Some of the riparian areas may be lightly burned, but the effect should not be significant. Although a short-term

degradation could occur, reintroduction of fire into this landscape and movement toward a more natural fire regime would have a long-term benefit. Mitigation measures and best management practices all contribute to the prevention of sediment delivery to streams and impacts to riparian areas. The amount of actual sediment delivery is expected to be negligible. Therefore streams, water bodies and riparian area are expected to experience minimal, short-term and negligible effects within the project area.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project involves no on-site water pumping and the off-site water pumping to fill water tender trucks will not be significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial on- or off-site erosion or siltation?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not alter drainage patterns or streamcourses or install any new impervious surfaces.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not alter drainage patterns or streamcourses or install any new impervious surfaces.

e) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not alter drainage patterns or streamcourses or install any new impervious surfaces.

f) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would impede or redirect flows	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not alter drainage patterns or streamcourses or install any new impervious surfaces.

g) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is not in a flood hazard, tsunami, or seiche zone.

h) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not obstruct implementation of a water quality control plan or sustainable groundwater management plan.

LAND USE AND PLANNING

a) Would the project physically divide an established community?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not physically divide an established community.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Project activities will not alter any existing land use. The project complies with zoning and plan designations as documented in the Lassen County General Plan (2010).

MINERAL RESOURCES

a) Would the project 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site does not contain any known mineral resources of value or of local importance.

b) Would the project 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not change the future availability of any mineral resources.

NOISE

a) Would the project result in 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 in other applicable local, state, or federal standards?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project implementation will require equipment use. Once the work is complete, the project site will return to its natural state with no new sources of noise other than those already existing. There will be temporary noise during project implementation.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The land management activities contemplated in the project description will not generate groundborne noise or vibrations.

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is not within an airport land use plan overlay or within 2 miles of any airport.

POPULATION AND HOUSING

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no proposed activities that would directly or indirectly promote population growth in the area.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project activities will not result in the displacement of people or housing

PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for 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 fire protection?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not impact the provision, or the need for governmental facilities. The project will not impact existing fire protection services.

b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for 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 police protection?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not impact the provision, or the need for governmental facilities. The project will not impact existing police protection services.

c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for 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 schools?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not impact the provision, or the need for governmental facilities. The project will not impact existing school services.

d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for 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 parks?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not impact the provision, or the need for governmental facilities. The project will not impact existing park services.

e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for 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 other public facilities?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not impact the provision, or the need for governmental facilities. The project will not impact existing public facilities.

RECREATION

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not increase the use of existing neighborhood and regional parks or other recreation facilities.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project does not include, construct, or expand any recreational facilities.

TRANSPORTATION

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

There are seasonal private roads within the project area that are accessed through locked property gates and are used only by those with permission to access the properties. The project does not alter any existing roadways. Because of locked gates, these internal roads have no users other than those with permission. Therefore, this project will have no impact on traffic circulation patterns. Roads used to access the project site include Hwy 395, Hwy 36, and Hwy 44 and numerous County Roads. **Mitigation Measure HYD-3** stipulates that project proponents and project contractors will be responsible for protecting Caltrans and Lassen County assets, including waterways and culverts within road easements on roads used to access the project site.

b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3(b)?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

While this project will require some vehicle miles traveled, the increase will be temporary and project-focused and will not exceed a threshold of significance. The project will not result in any sustained change in vehicle miles traveled in the region.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not include any alteration in the design or use of existing transportation systems.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No road will be altered in such a way as to decrease emergency access. A goal of the project is to improve ingress and egress within the project area for wildfire protection and recreational use.

TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 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 § 5020.1(k)?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The CAL FIRE Native American contact list (Cal FIRE 2024) and CA Native American Heritage Commission contact list (NAHC 2024) identifies the following Tribes and tribal groups as having aboriginal ties to, and interest in, projects that occur in Lassen County:

- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Greenville Rancheria of Maidu Indians;
- Honey Lake Maidu
- Maidu Cultural and Development Group;
- Mooretown Rancheria;
- Pit River Tribe of California
- Susanville Indian Rancheria
- Tasman Koyom Indian Foundation
- Tsi Akim Maidu;
- United Auburn Indian Community of the Auburn Rancheria
- Wadatakuta Band of Northern Paiute of the Honey Lake Valley
- Washoe Tribe of California and Nevada

These Tribes and groups have sacred sites that are not always identified through archaeological surveys, including cemeteries, places of prayer, and unique geologic features that are important to their creation stories and history.

Scoping letters, including a description of the proposed action, request for confidential information, and an invitation to consult on the project was mailed or emailed to the Tribes and groups listed above, as well as the Native American Heritage Commission (NAHC) on February 6, 2024. The NAHC Sacred Lands File (SLF) search was positive, and consultation with Tribes is underway to ensure that the sacred site is not impacted by the proposed project. Susanville Indian Rancheria (SIR) lands are within the project area, and SIR is interested in participating in the project to restore native habitats on their lands. SIR is also interested in reintroducing cultural burns and supportive of efforts to restore habitats within the region to pre-contact conditions. One of projects main goals is to provide for the safe and permanent re-introduction of prescribed and cultural fire as a stewardship tool.

The project will enhance living cultural resources (e.g. plants and animals). **Mitigation Measure CUL-1: Avoidance of Cultural Resources; Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources; and Mitigation Measure CUL-3: Encountering Native American Remains** all detailed on page 13, would be employed and applied to all cultural resources within the project area, including those identified by Tribes as significant. The project would have positive indirect and cumulative effects on cultural resources because of reduced potential for high intensity wildfire to impact sites.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 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 § 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project will enhance living cultural resources (e.g. plants and animals). **Mitigation Measure CUL-1: Avoidance of Cultural Resources; Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources; and Mitigation Measure CUL-3: Encountering Native American Remains** all detailed on page 13 will be employed and applied to all cultural resources within the project area, including those identified by Tribes as significant. The project would have a positive indirect effect on cultural resources because of reduced potential for high intensity wildfire.

UTILITIES AND SERVICE SYSTEMS

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not result in the relocation or construction of new utilities.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project is a restoration project that will not affect utilities.

c) Would the project result in a determination by the wastewater treatment provider that 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not involve the use of utilities or public service systems.

d) Would the project 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

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 checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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Recent wildfires have resulted in an abundance of dead and dying trees, especially in areas of high burn severity (the majority of the project area). Over time, dead and dying trees will fall to the ground and contribute to coarse and large wood volumes on the forest floor. The timeframe is highly variable; some trees will fall relatively quickly, while some may take many years. Wood recruitment is a natural and beneficial process; however, in excess can have adverse consequences. If the project is not implemented, an accumulation of excess fuels is likely. Where post-fire wood creates excessive fuel, it could lead to adverse fire effects in the event of a subsequent wildfire, such as high burn severity. The project, as designed, will reduce fire intensity, thereby making it safer for emergency personnel to respond to a future fire. The wildfire may be contained sooner with reduced area burned at high intensity. The reduced number of acres or fire intensity will have benefits to other resource, including environmental resources, public health, and public and firefighter safety.

The project places such small and incidental demands on local roads and fire protection services that it will not substantially impair an adopted emergency response plan or emergency evacuation plan.

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 checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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The desired fire intensity is low to moderate for proposed prescribed fires. A prescribed burn plan will be developed for each proposed prescribed fire prior to implementation that outlines the parameters (timing, weather, fuel moisture, etc...) necessary to implement the project to ensure that the fire remains low to moderate intensity and does not escape the project perimeter as well as identify protocols should the fire escape (See **Mitigation Measure FIRE-1: Burn Plan**). All prescribed fire activities carry a risk of fire escape, but the project design has reduced this risk below a significant level. By conducting burns in the off-season and with highly trained fire professionals on site, the project reduces the risk of wildfire below the level of risk associated with the no-project alternative. Spotting outside of fire lines should not be a problem with correct firing methods and weather patterns as prescribed in the burn plan. Tree ringing (clearing fuel away from the base of trees) in advance of burning will reduce tree mortality and spotting potential. Perimeter fire lines (roads and existing trails) will be in place and black line will be added to strengthen control lines as needed. Furthermore, by reducing fuels while leaving slope and other factors unchanged, the project will reduce, not exacerbate the effects of any future wildfire.

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	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project will require some road maintenance, which comes with an extremely small incidental fire risk. Most project personnel will be trained fire professionals, which reduces the risk that the project will start an uncontrolled wildfire.

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	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

All prescribed fire carries some risk of increased runoff and siltation during subsequent storms, but the project’s remote location and buffers to perennial streams reduce the hazard of runoff/flooding and landslides resulting from the prescribed fire component of the project. Furthermore, by reducing the likely severity of future fires, the project reduces the future flooding/landslide hazard to people and structures downstream, compared to the no-project alternative.

MANDATORY FINDINGS OF SIGNIFICANCE

a) Would 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 community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project will restore forests and woodland impacted by recent fires. In the long-term these treatments will increase habitat suitability for a wide range of native species while reducing invasive species, reduce fuel loads to lower burn severity for future fires, and improve ingress/egress for emergency personnel. The project will result in some species being less abundant and some being more abundant, but these shifts in abundance will be within the natural range of variation and will not lead to listing of any species. Careful study has resulted in a project design extremely unlikely, in the opinion of wildlife and botany specialists, 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 to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal.

According to the opinions of archaeologists and tribal cultural resources experts, the project, with mitigations incorporated, will not eliminate any important examples of the major periods of California history or prehistory.

With the implementation of mitigation measures included in the Initial Study, the proposed project would not degrade the quality of the environment; result in an adverse impact on fish, wildlife, or plant species including special status species, or prehistoric or historic cultural resources.

<p>b) Would 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.)</p>	<p>Potentially Significant Impact</p>	<p>Less Than Significant with Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The cumulative effects of wide scale efforts to remove dead/dying trees impacted by wildfire and restore these areas, overall, is ecologically positive. Cumulative negative impacts could include that some species will be less abundant and some drainages could experience transient peaks in siltation, however, these impacts will be less than significant when compared to the likely catastrophic wildfire impacts of *not* improving ecosystem health and reducing fuel loads.

Individual impacts are limited with this project and cumulatively are not considerable when viewed in connection to past or future projects.

<p>c) Would the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?</p>	<p>Potentially Significant Impact</p>	<p>Less Than Significant with Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This project does not have environmental effects which will cause substantial adverse effects on human beings. Restoring forests and woodlands impacted by recent fires, will improve aesthetics, economics, and recreational opportunities for human beings.

APPENDIX A

Mitigation Monitoring and Reporting Plan

In accordance with CEQA Guidelines § 15074(d), when adopting a mitigated negative declaration, the lead agency will adopt a mitigation monitoring and reporting plan (MMRP) that ensures compliance with mitigation measures required for project approval. Honey Lake Valley RCD is the lead agency for the above-listed project and has developed this MMRP as a part of the final IS-MND supporting the project. This MMRP lists the mitigation measures developed in the IS-MND that were designed to reduce environmental impacts to a less-than-significant level. This MMRP also identifies the party responsible for implementing the measure, defines when the mitigation measure must be implemented, and which party or public agency is responsible for ensuring compliance with the measure.

POTENTIALLY SIGNIFICANT EFFECTS AND MITIGATION MEASURES

The following is a list of the resources that will be potentially affected by the project and the mitigation measures made part of the Initial Study-Mitigated Negative Declaration.

Botany:

Mitigation Measure BIO-BOT-1: Sensitive Plants - Known populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) sensitive plant, lichen, or fungi species shall be flagged for avoidance. Ground-disturbing activities and spreading chips or slash materials shall be prohibited within flagged areas. When necessary, hand felling of trees and end-lining of logs may be conducted within occurrences if it is determined by a botanist that effects would be minimal or there will be beneficial effects based on the site or habitat conditions. Piles and fire lines shall be located outside of flagged areas.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-BOT-2: New Sensitive Plant Discoveries - In the event any new populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and sensitive (California Native Plant Society Rare plants Ranks 1 and 2) plant, lichen or fungi species are discovered during the various phases of the project, the area will be flagged and avoided until a botanist is consulted for mitigation measure applicability.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-BOT-3: *Felling Adjacent to Sensitive Plant Populations* – Dead/dying trees adjacent to flagged populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) plant, lichen, or fungi species will be directionally felled away from the flagged area to avoid disturbing the population. Only remove directionally felled trees if ground disturbance within the flagged area can be avoided. If directional felling cannot be done due to safety concerns, fell as necessary and leave on-site. This requirement may be waived by a botanist depending on the species present and its phenology. Flagging will be used to delineate avoidance boundaries.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-BOT-4: *Felling within Flagged Sensitive Plant Populations* – Dead/dying trees located within flagged avoidance areas may be felled but must be left on-site to avoid ground disturbance unless removal can occur with minimal effects in consultation with a botanist. Flagging will be used to delineate avoidance areas.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-BOT-5: *Special Plant Habitats* - Special habitat types which support unique plant communities (such as serpentine, lava caps, pumice flats, rock outcrops, and seeps and springs) will be avoided. This requirement may be waived by a botanist if ground disturbance can be avoided.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Non-Native Invasive Species:

Mitigation Measure BIO-INV-1: *Cleaning of Equipment* - All equipment to be used off-road would be cleaned using either washing or high-pressure air and visually inspected before moving into the project area to ensure equipment is free of soil, plant propagules, or other debris that may contain invasive plant seeds. All equipment working in infested areas will be cleaned prior to leaving the infested area.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-INV-2: *Weed Free Materials* - Any source that provides material such as rock, gravel, or boulders to be used in the project area would be inspected and determined to have limited potential for the spread of invasive plants. Material stockpiles must be noxious weed free.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-INV-3: *Weed Free Straw* - Any straw or seed placed within the project area must be California-certified weed-free and the seed mix approved by a botanist. Other materials to be used as mulch, for which a state inspection protocol does not exist (such as wood chips, local materials) would be inspected by a botanist to determine the potential for spread of invasive plants. Post-project monitoring would occur in areas where imported materials are used.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-INV-4: *Equipment and Flagged Sites* - Equipment, vehicles, and personnel will avoid working within flagged invasive plant sites. Flagging will be used to delineate avoidance boundaries. If infestation cannot be avoided, consult with a botanist for risk minimization strategies.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-INV-5: *Invasive Discoveries* - Any additional infestations discovered prior to or during project implementation would be flagged and avoided. Report new infestations to a botanist.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Fisheries and Aquatics:

Mitigation Measure BIO-AQUA-1: *Burn pile placement* - No burn piles shall be placed within the Watercourse and Lake Protection Zone (WLPZ) for watercourses, lakes, meadows, fens, or springs.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-2: *Water drafting sites* - Identify water sources on project implementation maps. Consult with the Registered Professional Forester to obtain approval for use of additional water drafting locations and to determine whether the location represents suitable habitat for sensitive aquatic species.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-3: *In-Channel drafting sites* - In-channel water drafting locations shall include rocking of approaches, barrier rock, straw bales, or other measures to prevent overflow and leaks from entering the watercourse.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-4: *Water drafting site survey and approval*- Survey all proposed water drafting locations for sensitive and listed amphibians and receive approval from a biologist prior to use. Use drafting devices with 2 millimeter or less screening, and place hose intake into bucket in the deepest part of the pool. Use a low velocity water pump, do not exceed 50% of the flow, and do not pump ponds to low levels beyond which they cannot recover quickly (approximately 1 hour).

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-5: *Water drafting in fish-bearing streams* - For fish-bearing streams, the water drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 4 cubic feet per second, nor exceed 20 percent of surface flows for streamflow less than 4 cubic feet per second. For non-fish-bearing streams, the drafting rate should not exceed 350 gallons per minute for streamflow greater than or equal to 2 cubic feet per second, nor exceed 50 percent of surface flows. Water drafting should cease when bypass surface flows drop below 1.5 cubic feet per second on fish-bearing streams and 10 gallons per minute on non-fish-bearing streams.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-6: *Dust Abatement in Riparian Areas with Sensitive Species* - Only use water as dust abatement in riparian areas known to be occupied with sensitive status species.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-7: *Hazardous spills* - Any hazardous spills will be immediately cleaned up and reported to the responsible party.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-8: *Western pond turtle* - Within areas identified as high-quality western pond turtle habitat by the biologist prior to implementation, avoid placing piles in open, grassy patches. Do not fell trees across these habitats wherever practical.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-9: *Vernal Pools* - Activities within 250 feet of vernal pools will occur only once the ground surface is completely dry (typically June 1 to October 31 but will vary year to year). No activity will occur within the vernal pool. A biologist will be present for ground- and vegetation-disturbing activities conducted within 250 feet of vernal pool habitat. Personnel will utilize existing roadways within 250 feet of vernal pools whenever possible. If not using an existing roadway, only rubber-tired vehicles will be utilized within vernal pool upland areas. Driving through vernal pools at any time of year will be avoided. Any trees felled within 250 feet of a vernal pool will be directionally felled away from the vernal pool.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-10: *Fiber netting and Frogs* - Tightly woven fiber netting, synthetic materials, or similar material shall not be used for erosion control or other purposes within suitable habitat to ensure the foothill yellow-legged frog, Sierra Nevada yellow-legged frog, or cascade frog do not get trapped, injured, or killed.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-11: *Stream Crossings and Water Drafting Sites* - Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water drafting sites to avoid adverse effects to in-stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-12: *Frogs and Rain* - Foothill yellow-legged frog, Sierra Nevada yellow-legged frog, and Cascade Frog: For all activities in occupied or suitable habitat, if there is a 70 percent or greater forecasted rain event of 0.25-inch or greater, work activities will be postponed until site conditions are dry enough to avoid potential impacts.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-AQUA-13: *Buffers for Frogs* - Foothill yellow-legged frog, Sierra Nevada yellow-legged frog, and Cascade Frog: Within the riparian areas with known or suspected occupancy or their designated or proposed critical habitat, use handheld equipment (chainsaws) and walk in and out using the same pathway. Do not create any skid trails or burn piles within these areas. Areas of occurrence for all species include reaches 0.3 miles upstream and downstream plus all associated wet meadows. Areas of occurrence are as follows into the uplands areas: California red-legged frog: 0.3 mile Sierra Nevada yellow-legged frog and Mountain yellow-legged frog: 82 feet Foothill yellow-legged frog: 100 feet (distance may change) Yosemite toad: 0.78 mile

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Wildlife:

Mitigation Measure BIO-WILD-1: *Large downed woody material* - To the greatest extent possible, retain downed woody material with a large end diameter greater than 30 inches, or of the largest size class available, that was present prior to the wildfire. Do not buck up, and avoid moving these large, pre-existing downed logs during treatment wherever practicable.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-2: *Pre-Fire Snags and Downed Logs* - Unless a hazard to a road, structure, or a threat to human safety, retain all snags and downed logs that were present prior to the recent fires. If large diameter pre-fire, old-growth, legacy trees (old trees that have been spared during harvest or have survived stand replacing natural disturbance), or snags are fallen as hazards, retain them whole as downed logs and do not buck or pile. If the downed log is a safety threat, move it to a safe location as intact as possible. Large-diameter (>30” dbh at stump height) and old-growth conifer snags or legacy trees with deformities such as cat faces, broken tops, hollows, or cavities are prioritized for retention when evaluating fuel levels.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-3: *Hardwood snags* - Unless a hazard to a road, or human safety retain all hardwood snags (larger than 16 inches diameter at breast height).

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-4: *Downed Logs* - Unless a hazard to a road, structure, or human safety where available retain an average of 5 to 8 downed logs per acre in uplands and 4 to 6 downed logs per acre in riparian areas of the largest size class (larger than 20 inches diameter at breast height, over 10 feet in length). Preference is to retain logs within riparian areas and away from roads. Numbers of downed logs can vary on any particular acre and should be an average for the landscape or treatment area.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-5: Bald Eagle: Dead/dying trees located within 0.25 mile of active bald eagle territory will be evaluated by a biologist prior to felling to establish whether they contain nests or are important pilot or perch trees. If a tree contains a nest, or is an important pilot tree, it will not be felled between January 1 and August 31 unless it is an immediate threat to human safety. No project actions that result in loud or continuous noise above ambient levels within 0.5 mile of an active bald eagle nest will occur from January 1 through August 31 or an occupied bald eagle winter roost from November through March 1.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-6: Sensitive Bats: Where caves or mines are located within 250 feet of the project boundaries, a Registered Professional Forester, in coordination with a biologist, would be consulted and a buffer flagged on the ground identifying an equipment exclusion zone. The following protective measures would apply: No noise generating or habitat modification activities will take place within 250 feet from caves, mines, and mine adits to protect known or potential sensitive bat species (Townsend's big-eared bat, pallid bat, and fringed myotis) roost sites. Options for pile burning and felling around caves or mines include the following: pile burning and felling imminent safety threats only outside the March 1 through August 31 breeding season or pile burning during the March 1 through August 31 breeding season only under prevailing wind conditions that disperse smoke away from cave and mine entrances.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-7: Limited Operating Periods (LOPs) - Limited operating period is a period of time to protect species from disturbance that could result in loss of fecundity (this year's young would not be conceived or birthed, young or eggs would be kicked out of den or nest, or otherwise be disturbed and not successfully survive to a juvenile or adult state) or a loss of life (migration).

Limited operating period timeframes examples (not all inclusive; others are listed in other mitigation measures):

-- Fisher: March 1 to June 30

-- Marten: May 1 to July 31

-- Sierra Nevada red fox: January 1 to June 30

The limited operating period could be lifted if one of the assumptions is met:

-- Species is not within the area as determined by protocol level surveys

-- Area no longer has appropriate habitat or habitat components for the species to reproduce in the area (post-fire no longer meets species needs)

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-8: *Marten and Fisher* - Retain some slash piles for marten escape cover and prey habitat, where biologists have determined that cover and/or connectivity could benefit marten or fisher habitat (i.e., along outer edges of canopy openings and riparian buffers). The number and location of slash piles will vary and will be determined by biologists on a site-specific basis. When feasible, piles should contain large and small diameter logs, have enough interstitial space to allow for marten or fisher occupancy, and be at least 6 feet by 8 feet in diameter. Piles would be clearly marked to not be burned. Pile specifications will be adapted to on-the-ground conditions.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-9: *Marten Dens* - Maintain a 100-acre buffer from May 1 to July 31 for all active marten den sites. Protect marten den site buffers from disturbance from vegetation treatments with a limited operating period from May 1 through July 31 as long as habitat remains suitable or until another regionally approved management strategy is implemented. The limited operating period may be waived for individual projects of limited scope and duration, when a biological evaluation documents that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-10: *Fisher*: In high quality reproductive and potential fisher denning habitat, implement hazard mitigation options other than complete removal for conifer snags larger than 35 inches diameter at breast height and hardwood snags larger than 27 inches diameter at breast height when it is safe to do so. Such options include cutting the hazard tree as high as possible to leave a portion of the trunk (10 to 20 feet tall) standing to provide potential microsites. Leave 15 to 20 feet of the thickest part of the trunk behind as a large log, particularly if it is decayed. When hazard tree removal creates continuous areas with canopy cover less than 40 percent, leave 1 to 2 large trees (larger than 30 inches diameter at breast height) per acre on the ground as coarse woody debris to enhance habitat quality and connectivity. This will facilitate crossing by fishers and limit the potential for habitat fragmentation.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-11: Fisher Dens - Protect any known fisher den site buffers from vegetation treatments disturbance with a limited operating period from March 1 through June 30, as long as habitat remains suitable or until another regionally approved management strategy is implemented. The limited operating period may be waived for individual projects of limited scope and duration, when a biological evaluation documents that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location. Avoid fuel treatments within any known fisher den site buffers to the extent possible. If areas within den site buffers must be treated to achieve fuels objectives for the urban wildland intermix zone, limit treatments to hand clearing of fuels. Use piling to treat surface fuels during initial treatment. Burning of piled debris is allowed in fall and winter.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-12: Fisher Habitat - In high and moderate quality reproductive fisher habitat (Thompson et al. 2021; habitat model) in low severity and unburned areas, apply a limited operating period during the denning season (March 1 through June 30). Use the programmatic biological opinion definitions for potential and high-quality denning habitat for areas that the habitat model does not cover. The limited operating period may be waived for individual projects of limited scope and duration if pre-project surveys document absence of denning fisher (Tucker et al. 2020). In areas of moderate burn severity (25 to 75 percent basal area loss), a biologist will assess the area to determine if potential habitat remains and the limited operating period should be applied.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-13: Sierra Nevada red fox: A biologist will validate detection of a Sierra Nevada red fox. When verified sightings occur, conduct an analysis to determine if activities within 5 miles of the detection have a potential to affect the species. If necessary, apply a limited operating period from January 1 to June 30 to avoid adverse impacts to potential breeding. Evaluate activities for a 2-year period for detections not associated with a den site.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-14: Gray wolf: To determine whether gray wolves have been documented in or in the vicinity of a treatment area, Project Proponents will contact CDFW before implementation of project activities to obtain general information about documented gray wolf activity within the vicinity and the need for protection measures.

- A limited operating period (LOP) restricting all noise or smoke generating activities would be instated from April 1 through July 15 within one mile of the den site. Further discussions and coordination with CDFW and the Service may result in a modified distances or more flexible dates for this specific conservation measure. In addition, if the den or rendezvous sites are clearly separated from project-generated disturbances by topographic features or terrain, seasonal restrictions may be adjusted or eliminated, as approved by the Service. These conservation measures would avoid or minimize disturbance at active den or rendezvous sites that could disrupt reproductive success or result in adverse effects. Dens that are known to be used in consecutive years but not used in the current year may require a LOP if CDFW or the Service determines it is necessary.
- Early rendezvous sites are typically close to dens: implementing a LOP within 1 mile of den sites will generally mitigate effects to early rendezvous sites when pups are still vulnerable. Coordination with CDFW and the Service prior to implementation would be done to ensure protection of all known and/or newly discovered den and rendezvous sites.
- If a den is discovered during implementation of the proposed project, the LOP shall be implemented and coordination with CDFW and the Service shall be pursued.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-15: *Snags* - Retain four of the largest snags per acre larger than 15 inches diameter at breast height following plan direction, and where possible, retain 5 to 10 tons per acre of the largest downed logs. Preference is to retain the largest downed logs present prior to the fire at least 20 inches in diameter and more than 10 feet in length. If areas are deficient in logs, retain these large, downed logs whole in stands and do not buck or pile. Within perennial stream riparian buffers retain large, downed woody material for wildlife. Follow all relevant plan direction.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-16: *LOPs for Northern Goshawks and CA Spotted Owls* - Maintain a seasonal limited operating period within 0.25-mile of known **California spotted owl and northern goshawk** nests during the breeding season (March 1 to August 15 for spotted owls; February 15 to September 15 for goshawks) unless surveys confirm they are not nesting. The limited operating period would prohibit mechanical activities such as tree felling, machine piling, major road maintenance, or other operations that generate loud or continuous noise within approximately 0.25-mile of the nest site, unless surveys confirm that California spotted owls or northern goshawks are not nesting.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-17: *Great gray owl:* Apply a limited operating period, prohibiting vegetation treatments within 0.5 mile of an active great gray owl nest stand, during the nesting period (typically March 1 to August 15). The limited operating period may be waived for vegetation treatments of limited scope and duration, if a biologist determines that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location. Where a biologist concludes that a nest site would be shielded from planned activities by topographic features that would minimize disturbance, the limited operating period buffer distance may be reduced.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-18: *Sandhill Cranes* - If **sandhill cranes** are observed within the project area before or during project implementation, a limited operating period will be in effect from April 1 through August 1 within one-half mile from occupied areas. If surveys indicate that cranes are not nesting, then the limited operating period for that year would not be required. Surveys of potential meadows are needed each year to establish nesting status.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD 19: *Western bumblebee* - Suitable bumblebee habitat within treatment areas, including areas of woodlands, grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows will be surveyed prior to implementation using "June 2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" as a guide. Nest sites or hibernacula discovered during implementation shall be protected with equipment exclusion buffers of 25 feet.

Schedule: Prior to project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-20: *Herbicides and pollinators* – Herbicide use will be limited to late winter (February – March) prior to the flowering period, and fall (October – November), after the flowering period, in order to protect pollinators. Herbicides with the EPA bee hazard icon, or high residual toxicity to bees, will not be used, and flowering plants will be avoided.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure BIO-WILD-21: Pre-implementation surveys – Surveys will be conducted for the species identified in the BIO-WILD mitigation measures, and BIO-AQUA #12 and #13 (Frogs) prior to project implementation using California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines. <https://wildlife.ca.gov/Conservation/Survey-Protocols>

Schedule: Prior to project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Cultural Resources:

Mitigation Measure CUL-1: Avoidance of Cultural Resources: Cultural resources present within the project area have not been formally evaluated to determine eligibility for listing on the CRHR. For the purposes of this project these cultural resources will be assumed potentially eligible for state and federal registers and will be avoided. Project proponents will ensure that cultural resources are not adversely affected by ground disturbing activities. If cultural resources cannot be avoided and ground disturbance will occur within the recorded site limits than the site(s) will be formally evaluated to determine if they meet the regulatory criteria for eligibility to the CRHR.

Schedule: Prior to project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources: If a cultural resource is discovered within a project area after the project has been approved, the following procedures apply:

1. Project activities within 100 feet of the newly discovered cultural resource shall be immediately halted.
2. A qualified professional archaeologist or RPF with CALFIRE Archaeological Training Certification, as well as the Susanville Indian Rancheria (SIR) Tribal Historic Preservation Officer (THPO) shall be immediately notified.
3. The archaeologist shall evaluate the new discovery and develop appropriate protection measures in consultation with the SIR THPO.
4. The archaeologist shall ensure that the newly discovered site is recorded and its discovery and protection measures are documented in the project files.
5. If the newly discovered site is a Native American Archaeological or Cultural Site, the Archaeologist shall notify the appropriate Native American tribal group, the NAHC, and the SIR THPO, if appropriate.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure CUL-3 *Encountering Native American Remains:* Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner, a qualified archaeologist, and the SIR THPO must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a “Most Likely Descendant” can be designated and further recommendations regarding treatment of the remains is provided.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Geology and Soils:

Mitigation Measure GEO-1: *Detrimental disturbance* – Limit total soil detrimental disturbance (compaction, displacement, and total porosity loss) to less than 15 percent of an activity area.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-2: *Slopes* – Limit all mechanical operations to slopes less than 35 percent.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-3: *Soil Moisture* - Operate mechanical equipment when soil moisture is less than 20 percent by weight.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-4: *Pivoting of Machinery* – Pivoting of machinery should be avoided to prevent soil displacement in high soil burn severity areas.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-5: *Slash* – Activity generated slash may be machine or hand piled on slopes less than 35 percent; and hand piled on slopes greater than 35 percent.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-6: *Soil Cover* - During management activities, maintain (or add to the extent feasible in deficient areas) an average of 50 percent effective soil cover in treatment areas that is well-distributed and generally in the form of fine organic matter. Where feasible, maintain 85 percent or more effective soil cover in riparian areas and on slopes greater than 25 percent, and 70 percent effective soil cover on areas with high soil burn severity. Management activities in areas with ecological types that cannot normally support 50 percent soil cover shall be considered individually for soil cover needs.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure GEO-7: *Woody debris* – Maintain coarse woody debris for soil organisms based on ecological type and in consultation with wildlife and fuels specialists.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Hydrology:

Mitigation Measure HYD-1: *Project Best Management Practices (BMPs):* Protect water quality through the use of best management practices (BMPs) to prevent water quality degradation and to meet state water quality objectives relating to non-point sources of pollution. Best management practices utilized for this project are procedures and techniques that are incorporated in project actions and have been determined by the State of California to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

Watercourse and Lake Protection Zones (WLPZ) will be classified based on the California Forest Practice Rules §936.5 – Procedures for Determining Watercourse and Lake Protection Zones Widths and Protective Measures. WLPZs shall be identified on the ground with flagging prior to implementation of treatments. These zones will be:

Watercourse Classification	Slope 0-30%	Slope 30-50%	Slope >50%
Class I	75'	100'	150'
Class II (including all springs with surface water)	50'	75'	100'
Class III	25'	50'	50'

The standard best management practices for protecting water quality include:

- Within the WLPZ, at least 50% of the total canopy covering the ground shall be left in a well-distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers.
- No heavy equipment shall operate within the WLPZ except on existing roads and crossings. Light weight equipment, including a mini-excavator, mini-chipper, and/or skid steer, may operate within the WLPZ when conditions are dry within the WLPZ. Equipment within the WLPZ will not turn around within the WLPZ, but will make minimal tracks perpendicular to the watercourse. Any other types of light equipment that are used will not exceed the weights of those listed above. Exposed soils within WLPZ shall be 90% covered with operational slash or hay/straw to a minimum 2” depth prior to the winter period (Nov. 15 – April 1). This will occur after the conclusion of each individual operation and prior to each winter period for the life of the Project.
- No equipment shall refuel, be cleaned, or lubricated within the WLPZ.
- Road based equipment being used for project implementation shall not be used during any time of the year when soils are saturated and excessive damage can occur as well as the potential discharge of sediment to watercourses.
- There will be no mechanical fireline construction within the WLPZ.
- No ignitions of broadcast (prescribed) burns would occur within the WLPZ. Broadcast burning would be allowed to back burn into the WLPZ, but in order to maintain stream temperatures and avoid sediment discharge to Class I and II streams piles and broadcast prescribed burns are restricted within the WLPZ to the following distances from the stream:

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure HYD-2: Tree Cutting –Trees providing bank stability on fish-bearing streams should not be cut where possible (where they don’t pose an imminent threat to life and safety). Trees will be directionally felled away from streambank where possible and as safety allows or unless otherwise approved by an aquatics specialist or designee.

Schedule: During project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure HYD-3: Streambed Alteration Permit – Before any riparian vegetation removal or work within the bed bank or channel of a stream, creek, or river, including temporary watercourse crossings, project proponents will coordinate with the California Department of Fish and Wildlife to ensure compliance with Section 1602 of the Fish and Game Code.

Schedule: Prior to project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure HYD-4 Timber waiver, Proposed activities will abide by the Lahontan Regional Water Quality Control Board (LRWQCB) Timber Waiver program, and project proponents will consult with the LRWQCB if there are proposed activities that could potentially impact water quality.

Schedule: Prior to project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Mitigation Measure HYD-5 Protection of Caltrans and County Assets, The project proponent and project contractors shall protect Caltrans and Lassen County assets, including but not limited to, road culverts and drainage inlets and water channels within road easements and right of way on roads down-slope of the project site or roads used to access the project site. This may include, but is not limited to, adding temporary debris control features to keep drainage assets from clogging.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

Wildfire:

Mitigation Measure FIRE-1: Prescribed (Rx) burn plan: Mitigation measures will include and be dependent upon:

- Rx burns and pile burns can be scheduled for fall months into spring. Burn days will be dependent upon California Air Resources Board (CARB) forecasts, Cal Fire approval and will comply with all local and state regulations.
- Rx broadcast burns will coincide with ecological emergence to promote a heterogeneous forest structure, reduce the abundance of invasive and limit impact to desired native species.
- To reduce impacts to surrounding community's Rx burn timing, planning and implementation will all be dictated by smoke management mitigations through CARB.

- Prescribed burns will be coordinated with other planned burns in the area to avoid cumulative impacts to air quality and wildfire safety.

Schedule: Prior to and during project implementation

Responsible Party: Project partners implementing the project and project contractors

Verification of Compliance:

Monitoring Party: Project partner implementing the project.

Initials: _____

Date: _____

A copy of the completed MMRP will be forwarded to: Honey Lake Valley Resource Conservation District (HLVRCD), 170 Russell Ave., Susanville, CA 96130.

APPENDIX B

Comments and Response to Comments



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



May 1, 2024

Kelsey Marks
District Manager
Honey Lake Valley Resource Conservation District
170 Russell Avenue, Suite C
Susanville, CA 89509
kmarks@honeylakevalleyrcd.us

**SUBJECT: LASSEN COUNTY WILDFIRE RECOVERY PROJECT,
STATE CLEARINGHOUSE NUMBER 2024040088, LASSEN COUNTY**

Dear Kelsey Marks:

The California Department of Fish and Wildlife (CDFW) has reviewed the Honey Lake Resource Conservation District (Lead Agency) Draft Initial Study and Mitigated Negative Declaration (ISMND), for the above-referenced project (Project). CDFW appreciates this opportunity to provide comments on the Project, pursuant to the California Environmental Quality Act (CEQA) Guidelines¹.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the state (Fish and G. Code, §§ 711.7, subd. (a) & 1802; Public Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its Trustee Agency capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 2

need to exercise regulatory authority as provided by the Fish and Game Code. Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by state law, of any species protected under the California Endangered Species Act (CESA) (Fish and G. Code, § 2050 et seq.), or state listed rare plants pursuant to the Native Plant Protection Act (NPPA; Fish and G. Code § 1900 et seq.) authorization as provided by the applicable Fish and Game Code will be required.

Project Description

The Project summary, as described in the ISMND, is as follows:

"The project will result in up to 28,650 acres of private non-industrial timberlands and woodlands receiving site preparation to remove dead and dying trees and shrubs and regrowth of competing vegetation resulting from the Hog, Sheep, Sugar, and Dixie Fires, planting of seedlings to reforest areas prepped as a result of this project and other areas previously cleared by private landowners. The project proposes removal of standing dead biomass material for site preparation in burned stands of Eastside Pine (EPN), Sierra Mixed Conifer (SMC), and Montane Hardwood Conifer (MHC) habitats (See Project Vicinity and Project Area Map). Clearing dead and dying trees which will fall down over time and become a fuel hazard to the reforested area is a key step in ensuring successful regeneration and protecting the investment from reburning. Long-term, downed fire killed trees inhibit reforestation treatments, increase watershed degradation, decompose, and increase fuel loads for a highly probable reburn event. Both occurrences release excess greenhouse gases into the atmosphere. Projects will be implemented within the project area over several years as funding becomes available..."

Comments and Recommendations

CDFW finds that most of the proposed Avoidance and Minimization Measures (AMM's) included in the ISMND are adequate for avoiding and minimizing potentially significant impacts to biological resources. However, CDFW offers the following comments and recommendations to assist the Lead Agency in further minimizing and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife.

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 3

Nesting Birds

The Project includes removal of hazard trees (defined as dead and dying trees) and shrubs which may provide suitable nesting habitat for migratory birds, especially cavity nesting birds; however, the ISMND does not include any AMM's to avoid or reduce potentially significant impacts to nesting birds.

Nesting migratory birds, if present, could be directly or indirectly impacted by Project activities. Direct effects include mortality from pruning tree limbs and/or felling trees containing eggs or young. Indirect effects could include nest abandonment by adults in response to higher-than-ambient noise levels, human encroachment, visual disturbance and/or a reduction in food availability for young birds due to disruption of feeding behavior of adult birds. Including the following AMM into the final ISMND would ensure that potential impacts to nesting birds are less than significant.

To avoid impacts to all nesting birds and/or raptors protected under Fish & Game Code Sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act, one of the following should be implemented:

- a. Construction activities should occur between September 1 and January 31, when birds are not anticipated to be nesting; or
- b. If construction activities are to occur during the nesting season, a pre-construction nesting bird survey should be conducted by a qualified biologist to identify any active nests adjacent to the Project area.

Pre-construction surveys should begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey should consider acoustic impacts and line of sight Project disturbances to determine a sufficient survey radius. A nesting bird survey report should be prepared and, at a minimum, the report should include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, presence of predators).

If an active nest is located during pre-construction surveys, a non-disturbance buffer should be established around the nest by a qualified biologist in

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 4

consultation with CDFW and U.S. Fish and Wildlife Service to comply with Fish & Game Code Sections 3503 and 3503.5 and the Migratory Bird Treaty Act. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified during the survey, as well as ongoing monitoring by biologists.

Nesting bird surveys should be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction nesting bird survey, the site should be resurveyed.

Bats

While the ISMND offers Mitigation Measure BIO-WILD-6 for the avoidance and protection of bats that may utilize caves or cave-like structures, AMM's are not offered for individual roosting bats. Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish and Game Code, Section 4150; California Code of Regulations, Section 251.1).

Trees that contain cavities, crevices and/or exfoliated bark have high potential to be used by various bat species. Since this Project includes tree removal and may impact trees with the above-referenced characteristics, a thorough pre-construction survey should be conducted by a qualified biologist to determine if bat roosting features are present prior to tree removal. Trees with potentially suitable roosting features should be clearly marked by a qualified biologist and the following should occur prior to tree removal:

- 1) To avoid impacts to roosting bats, removal of marked trees 12" diameter at breast height (DBH) or greater should occur only during the following time frames and subject to the following weather conditions, or as otherwise approved/recommended by a qualified biologist:
 - Between March 1 (or after evening temperatures rise above 45°F, and/or no more than ½" of rainfall within 24 hours occurs), and April 15; and
 - Between September 1 and October 15 (or before evening temperatures fall below 45°F, and/or more than ½" of rainfall within 24 hours occurs).

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 5

2) Marked trees greater than 12" DBH shall be removed using a two-step process to allow bats the opportunity to abandon the roost prior to removal. The two-sept removal process is as follows:

- Day 1: Remove small-diameter trees, brush, and non-habitat features of large trees (branches without cavities, crevices, or exfoliating bark) to create noise and vibration disturbance on the tree and to alter the air flow and temperature around the roost feature thus encouraging bats to vacate roost features on their own. The tree shall then be left for 24 hours to allow the bats to move to another roost site. Excavators, grinders, or other heavy equipment shall not be used for first day trimming of habitat trees.
- Day 2: Remove the remainder of the tree. If bats may be in branches that can be removed from the tree and set aside, cut the branches off intact and set them upright against trees away from the Project site to allow any bats present to passively escape.

This two-step process changes the microhabitat of the area, causing bats to vacate under their own volition, therefore minimizing direct and indirect impacts to bat species.

Western Bumble Bee

On September 30, 2022, the California Fish and Game Commission accepted a petition to list western bumble bee (WBB; *Bombus occidentalis*) as endangered under CESA, advancing the species to the candidacy stage of the CESA listing process. Candidate species are granted full protection under CESA during this period. Take of any endangered, threatened, or candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). Additionally, WBB has a state ranking of S1/S2, of which are imperiled/critically imperiled and extremely rare (often five or fewer populations) and is listed as an invertebrate of conservation priority under the [Terrestrial and Vernal Pool Invertebrates of Conservation Priority](#)².

Suitable WBB habitat includes areas of woodlands, grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. WBB primarily nest in late February through late November in abandoned

² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=149499&inline>

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 6

underground small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs^{3,4}. Overwintering sites utilized by WBB mated queens include soft, disturbed soil⁵ or under leaf litter or other debris. Post forest-fire environments have been linked to increases in bumble bee probability⁶ therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local WBB populations.

Without appropriate AMM's for WBB, direct mortality and potentially significant indirect impacts associated with ground- and vegetation-disturbing activities may occur as a result of the Project. Indirect impacts may include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, and a reduction in health and vigor of eggs, young and/or queens.

Due to potentially suitable habitat throughout the Project area and the potential for significant impacts to WBB, CDFW recommends including AMM's for WBB in the ISMND and aligning the measures with survey considerations outlined in the [June 2023 Survey Considerations for California Endangered Species Act \(CESA\) Candidate Bumble Bee Species](#)⁷.

Water Drafting

ISMND offers Mitigation Measure BIO-AQUA-4, which states the project will, *"Survey all proposed water drafting locations for sensitive and listed amphibians and receive approval from a biologist prior to use. Use drafting devices with 2 millimeter or less screening, and place hose intake into bucket in the deepest part of the pool. Use a low velocity water pump and do not pump ponds to low levels beyond which they cannot recover quickly (approximately 1 hour)."* However, for the protection of sensitive and listed amphibians that may be present, AMM's are not offered for egg mass tadpole life stages stemmed from

³ Williams, P. H., R. W. Thorp, L. L. Richardson, and S.R. Colla. 2014. Bumble bees of North America: An Identification guide. Princeton University Press, Princeton, New Jersey. 208pp.

⁴ Hatfield, R., Jepsen, S., Thorp, R., Richardson, L., Colla, S. & Foltz Jordan, S. 2015. *Bombus occidentalis*. The IUCN Red List of Threatened Species 2015: e.T44937492A46440201. <https://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T44937492A46440201.en>.

⁵ Goulson, D. 2010. Bumblebees: behaviour, ecology, and conservation. Oxford University Press, New York. 317pp.

⁶ Johnson, S. A., Jackson, H. M., Noth, H., & M'Gonigle, L. K. (2023). Positive impact of postfire environment on bumble bees not explained by habitat variables in a remote forested ecosystem. *Ecology and Evolution*, 13, e9743

⁷ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline>

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 7

water level reductions. Foothill yellow-legged frog (*Rana boylei*) is a Priority 1 Species of Special Concern (SSC, Northwest/North Coast Clade) and threatened under CESA (North Fork Feather River and Upper Feather River Watershed); Cascades frog (*Rana cascadae*) a candidate species under CESA. Priority 1 SSC are those taxa that are likely to experience severe future declines and/or extirpation without immediate conservation actions. CEQA provides protection not only for ESA or CESA listed species, but for any species including, but not limited to, SSC that can be shown to meet the criteria for state listing.

Foothill yellow-legged frog and Cascades frog have ranges that extend adjacent to the project area and have the potential to occur within the project area. Both species reproduce by laying eggs in shallow, slow moving waters, between March and mid-August^{8,9}. Flow rate reductions of 50% or more have a significant dewatering effect on the edges of a stream where egg masses and tad poles have potential to be present.

CDFW recommends revising BIO-AQUA-4 to include a drafting rate restriction of no more than 50 percent of surface flows, similar to the language included in Mitigation Measure BIO-AQUA-5. This will ensure that shallow waters retain enough volume to support any amphibian egg masses or tadpoles that may be present. CDFW further recommends revising the language to require surveys be conducted by a biologist familiar with the life-stages of these species.

California Endangered Species Act

Please be advised that a [CESA Incidental Take Permit](#)¹⁰ must be obtained if the Project has the potential to result in "take" (hunt, pursue, catch, capture, kill, or attempt thereof) of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project has the potential to result in take of a CESA-listed species, early consultation is encouraged, as significant modification to the Project may be necessary to minimize and fully mitigate impacts as required by Fish and Game Code Section 2081 (b) (2).

⁸ <https://californiaherps.com/frogs/pages/r.boylei.html>

⁹ <https://californiaherps.com/frogs/pages/r.cascadae.html>

¹⁰ <https://wildlife.ca.gov/Conservation/CESA/Permitting>

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 8

Additionally, some AMM's only refer to federally listed and sensitive species, and omit state listed and sensitive species. For example, Mitigation Measure BIO-BOT-2 states, "*New Sensitive Plant Discoveries - In the event any new populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) plant, lichen or fungi species are discovered during the various phases of the project, the area will be flagged and avoided until a botanist is consulted for mitigation measure applicability.*" CDFW recommends including reference to state listed and sensitive plants species in addition to federally listed and sensitive plant species.

Herbicide Use

The ISMND indicates the use of herbicides for emergent brush and noxious weed treatment. While herbicide use is sometimes most efficient for control of vegetation, CDFW discourages their use, especially in areas that provide habitat for CESA-listed bumble bees. If CESA-listed bumble bees occur on the Project area, CDFW recommends implementing alternatives to herbicide use, as outlined in the ISMND.

If herbicides are used, the ISMND should specify specific methods for use to avoid or minimize direct and indirect impacts to bumble bees (i.e. applying herbicides outside of the blooming season). CDFW strongly encourages the preparation and implementation of a weed prevention and control plan. When applying herbicides, CDFW recommends:

- Following the best management practices described by the [Guidance to Protect Habitat from Pesticide Contamination¹¹](#).
- Avoid using pesticides marked with the US Environmental Protection Agency's bee hazard icon.
- Avoid spraying pesticides onto any flowering plant.
- Use pesticides with a short residual toxicity to bees; bee pesticide toxicity can be checked via UC ANR's [Bee Precaution Database¹²](#).
- Use targeted application instead of broadcast spraying whenever possible.
- Avoid mixtures of pesticides as they are only evaluated in scenarios in which they are not mixed; thus, potentially harmful synergies are unknown.

¹¹ https://xerces.org/sites/default/files/2019-10/16-024_01_XercesSoc_Guidance-to-Protect-Habitat-from-Pesticides_web.pdf

¹² <https://ipm.ucanr.edu/bee-precaution-pesticide-ratings/>

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 9

- All pesticide application must be conducted by a Licensed and Certified Pesticide Applicator and should be used as directed by the manufacturer.

Additional guidance on this topic is provided by the [United States Environmental Protection Agency](#)¹³ and the [California Department of Pesticide Regulation](#)¹⁴.

Erosion Control

The ISMND indicates a need for erosion control. CDFW recommends using erosion control materials (e.g., geotextiles, fiber rolls) only made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves. Synthetic (plastic or nylon) materials are strongly discouraged and should not be used.

Pre-Construction Surveys

Many of the AMM's listed in the ISMND infer sensitive species will be protected if 'discovered' but do not include targeted or general pre-construction surveys conducted by a biologist specifically for the purpose of detecting sensitive species and/or their habitats. For example, Mitigation Measure BIO-BOT-2 states, *"New Sensitive Plant Discoveries - In the event any new populations of federally threatened, endangered, proposed, and candidate, and State threatened, endangered, and rare (Ranks 1 and 2) plant, lichen or fungi species are discovered during the various phases of the project, the area will be flagged and avoided until a botanist is consulted for mitigation measure applicability."* However, there is no requirement to conduct pre-construction or appropriately timed botanical surveys within the ISMND.

If appropriately timed botanical surveys and/or pre-construction surveys are planned for botanical species or other biological resources, CDFW recommends including such measures in the ISMND. If pre-construction surveys are not planned, CDFW recommends including pre-construction surveys, as they are directly correlated with the implementation and success of the AMM's included throughout the ISMND.

Where pre-construction surveys are specifically indicated in the ISMND, such as for amphibians, it is unclear what survey methods will be used. CDFW recommends including survey methods for each biological resource. Please visit

¹³ <https://www.epa.gov/pollinator-protection/epa-actions-protect-pollinators>

¹⁴ <https://www.cdpr.ca.gov/docs/enforce/pollinators/>

Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 10

CDFW's [Survey and Monitoring Protocols and Guidelines](#)¹⁵ for accepted survey protocols for some biological resources, including rare plants and amphibians. Acceptable species-specific survey procedures may also be developed in consultation with CDFW and other applicable resource agencies.

Lake and Streambed Alteration

The ISMND indicates the use of water drafting for project operations, however, does not indicate authorization for potential impacts to bed, bank, or channel. Fish & Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following:

1. Substantially divert or obstruct the natural flow of the bed, channel, or bank of any river, stream, or lake; or
2. Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
3. Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

To obtain more information about the 1602 Notification process, please access [the Lake and Streambed Alteration Program](#)¹⁶.

Submitting Data

CEQA requires that information in environmental documents is incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Public Resources Code, § 21003, subd. (e).) Accordingly, please report any observation of special status species to the CNDDDB. Use this link to access the [CNNDB field survey form](#)¹⁷ and this link for additional information on the type of [information reported to CNDDDB](#)¹⁸.

Future CEQA Consultation

CDFW would like to emphasize that our staff remain available for consultation at every stage of the project development process. CDFW strongly encourages the Lead Agency to continue to consult with CDFW before and during the

¹⁵ <https://wildlife.ca.gov/Conservation/Survey-Protocols>

¹⁶ <https://wildlife.ca.gov/Conservation/Environmental-Review/LSA>

¹⁷ <https://nrm.dfg.ca.gov/fieldSurvey/default.aspx>

¹⁸ <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>


Kelsey Marks, District Manager
Honey Lake Resource Conservation District
May 1, 2024
Page 11

development of future projects and their equivalent CEQA documents, specifically regarding the analyses of biological resources and the formulation of avoidance, minimization, and mitigation measures for such resources. Engaging with CDFW early-on plays a critical role in allowing our agency to fulfill our mandate to conserve California's valuable fish and wildlife resources and will simultaneously aid the Lead Agency in an efficient and comprehensive CEQA review.

Conclusion

CDFW appreciates the opportunity to comment on the Project to assist the Lead Agency in adequately analyzing and minimizing impacts to biological resources. If you have any questions regarding the information above, or for future CEQA consultation requests, please contact Colton Trent, Environmental Scientist, by email at R1CEQARedding@wildlife.ca.gov.

Sincerely,

DocuSigned by:

1D82ADE7303A474...

Tina Bartlett, Regional Manager
Northern Region

cc: State Clearinghouse
State.Clearinghouse@opr.ca.gov

Colton Trent
California Department of Fish and Wildlife
R1CEQARedding@wildlife.ca.gov

May 14, 2024

Tina Bartlett, Regional Manager
Northern Region
California Department of Fish and Wildlife (CDFW)
601 Locust St.
Redding, CA 96001

Subject: CDFW Comment Letter regarding the Lassen County Wildfire Recovery Project State Clearinghouse #2024040088, Lassen County

Dear Tina Bartlett:

Thank you for your review and comments regarding the Lassen County Wildfire Recovery Project (State Clearinghouse #2024040088). Based on your comments CDFW is concerned as to whether there are adequate protections for nesting birds, bats, and bumblebees, as well as clarification regarding pre-implementation surveys.

CDFW has suggested the following additional mitigation measures to protect nesting birds.

Nesting Birds

- a) Construction activities should occur between September 1 and January 31, when birds are not anticipated to be nesting,; or
- b) If construction activities are to occur during the nesting season, a pre-construction nesting bird survey should be conducted by a qualified biologist to identify any active nests adjacent to the Project area. If an active nest is located during pre-construction surveys, a non-disturbance buffer should be established around the nest.

Response: The project involves mastication, cutting, and removal of standing dead/dying biomass (<11” dbh) and hand thinning of small diameter conifers described in Section 1.1 of the Project Description (pg. 6 of the IS-MND). This project description has been modified in the Final IS-MND to more clearly state the proposed action related to tree/shrub treatments:

1.1. Mastication and Hand Treatment of Brush and Small Trees

Mastication and hand treatments involve the pulverization and removal of standing dead/dying biomass. Dead/dying trees and brush that are over 18” in height and less than 11” diameter at breast height (dbh) will be treated. Brush greater than 18” in height will be treated. Snags less than 12” dbh will be treated, unless they show signs of use by wildlife or are marked with an “L”, “W”, or tag identifying them as a “Wildlife Tree”. Woody debris less than 12” diameter which extends greater than 12” from the ground will be treated. Areas with concentrations of activity fuels (i.e. logging slash) will be treated.

Lassen County is snow country. Limiting treatments to September to January as described in CDFW Nesting Birds #1 would drastically decrease the pace and scale of the project as some year's project sites can be inaccessible from November to June. The longer it takes to reforest burned areas, the more labor intensive and expensive it becomes, and the likelihood of converting forest to shrubland increases. Once converted to shrubland, the site will no longer provide habitat for forest nesting birds.

Conducting pre-activity bird nesting surveys may result in identifying the occurrence of some nesting activity that may be disturbed or interrupted by project implementation and a likelihood exists, even with the surveys, that nesting success may be disrupted due to project activities; however, the consequences are short-term and not expected to lead to a significant decline in bird population or the potential for listing. Additionally, trees less than 11" dbh do not provide great nesting habitat. Further, the following mitigation measures provide additional protections for nesting birds through the application of limited operating periods where these federally/state listed, sensitive, or species of special concern exist in the project area: BIO-WILD-5, *Bald Eagles*, BIO-WILD-16, *Northern Goshawks and California Spotted Owls*, and BIO-WILD-17, *Great Gray Owls*. Other mitigation measures being applied also protect large snags and call for the retention of deformed legacy trees to provide important nesting habitat: BIO-WILD-2 *Pre-fire Snags and Downed Logs*, prioritizes large-diameter (>30" dbh at stump height) and old-growth conifer snags or legacy trees with deformities such as cat faces, broken tops, hollows, or cavities for retention, BIO-WILD-3 *Hardwood snags*, call for the retention of all hardwood snags, and BIO-WILD-15, *Snags*, stipulates retention of the four largest snags per acre. Therefore, nesting habitat will be protected, will still be present post-treatment, and the area will be more resilient to future wildfires thereby improving habitat conditions for forest nesting birds over the long-term.

Due to these considerations, the Honey Lake Valley RCD finds that existing mitigation measures adequately protect nesting habitat for endangered, threatened, and species of special concern, and additional mitigation measures for nesting birds will decrease the pace and scale of the project. Implementation of this project as proposed will not have significant direct or indirect impacts on nesting birds.

CDFW has suggested the following additional mitigation measures:

Bats:

1. Pre-construction marking of leave trees with potentially suitable roosting features by a qualified biologist.
2. To avoid impacts to roosting bats, removal of marked trees 12" dbh or greater should occur only during the following time frames and subject to the following weather conditions, or as otherwise approved/recommended by a qualified biologist.

- a. Between March 1 (or after evening temperatures rise above 45 F and/or no more than 1/2" of rainfall within 24 hours occurs), and April 15;
 - b. Between September 1 and October 15 (or before evening temperatures fall below 45 F, and/or more than 1/2" of rainfall within 24 hours occurs).
3. Marked trees greater than 12" dbh shall be removed using a two-step process to allow bats the opportunity to abandon the roost prior to removal. The two step removal process is as follows:
- a. Day 1: Remove small-diameter trees, brush, and non-habitat features of large trees (branches without cavities, crevices, or exfoliating bark), to encourage bats to vacate. The trees and any suitable branches shall then be left for 24 hours to allow the bats to vacate. Excavators, grinders, or other heavy equipment shall not be used for first day trimming of habitat trees.
 - b. Day 2: Remove the remainder of the tree. If branches contain suitable bat habitat, set aside, cut the branches off intact and set them upright against trees away from the project site to allow any bats present to passively escape.

Response: This project will only treat trees <11" dbh, and therefore CDFW suggested mitigation measures are not necessary. As discussed above, mitigation measures BIO-WILD-2, BIO-WILD-3, and BIO-WILD-15 will protect the majority of the trees with potentially suitable roosting features for bats.

Due to these considerations, the Honey Lake Valley RCD finds that additional mitigation measures for bats are not necessary, and implementation of this project as proposed will not have significant direct or indirect impacts on bat species.

CDFW has suggested the following mitigation measure to protect the Western bumblebee:

Western bumblebee:

1. Survey for bumblebees prior to implementation using the June 2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Species protocol.

Response: Honey Lake Valley RCD agrees with CDFW that an additional mitigation measure is warranted to ensure the protection of bumblebee nests and hibernacula and has added a new mitigation measure in the final document:

Mitigation Measure BIO-WILD 19: *Western bumblebee* - Suitable bumblebee habitat within treatment areas, including areas of woodlands, grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows will be surveyed prior to implementation using "June 2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" as a guide. Nest sites or hibernacula discovered during implementation shall be protected with equipment exclusion buffers of 25 feet.

An additional mitigation measure has been added and the project description has been modified in the final IS-MND to specify that herbicide use will take place in late winter (Feb./Mar.) prior to the flowering period, or late fall (Oct./Nov.), after the flowering period, to protect pollinators.

Mitigation Measure BIO-WILD-20: *Herbicides and pollinators* – Herbicide use will be limited to late winter (February – March) prior to the flowering period, and fall (October – November), after the flowering period, in order to protect pollinator. Herbicides with the EPA bee hazard icon, or high residual toxicity to bees, will not be used, and flowering plants will be avoided.

Pre-Construction Surveys:

Botanical and wildlife surveys for the species identified in the Botany, Invasive Species, Aquatics, and Wildlife mitigation measures will be performed prior to project implementation. These surveys will be conducted using CDFW Survey and Monitoring Protocols and Guidelines. Additional language has been added to the final IS-MND to clarify this and the following Mitigation Measure has been added:

Mitigation Measure BIO-WILD-21: Pre-implementation surveys – Surveys will be conducted for the species identified in the BIO-WILD mitigation measures, and BIO-AQUA #12 and #13 (Frogs) prior to project implementation using California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines. <https://wildlife.ca.gov/Conservation/Survey-Protocols>

Drafting Rates:

Mitigation measure BIO-AQUA-4 has been modified to include a drafting rate restriction to not exceed 50% of flow:

Mitigation Measure BIO-AQUA-4: *Water drafting site survey and approval-* Survey all proposed water drafting locations for sensitive and listed amphibians and receive approval from a biologist prior to use. Use drafting devices with 2 millimeter or less screening, and place hose intake into bucket in the deepest part of the pool. Use a low velocity water pump, ***do not exceed 50% of the flow***, and do not pump ponds to low levels beyond which they cannot recover quickly (approximately 1 hour).

It should be noted that BIO-AQUA-5 already includes this requirement for fish bearing streams.

Synthetic Materials:

Mitigation measure BIO-AQUA-10 has been modified to include the restriction of synthetic materials for erosion control:

Mitigation Measure BIO-AQUA-10: *Fiber netting and Frogs* - Tightly woven fiber netting, ***synthetic materials***, or similar material shall not be used for erosion control or other purposes

within suitable habitat to ensure the foothill yellow-legged frog, Sierra Nevada yellow-legged frog, or cascade frog do not get trapped, injured, or killed.

CA Sensitive Species:

Mitigation measure BIO-BOT-2 has been modified to more clearly identify California sensitive plant species:

Mitigation Measure BIO-BOT-2: *New Sensitive Plant Discoveries* - In the event any new populations of federally threatened, endangered, proposed, and candidate, ***and State threatened, endangered, and sensitive (California Native Plant Society Rare Plants Ranks 1 and 2) plant, lichen or fungi species*** are discovered during the various phases of the project, the area will be flagged and avoided until a botanist is consulted for mitigation measure applicability.

Lake and Streambed Alteration Agreements:

As project layout begins prior to implementation, occasionally there is an unforeseen need for a Lake And Streambed Alteration Agreement, in most cases for a temporary stream crossing. Per mitigation measure BIO-HYD-3, which was included in the draft IS-MND, project proponents will coordinate with CDFW to ensure compliance with Section 1602 of the Fish and Game code prior to any riparian vegetation removal or work within the bed, bank, or channel of a stream, creek, or river:

Mitigation Measure HYD-3: *Streambed Alteration Permit* – Before any riparian vegetation removal or work within the bed bank or channel of a stream, creek, or river, including temporary watercourse crossings, project proponents will coordinate with the California Department of Fish and Wildlife to ensure compliance with Section 1602 of the Fish and Game Code.

The Honey Lake Valley will be having a public hearing during the regularly scheduled RCD Board meeting on May 23, 2024 at 5:30 pm at the USDA Service Center, 170 Russell Ave., Susanville, CA to review and approve the final IS-MND for the Lassen County Wildfire Recovery Project. The Honey Lake Valley RCD and Lassen Fire Safe Council, Inc. are committed to assisting state agencies to meet the objectives of Governor Newsom’s goal to increase the pace and scale of forest health projects to meet the goals of the Forest Carbon Plan and Shared Stewardship Agreement, and Executive Order N-82-20 in October 2020, directing state agencies to accelerate actions to combat climate change, protect biodiversity, and build resilience nature-based solutions, including improved forest management.

The Honey Lake Valley RCD appreciates your review and comments on the Lassen County Wildfire Recovery Project, and values CDFW as a partner. Please let us know if you have any questions or need additional information.

Honey Lake Valley Resource Conservation District

170 Russell Ave., Suite C.
Susanville, CA 96130
(530)252-7271

www.honeylakevalleyrcd.us



Sincerely,

A handwritten signature in black ink that reads "Kelsey Marks".

Kelsey Marks
Honey Lake Valley RCD District Manager

Cc: Honey Lake Valley RCD Board of Directors
Cade Mohler, LFSC Managing Director

PREPARERS OF THIS DOCUMENT

Tim Keesey
Ecologist/Registered Professional Forest (RPF #3134)
TCK Ecological Consulting
P.O. Box 9335
Chico, CA 95927
(530) 260-0934
timkeesey@tckecological.com

Kelsey Siemer, District Manager
Honey Lake Valley Resource Conservation District
170 Russell Ave., Suite C
Susanville, CA 96130
(530) 257-7271
kmarks@honeylakevalleyrcd.us

Cade Mohler (RPF #2986), Managing Director
Lassen Fire Safe Council, Inc.
P.O. Box 816
Susanville, CA 96130

EXPERTS CONSULTED

Specialists in Aquatics and Fisheries, Wildlife Biology, Botany, Archaeology, Climate Change, Hydrology, Fire and Fuels, Soils, Recreation, and Scenery from the:

Brandie Cooper
Natural Resources Director
Susanville Indian Rancheria
745 Joaquin St.
Susanville, CA 96130
bcooper@sir-nsn.gov
(530) 251-5636

Don Hankins
Professor of Geography and Planning
Chico State University
Butte Hall, Room 539
(530)-898-4104
dhankins@csuchico.edu

Ryan Hilburn
Chief Forester, RPF #2782
W.M. Beaty and Associates
845 Butte St.
Redding, CA 96001
(530) 243-2783

Ivan Houser
Lassen/Modoc/Plumas Unit Forester, RPF #2649
CALFIRE
697-345 CA-36
Susanville, CA 96130
(530) 257-8503
Ivan.houser@fire.ca.gov

Karine Hunt
Vegetation Management Specialist
Sierra Pacific Industries (SPI)
11605 Reading Rd.
Red Bluff, CA 96080
11605 Reading Rd.
Red Bluff, CA 96080
(530) 378-8307

Adam Mattos
Lassen-Modoc-Unit Assistant Chief of Operations
CAL FIRE
697-345 CA-36

Susanville, CA 96130
(530) 257-4171

Phil Nemir (RPF #1666)
P.O. Box 1717
Susanville, CA 96130
(530) 257-2294
philnemir@hotmail.com

Mark Pustejovsky
Forester-Regen Manager, RPF #2583
Sierra Pacific Industries (SPI)
11605 Reading Rd.
Red Bluff, CA 96080
(530) 527-9620

Silas Rojas
Emergency Services Chief
Lassen County Office of Emergency Services (OES)
697-345 CA-36
Susanville, CA 96130
(530) 257-8504

Tiffany Russell
Rangeland Watershed Initiative Partner Biologist
Point Blue/Natural Resource Conservation Service (NRCS) – Susanville Office
170 Russell Ave., Suite C
Susanville, CA 96130
(530) 257-7272
trussell@pointblue.org

Glenn Schall
Lassen-Plumas-Modoc Unit Vegetation Management Program (VMP), RPF #2958
CAL FIRE
697-345 CA-36
Susanville, CA 96130
(530) 257-4171

Anne Stephens
District Conservationist
Natural Resource Conservation Service (NRCS) – Susanville Office
170 Russell Ave., Suite C
Susanville, CA 96130
(530) 257-7272
Anne.stephens@ca.usda.gov

Todd Swickard
Owner
Five Dot Land & Cattle Co.

707-005 U.S. Hwy 395
Standish, CA 96128
(530) 254-6987

Isaac Thornton
Lassen-Modoc Unit Fire Captain
CAL FIRE
697-345 CA-36
Susanville, CA 96130
(530) 257-4171

Dan Varney
District Fuels Management Officer (FMO)
477-050 Eagle Lake Rd.
Susanville, CA 96130
Lassen National Forest, Eagle Lake Ranger District
(530) 257-4188
Daniel.varney@usda.gov

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