

Notice of Determination

Appendix D

To:

Office of Planning and Research
U.S. Mail: Street Address:
P.O. Box 3044 1400 Tenth St., Rm 113
Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk
County of: Lassen
Address: 220 S. Lassen St., Annex
Susanville, CA 96130

From:

Public Agency: Honey Lake Valley RCD
Address: 1516 Main Street
Susanville, CA 96130
Contact: Kelsey Siemer
Phone: (530) 260-0067

Lead Agency (if different from above):
Address:
Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2024030580

Project Title: Lassen National Forest (LNF) Eagle Lake Ranger District Hazard Tree Management

Project Applicant: Lassen County Fire Safe Council, Inc.

Project Location (include county): LNF Eagle Lake Ranger District (ELRD), Lassen County

Project Description:

The Dixie Fire (2021) resulted in expansive stretches of fire-killed and fire-damaged trees adjacent to National Forest System roads, trails, and facilities managed by LNF ELRD that now present a safety hazard. The primary purpose of this project is to provide for the safe use of National Forest System roads, trails, and facilities to the public, staff, firefighters, emergency response personnel, law enforcement, private landowners, contractors, special use permit holders, and others.

This is to advise that the Honey Lake Valley Resource Conservation District has approved the above (Lead Agency or Responsible Agency)

described project on 2/27/2025 and has made the following determinations regarding the above described project.

- 1. The project will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA. A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan was adopted for this project.
5. A statement of Overriding Considerations was adopted for this project.
6. Findings were made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

1516 Main Street, Susanville, CA 96130

Signature (Public Agency) Title: Chairman

Date: 3/4/2025 Date Received for filing at OPR:

FILED

MAR - 4 2025

JULIE BUSTAMANTE LASSEN COUNTY CLERK
By Julie Bustamante, Deputy

Authority cited: Sections 21083, Public Resources Code. Reference Section 21000-21174, Public Resources Code.

Revised 2011

**Initial Study-Mitigated Negative Declaration
for the proposed
Lassen National Forest (LNF) Eagle Lake Ranger District (ELRD)
Hazard Tree Management Project
Lassen County, California**



Prepared by:

Honey Lake Valley Resource Conservation District
Lassen County, CA

February 2025

FILED

MAR - 4 2025

JULIE BUSTAMANTE
LASSEN COUNTY CLERK

By S. Howe, Deputy

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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 15, 2024, and is being circulated for a 30-day state agency and public review period. The review period ends on April 13, 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, 1516 Main Street, 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 has been 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 March 15, 2024 and ended on April 13, 2024.

The requirements for providing an NOI are found in CEQA Guidelines §15072. These guidelines require HLVRCDD 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.

HLVRCDD 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.honeylakevalleyrccd.us/> , and the project is posted on <https://ceqanet.opr.ca.gov/> .

One comment letter was received from the California Department of Fish and Wildlife (CDFW). The Honey Lake Valley RCD has considered CDFW's comments, responded, and added additional mitigation measures to minimize potential impacts to wildlife and botanical resources as a result of the proposed action.

Project Description and Environmental Setting

PROJECT LOCATION

The project area is located on +/-6,750 acres of public land managed by the U.S. Department of Agriculture, Lassen National Forest (LNF), Eagle Lake Ranger District (ELRD) in Lassen County, CA impacted by the Dixie Fire (2021). The project area is within the: Lower Butte Creek (5526.360103); Middle Butte Creek (5526.360102); Upper Butte Creek (5526.360101); Triangle Lake (8637.310104); Pine Lake (8637.310101); Silver Lake (8637.200105); Bogard (8637.310102); Lower Robbers Creek (5518.450101); Moonlight Pass (5518.450400), Mountain Meadows Creek (5518.450300), Upper Willard Creek (8637.200301), and Lower Willard Creek (8637.200302) watersheds. The legal location is:

Mount Diablo Base and Meridian (MDBM) Township 27North, Range 9 East, portions of Sections 1, 2, 11-13; T27N, R10E, portions of Section 18; T28N, R10 E, portions of Sections 3, 4, 9, 10, 14, 15, 22 & 23; T29N, R09E, portions of Sections 5, 6, & 8; T29N,

R10E, portions of Sections 13, 14, 21-23, 27, 28, 33 & 34; T31N, R06E, portions of Sections 1, 2, & 12; T31N, R07E, portions of Sections 5, 6, 8-15, 17, & 23-26; T31N, R08E, portions of Sections 5-8, 17-20, 30, & 31; T32N, R06E, portions of Sections 23, 24, 26, 27, 34, & 35; T33N, R06E, portions of Sections 9, 10, 15, & 16.

The project is fairly steep with elevation ranging from 5,160 – 7,300 feet, and average annual precipitation of 27 - 35 inches. The majority of the project area burned at medium to high severity during the Dixie Fire in 2021.

BACKGROUND AND NEED FOR THE PROJECT

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 fire resulted in expansive stretches of fire-killed and fire-damaged trees adjacent to National Forest System roads, trails, and facilities managed by LNF ELRD that now present a safety hazard. The primary purpose of this project is to provide for the safe use of National Forest System roads, trails, and facilities to the public. Forest Service staff, firefighters, emergency response personnel, law enforcement, private inholding landowners, contractors, special use permit holders, and others. Portions of the project area also contain hazard trees requiring abatement due to mortality or damage by insects and disease, drought, or other stressors either before or after the fire. Many of these trees are structurally unsound and are likely to fall within the next several years, posing a serious risk of injury or death to people using roads, trails, and facilities in the area. If hazard trees are left unabated, they may fall on roads, trails and facilities and either cause direct injury or death to people (tree falls directly on a person) or indirect injury or death (for example, a tree falls across a road and a driver strikes the downed tree after coming around a blind curve). Providing a safe environment for both public and administrative use of affected roads, trails, and facilities, is a priority for the Forest Service. The Chief of the Forest Service and the Regional Forester repeatedly stress that the safety of the public and employees is of central concern. Therefore, identification and mitigation of hazard trees on National Forest System lands is necessary to fulfill the Forest Service's mission.

Because it is impossible to accurately predict whether and when a particular tree will strike a road, trail, or facility, the Forest Service made a policy choice to take a conservative approach to hazard tree abatement, erring in favor of being overinclusive in identifying and removing trees rather than being underinclusive and risking injury or death to forest users. Therefore, integral parts of the project's purpose are to:

- Treat a broad range of roads (such as road maintenance levels 2, 3, 4, and 5), trails, and facilities.
- Identify trees for removal that have a genuine risk of falling in the next several years, even if that risk is not a certainty (trees with a "moderate" or "high" risk rating according to the Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region (Angwin et al. 2022)).
- Adopt an analysis and treatment area surrounding roads that encompasses the vast majority of hazard trees likely to strike a target of concern (using a 300-foot potential treatment zone around roads, removing trees up to 1.5 times the height of a tree from a potential target).

Along with the need to reduce safety hazards on National Forest System roads, trails, and facilities, is the need to maintain an available and useful system of roads, trails, and facilities, for the public. Forest Service staff, firefighters, emergency response personnel, law enforcement, private inholding

landowners, contractors, special use permit holders, and others. If hazard trees are not removed, they will likely fall in the next several years, and many will negatively impact the roads, trails, and facilities, as well as the people using them, separate from the risks of human injury or death caused by falling trees. Large trees can damage roadways, resulting in significant repair costs and temporary closures. Even when treefall causes no significant damage, fallen trees can create serious obstacles across major routes and significantly impact the public. For example, a large tree across a road can impede emergency ingress or egress by firefighters, emergency response vehicles, or members of the public trying to evacuate from an active forest fire.

While road closure may be an option in limited circumstances, it is contrary to the Forest Service's objective of maintaining the integrity of its road system, which provides a network of access routes and facilities for a wide range of recreational, commercial, emergency, and other public purposes. Therefore, LNF ELRD chooses not to include road closures as part of this decision, reserving such closures for individual circumstances where there is no reasonable alternative.

Another purpose of the project is to reduce fuel loading, elevated fire hazard, and resistance to control from dead, dying, fire-damaged, and already fallen hazard trees. The project area has high densities of dead and dying trees, especially in areas of high-severity burn. Felling identified trees will, in many instances, abate the safety hazard such trees pose to adjacent roads, trails, and facilities. However, felling the trees does not mitigate the fire hazard these trees pose and, in most instances, will increase the hazard, as well as create new problems such as impeding effective fire suppression where hazard trees are felled.

Increased fuel loading caused by felling hazard trees 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). Because human-caused wildfires tend to start near roads and in and around developed areas (Narayanaraj and Wimberly 2012; Stephens and Ruth 2005), heavy downed fuel loading presents an additional safety risk in these areas, particularly if the fire may spread to adjacent lands. In addition, hazardous fuels or increased potential fire behavior within the road corridor present a safety threat to anyone using the recreation and administrative sites, accessing inholdings, or using roads as an escape route during a wildfire. Therefore, it is important to not only fell hazard trees but also remove them from the treatment areas (both the tree trunk and its limbs). 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.

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 fuels from hazard tree felling 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.

Vast areas of Region 5 National Forest System lands burned in recent years and a huge number of dead and dying trees adjacent to roads, trails, and facilities pose a threat to the public, Forest Service staff, firefighters, emergency response personnel, law enforcement, private inholding landowners, contractors, special use permit holders, and others. While there is no firm estimate of the number of hazard trees, recent fires affected likely hundreds of thousands (if not millions) along thousands of miles of roads. Unfortunately, the agency's financial and staff resources do not match

the magnitude of the problem. Therefore, it is critical that the project is as efficient as possible in addressing the hazards. Implementation efficiency has several important components. One is the need for a relatively simple process for identifying hazard trees. While a detailed tree-by-tree analysis involving mortality risk, slope position, lean, micro-site characteristics, prevailing wind patterns, or more, would likely yield a robust evaluation of individual tree hazard, such an approach is not practical given the overwhelming number of trees to be evaluated and the lack of a skilled workforce to conduct such evaluations. Therefore, a more streamlined approach is needed that considers individual tree failure potential and target potential (consistent with the Region 5 Hazard Tree Guidelines) but does so in a way that field crews can easily and efficiently implement the approach across thousands of acres. Because such a simplified approach will likely be either under- or over-inclusive in the trees identified as hazards, we chose to err on the side of caution and increased safety, consistent with the primary purpose of the project expressed above.

Another important component of implementation efficiency relates to the timing of treatments and requires abating hazard trees that will imminently fall (within the next year) as well as those likely to fall within the next 5 years. While removing trees at most imminent risk of falling is a priority, it is neither practical nor necessary to have a series of separate projects to abate existing hazard trees in the same location over several years. Doing so is not only inefficient from a planning perspective, but also inefficient and unnecessarily detrimental to the environment from an operational perspective (it would require multiple entries by loggers and equipment to the same parcel of land in locations where there is a mix of imminent and non-imminent hazard trees). Furthermore, it is often difficult to predict exactly when a hazard tree will fall, but dead and dying hazard trees become less stable with time, posing an increasing safety hazard to the contractors felling and removing the trees. Therefore, it is important to remove the hazard trees as soon as possible.

Dead and dying trees and downed woody biomass are natural components of forest ecosystems that provide both ecological and recreational values. However, the extent of dead and dying trees caused by recent mega-fires is not natural, and hazard trees adjacent to roads, trails, and facilities pose a serious threat to the public, agency staff, and other forest users. Therefore, the Forest Service's objective is to remove hazard trees to increase human safety; maintain the integrity and utility of the road, trail, and facility network; and reduce hazardous fuel accumulation, while leaving some dead and dying trees and downed woody biomass on the landscape for ecological and recreational purposes.

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. Also, because of the heightened impacts to recreational values from widespread hazard tree removal along trails, the lower hazard along trails and fences (compared to roads and most facilities), and the operational difficulty of removing hazard trees from trails and fences without adjacent roads, it may be appropriate to leave the felled hazard trees along trails and fences.

In addition to retaining some woody biomass in treated areas, it is also appropriate to entirely forego treatment in some areas where the hazard posed by dead and dying trees is less and the ecological and recreational values of snags and downed wood are greater. For example, it is not

being proposed to treat in wilderness areas, inventoried roadless areas, and along maintenance level 1 roads.

PROJECT OBJECTIVES

The project objective is to remove dead and dying trees resulting from the Dixie Fire (2021) along Forest Service system roads on the LNF ELRD in a timely and efficient matter to reduce safety hazard and the accumulation of fuels.

PROJECT START DATE

Summer 2024

PROJECT DESCRIPTION

The project will result in up to +/-6,750 acres of treatments to remove hazard trees from National Forest System roads, trails, and facilities. This includes the following actions in the project area:

1. Identify, fell, and remove hazardous trees up to 1.5 times the tree height striking distance of roads, trails, and facilities; and remove trees already felled during fire suppression or rehabilitation activities along high-use roads (maintenance level 2, 3, 4, and 5 National Forest System roads, county roads, and highways), within and adjacent to developed facilities on National Forest System lands; and fell certain trees along National Forest System trails.
2. Maintain roads.
3. Use best management practices to minimize or eliminate potential negative effects (*See Appendix B - Best Management Practices*).

Treatments would be prioritized to address the most heavily used roads and the most fire -impacted trees. Implementation would begin with those areas at highest risk due to their location (the primary factor) and the condition of the trees. Most treatment would occur within approximately 2 to 3 years.

Identifying Hazard Trees

Hazard trees are trees at risk of falling, in whole or in part, and injuring people or damaging property. Hazard trees are sometimes referred to as danger trees; on federal lands in California, the term hazard tree is used most consistently. Roads, trails, and National Forest System lands within and adjacent to developed facilities would be assessed for hazard trees. The area assessed for hazard tree abatement would be within 300 feet on each side of the centerline of roads, trails, and fences (a 600-foot corridor), and around facilities and infrastructure.

Trees within the assessment areas would be evaluated to determine if they are hazards using the Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region (Angwin et al. 2022) (referred to as “guidelines”). Trees that are determined to be a hazard would be abated, but not all dead or dying trees would require abatement. To identify if a tree is a hazard and if it requires abatement, a hazard rating is determined by adding the failure impact and the failure potential (tree defect) values as described in the guidelines.

The failure impact refers to the potential for the tree to impact people or property. The guidelines define the potential failure zone of a tree (where the tree or branch may fall) on level ground as about 1 to 1.5 times the height of the tree. However, the failure zone depends on several factors including degree of slope, obstacles, and the potential for a “domino effect” with the possibility of a more distant tree knocking down others closer to the road as it fall. **Only moderate to high hazard trees up to 1.5 times the tree height striking distance of the road would be felled.** This assessment would be based on the height of the tree, lean, condition, distance, and slope from the area to be protected in accordance with the guidelines. For example, it is expected that fewer trees would be identified as hazards on the downhill slopes next to roads because the trees would tend to fall downhill and away from the road. The failure potential would be determined using the guidelines along with the probability of fire-injured tree dying in the next several years, as described in Marking Guidelines for Fire-Injured Trees (Smith and Cluck 2011). The failure potential threshold for this project varies depending on severity of fire effects.

It is expected that most hazardous trees, and therefore more treatment, would occur in moderate intensity (25 to 75 percent basal area loss) and high intensity (75 percent or greater basal area loss) burn areas, based on post-fire vegetation condition data. In these areas, trees with a moderate to high hazard potential (hazard rating 4 to 7) would be felled. A probability of mortality of 0.6 would be used to determine failure potential, meaning that all trees for which the probability of mortality is 60 percent or higher within the treatment zone should be abated (Angwin et al. 2022).

Unburned or low intensity burn areas are not targeted for treatment but may require incidental tree felling for an occasional single tree or scattered pockets of trees that have a high hazard rating (rating of 6 or 7 as described in the guidelines).

Some of the potential treatment areas displayed in these maps would remain untreated because they present a low hazard or low threat to health and safety (for instance, burned areas that resulted in no tree mortality or forest structure is composed of shrub layer with no overstory). Areas of lower priority hazard trees or trees with a lower chance of mortality may be monitored for future follow up.

Hazard Abatement Methods

Identified hazard trees would be felled using hand tools (such as chainsaws) or feller-bunchers. Felled trees would be chipped, lopped and scattered, piled and burned; removed for wood products such as lumber, biomass, or personal or commercial firewood; or other similar means of processing or removal. The most cost-efficient and effective treatment in each area based on timing, equipment availability, and post-treatment results would be selected.

Activity-generated woody fuels such as limbs and needles (commonly referred to as slash) would be piled, lopped and scattered, masticated, chipped, or burned. Lopped and scattered slash would be less than 8 feet in length and distributed at most 18 inches in depth. Hand-piled slash would be placed in openings clear of debris so that a hand line down to mineral soil can be created around each pile. Crews would locate piles in areas where they would not damage other timber or residual trees when burned. Piles would be located twice their height away from residual vegetation and no more than 5 feet by 5 feet by 6 feet. Crews would compress slash tightly in piles to ensure full consumption when burned. Piles would be placed outside the boundaries of sensitive resource areas

including, but not limited to, historical or archeological sites, sensitive plant populations, annual streambeds or drainages, and roadside gutters and culverts. Within proposed treatment areas, existing woody fuels on the ground that exceed desired conditions for fuel loading may be removed or treated along with activity-generated woody fuels, consistent with project parameters and design features.

Chipped materials may be removed or left on-site when appropriate in place of piling. Chipping and spreading of materials on the landscape would not exceed a depth of 3 inches. Chips would be spread away from the base of trees.

Consistent with mitigation measures, stumps from live and recently dead trees in select areas may be treated with a registered borate compound (Forest Service Manual Pacific Southwest Region Supplement 2300-92-1 modified by Forest Service Handbook Pacific Southwest Region Supplement 3409.11-2010-1) to reduce the probability of infection in remaining live trees by *Heterobasidion occidentale* and *Heterobasidion irregular*, the causal agents of heterobasidion root disease (formerly referred to as annosus root disease). The need for borate treatment would vary by area and would be assessed at implementation.

Removing trees may require skidding logs or trees to landing areas for processing and loading on trucks. Landings would be selected from existing impacted areas or constructed as needed within 300 feet of roads, trails, and facilities. As ground conditions permit, log skidding would avoid remaining trees that are not hazards, seedlings, or regenerating trees. Logs would be skidded with the leading end suspended off the ground wherever conditions permit. Skidding distances would be limited to the minimum length necessary to safely reach the road, landing, or access point to load onto trucks. End-lining may be used to winch logs out of special management areas. Skyline, helicopter, and cable-yarding methods would not be used. Safe and efficient operations may require the incidental removal of trees that are not hazardous to the roads or infrastructure but need to be removed because they are hazards for workers (per hazard tree guidelines) or they need to be removed for landings or skid trails.

Road Maintenance

No new temporary or permanent road construction is proposed for this project. Road maintenance activities would include cleaning culverts, ditches, drains, and cattleguards, and grading road surfaces and reestablishing rolling dips or other drainage features of the roadbeds on haul routes within the project area. All road maintenance including maintenance of haul routes would occur within previously disturbed areas of the roadbed, consistent with current road maintenance levels with no changes to the existing road system. For public safety, some roads may be temporarily closed during implementation (MUTCD 2014; Highway Safety Act of 1966).

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. Within the project area, average annual precipitation decreases from 25-45 depending on elevation, which ranges from 5,160-7,300 feet. 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 purpose of this CEQA evaluation is to analyze the potential environmental impacts of removing hazard trees resulting from the Dixie Fire along Forest Service system roads to improve safety and reduce fuel loads.

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. Past vegetation management activities include fuel treatments and timber harvest. The project area is currently managed by LNF ELRD for recreation, timber management, wildlife habitat, and watershed protection.

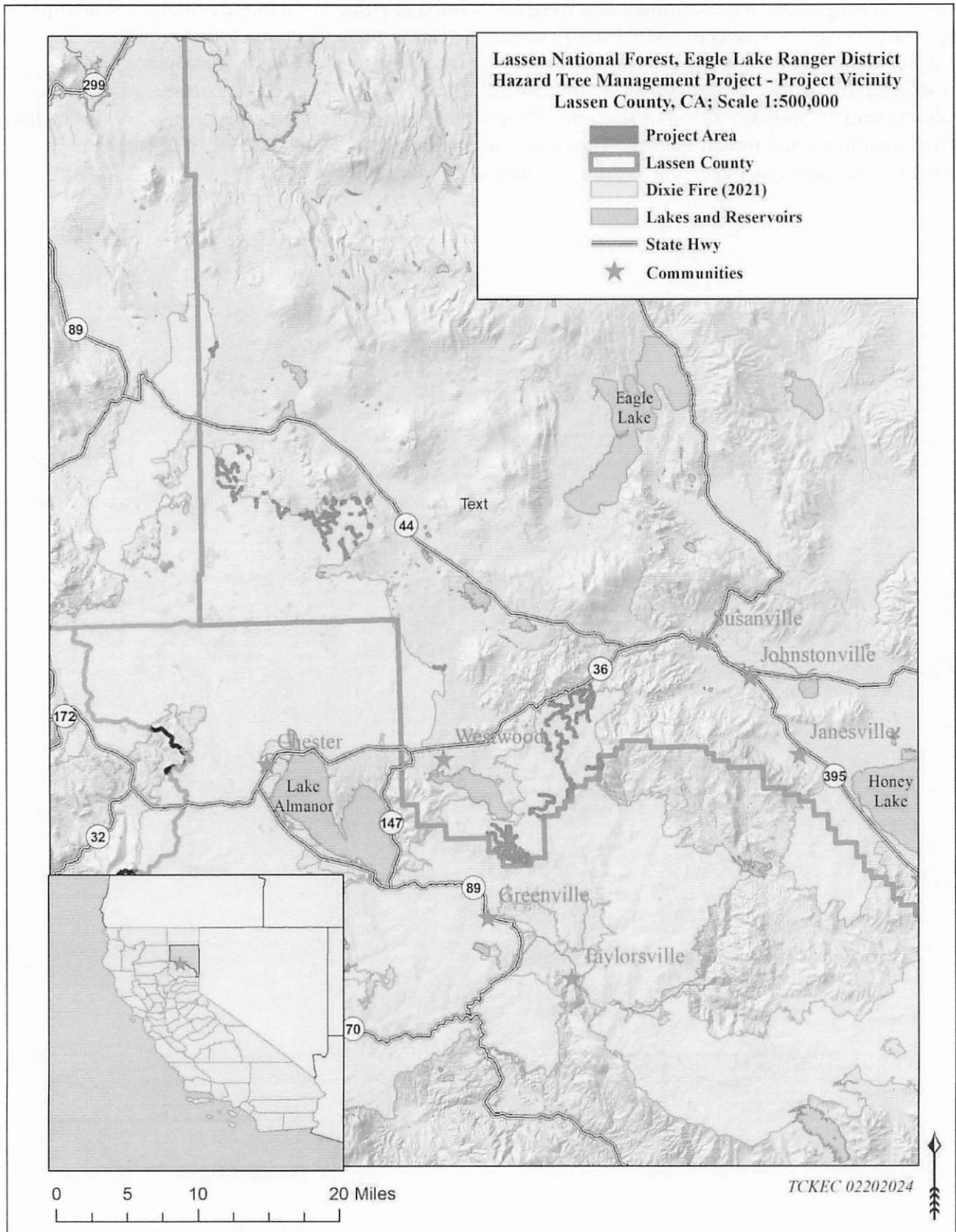


Figure 1: LNF ELRD Hazard Tree Management Project Vicinity

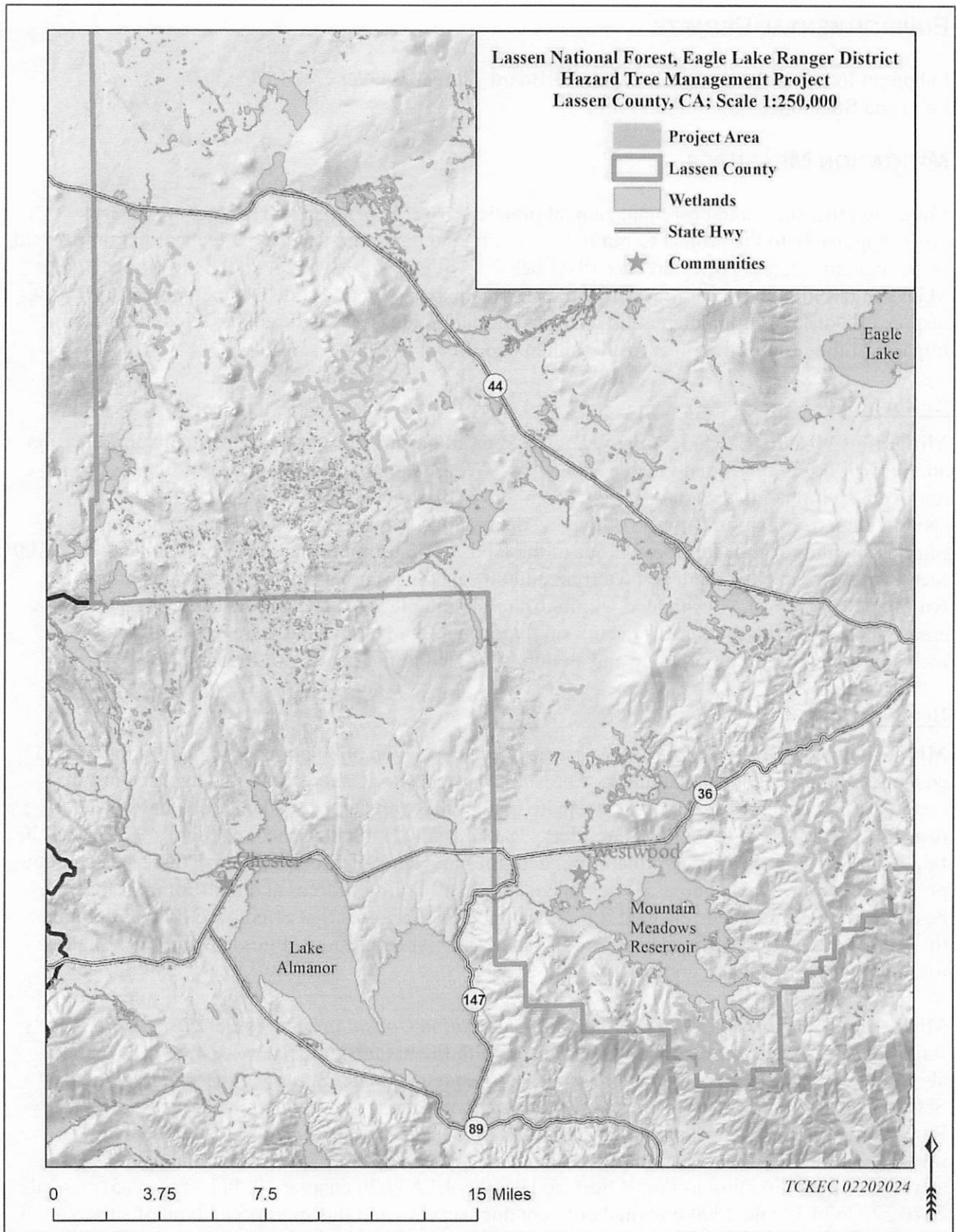


Figure 2: LNF ELRD Hazard Tree Management Project Location.

ENVIRONMENTAL PERMITS

Lahontan Regional Water Quality Control Board Timber Waiver
Lake and Streambed Alteration Permit

MITIGATION MEASURES

Mitigation measures and best management practices (*See Appendix B*) (USDA Forest Service 2012) applicable to the project to minimize or eliminate potential negative effects or to comply with laws, regulations, and policy are described below (Mitigation Measures) and in Appendix B (Best Management Practices). 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.

Aesthetics:

Mitigation Measure AES-1: *Stump Heights* - For all hazard tree removal treatments in Retention and Partial Retention Visual Quality Objectives: Where high masses or groups of trees will be removed, stump heights should be between 6 to 8 inches (according to timber contract specifications), except in the case of localized situations that make low cutting heights unsafe. Stumps should be angled to the contour of the land. Low stumping shall occur for a distance of 100 feet from the road edge on upslope terrain and on easily visible level terrain areas and anywhere within the corridor of a designated, eligible, and/or suitable Wild and Scenic River. In those same areas where hazard tree removal occurs singly, or in a low volume and dispersed pattern, 8- to 12-inch stump heights are acceptable and should be angled to the contour of the land.

Botany:

Mitigation Measure BIO-BOT-1: *Sensitive Plants* - Known populations of federally threatened, endangered, proposed, and candidate; Forest Service sensitive, survey and manage, species of conservation concern; Forest Service sensitive, and State threatened, endangered, and sensitive (California Native Plant Society Rare Plants Ranks 1 and 2) 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: *Pre-implementation Consultation with Botanist* - During early stages of hazard tree removal planning, consult with the botanist to review existing information about federally threatened, endangered, proposed, and candidate, Survey and Manage, Forest Service sensitive and State threatened, endangered, and sensitive (California Native Plant Society Rare Plants Ranks 1 and 2) plant, lichen, and fungi species and habitat, and suitable habitat, invasive species, and whether surveys are necessary in the specific areas or habitats planned for activity. Follow direction in Forest Service Handbook 2609.26 chapter 10, Forest Service manuals 2670.22, 2670.32 and 2900 on whether to conduct surveys and the appropriate type of survey documentation. Where these plants exist or are found through surveys, the botanist will recommend the appropriate avoidance or other design elements.

Mitigation Measure BIO-BOT-3: *New Sensitive Plant Discoveries* - In the event any new populations of federally threatened, endangered, proposed, and candidate, Forest Service sensitive, survey and manage, and 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 design feature applicability.

Mitigation Measure BIO-BOT-4: *Felling Adjacent to Sensitive Plant Populations* - Hazard trees adjacent to flagged populations of federally threatened, endangered, proposed, and candidate and Forest Service sensitive, survey and manage, and State threatened, endangered, and sensitive (California Native Plant Society Rare Plants 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-5: *Felling within Flagged Sensitive Plant Populations* - Hazard 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-6: *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: *Staging Areas and Landings* - If potential landings or staging areas are infested with invasive plants, consult a botanist about appropriate methods for minimizing risk and managing the infestation.

Mitigation Measure BIO-INV-6: *Invasive Discoveries* - Any additional infestations discovered prior to 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 meadows, fens, springs, or 25 feet from the edge of riparian vegetation.

Mitigation Measure BIO-AQUA-2: *Burn pile ignition* - Piles that lie within 300 feet of perennial streams or special aquatic features or 150 feet of intermittent or ephemeral streams may be burned, but would, to the extent practicable, be ignited in a manner that allows any organisms to flee from the pile (for example, light on the leeward side so that fire moves as a front through the pile).

Mitigation Measure BIO-AQUA-3: *Water drafting sites* - Identify water sources on project implementation maps. Consult with the biologist or hydrologist 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-4: *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-5: *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-6: *Water drafting and Aquatic invasive organisms* - To minimize the risk of aquatic invasive species, project activities will adhere to the Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations, PMS 444. If contamination of gear with raw water, mud, or plants is unavoidable, the biologist will be consulted, and the operators will adhere to sanitizing equipment guidelines. A map of known locations of aquatic invasive organisms would be provided to implementation crews.

Mitigation Measure BIO-AQUA-7: *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-8: *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-9: *Storage of heavy equipment and Sensitive Species* - The storage of heavy mechanical equipment will occur outside of habitats occupied by threatened, endangered, and sensitive species unless a biologist authorizes specific locations. If equipment is stored in occupied habitats, the areas around all equipment occurring in suitable habitat will be checked daily for threatened, endangered, and sensitive species prior to the equipment being moved.

Mitigation Measure BIO-AQUA-10: *Hazardous chemicals and Riparian Areas* - Do not store equipment fuels, hydraulic fluid, oils, fire ignition fuels, and other toxic materials within riparian areas unless a biologist authorizes specific locations.

Mitigation Measure BIO-AQUA-11: *Fueling and watercourses* - No fueling or refueling of any mechanical equipment (such as chainsaws) will occur within 100 feet of any flowing watercourse or intermittent drainage. Fueling and servicing of vehicles and other heavy equipment used for proposed activities will be done outside of aquatic management zones, the zone of concern for aquatic and riparian resources.

Mitigation Measure BIO-AQUA-12: *Hazardous spills* - Any hazardous spills will be immediately cleaned up and reported to the Forest Service.

Mitigation Measure BIO-AQUA-13: *Western pond turtle* - Within areas identified as high-quality western pond turtle habitat by the biologist prior to implementation, avoid placing piles, skid trails, and landing sites in open, grassy patches. Do not fell trees across these habitats wherever practical.

Mitigation Measure BIO-AQUA-14: *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 hazard trees found within 250 feet of a vernal pool will be directionally felled away from the vernal pool.

Mitigation Measure BIO-AQUA-15: *Equipment Exclusion Zone for Sensitive Aquatic Species* - Within suitable habitat for aquatic and terrestrial Regional Forester sensitive species, implement a minimum 100-foot equipment exclusion zone around perennial and intermittent rivers, streams, other waterbodies, and wet/sensitive areas including seeps, springs, and meadows. If a biologist determines that suitable habitat is not present, the standard equipment exclusion zone will be applied.

Mitigation Measure BIO-AQUA-16: Hazard tree marking guidelines in aquatic management zones— Use a probability threshold of 0.7 or higher as defined in Marking Guidelines for Fire-Injured Trees (Smith and Cluck 2011) and a hazard tree rating of 6 or 7 as defined in the hazard tree guidelines (Angwin et al. 2022) when identifying hazard trees for removal within 1.5 site potential tree heights if upslope from the road, and 1 site potential tree height if downslope from the road, or 150 feet, whichever is greatest, from all perennial and intermittent streams.

Mitigation Measure BIO-AQUA-17: 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-18: Borate and Frogs - Within 500 feet of known occupied sites Cascades frog, foothill yellow-legged frog, and Sierra Nevada yellow-legged frog, design borate applications to avoid adverse effects to individuals and their habitats.

Mitigation Measure BIO-AQUA-19: Refueling and Critical Aquatic Refugia - Prohibit storage of fuels and other toxic materials within riparian conservation areas and critical aquatic refuges except at designated administrative sites and sites covered by a special use authorization. Prohibit refueling within riparian conservation areas and critical aquatic refuges unless there are no other alternatives. Ensure that spill plans are reviewed and up to date.

Mitigation Measure BIO-AQUA-20: 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-21: Stream Channels - Determine if the level of coarse large woody debris is within the range of natural variability in terms of frequency and distribution and is sufficient to sustain stream channel physical complexity and stability. Ensure proposed management activities move conditions toward the range of natural variability.

Mitigation Measure BIO-AQUA-22: RCA's and Critical Aquatic Refugia - Allow hazard tree removal within riparian conservation areas or critical aquatic refuges. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within riparian conservation areas or critical aquatic refuges when the activity is consistent with riparian conservation objectives. Use low ground pressure equipment, over-the-snow logging, or other non-ground-disturbing actions to operate off of existing roads when needed to achieve riparian conservation objectives. Ensure that existing roads, landings, and skid trails meet best management practices. Minimize the construction of new skid trails for access into riparian conservation areas for fuel treatments, salvage harvest, commercial fuelwood cutting, or hazard tree removal.

Mitigation Measure BIO-AQUA-23: 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-24: *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, trail, facility, 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, trail, or facility, 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, trail, or facility, 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:* Hazard 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 hazard 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 Forest Service cave coordinator, 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 (hazard trees with a high hazard rating within 1.5 tree lengths of a road, trail, or facility) 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 and along Maintenance Levels 2 and 3 roads, 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: If dens or rendezvous sites are within 1 mile of the work activity, the biologist will establish a buffer to seasonally restrict activities from April 1 through July 15 between the proposed activity and the den site or rendezvous site. The buffer will be at least 1 mile but is likely to be irregularly shaped based on topography and concerns for revealing the exact site location. The biologist is expected to coordinate with California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service as appropriate, when determining whether dens or rendezvous sites are present and when designating buffers.

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 or within protected activity center boundaries 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 activity center, unless surveys confirm that California spotted owls or northern goshawks are not nesting. If the nest stand within a protected activity center is unknown, either apply the limited operating period to a 0.25-mile area surrounding the protected activity center, or survey to determine the nest stand location.

Mitigation Measure BIO-WILD-17: *Activities in Northern Goshawk and CA Spotted Owl PACs* - No tree removal would occur in California spotted owl or northern goshawk protected activity centers, unless they are identified as a hazard. Trees identified as hazards, located within spotted owl or goshawk protected activity centers, which are larger than 30 inches diameter at breast height would be left on-site as whole downed logs (and not bucked up or removed) unless they would exceed desired fuel levels for the area. Do not locate log processing landings in northern goshawk or California spotted owl protected activity centers.

Mitigation Measure BIO-WILD-18: *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-19: *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.

Mitigation Measure BIO-WILD 20: *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-21: *Herbicides and pollinators* – No herbicides will be used for this project.

Mitigation Measure BIO-WILD-22: *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 Forest Service and California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines.
<https://wildlife.ca.gov/Conservation/Survey-Protocols>

Cultural Resources:

Mitigation Measure CULT-1: *National Historic Preservation Act* - Compliance with National Historic Preservation Act Section 106 will be fulfilled in accordance with the provisions of the R5 PA. Heritage program specialists will be involved early in planning processes for treatments to identify cultural resources at risk and determine effects. Measures to avoid adverse effects recommended by the Heritage Program Manager or Delegated Heritage Program Specialist and accepted by the Line Officer will be incorporated into treatment designs and implementation plans. Unavoidable and unanticipated adverse effects to cultural resource sites, and inadvertent discoveries, will be addressed in accordance with the provisions of R5 PA.

Mitigation Measure CULT-2: *Protection of Historic Sites and Unanticipated Discoveries* - Contracts will contain standard provisions for the Protection of Historical Sites and unanticipated discoveries (B/BT6.24 and C/CT6.24) pursuant to FSH 2409.11, 61.11b. Forest Service project administrators and/or designated Heritage Program Staff will review cultural resource site protection measures with contractors prior to the start of activities.

Mitigation Measure CULT-3: *Treatment Activities with Cultural Site Boundaries* - No treatment activities will occur within cultural site boundaries unless approved by the Heritage Program Manager or Delegated Heritage Program Specialist in accordance with provisions of the programmatic agreement.

Mitigation Measure CULT-4: *Human Remains* - Discoveries of human remains will be treated in accordance with provisions of the R5 PA (Stipulation 7.9: Human Remains).

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. Landings and skid trails will be considered part of an activity area.

Mitigation Measure GEO-2: *Slopes* – Limit all mechanical operations to slopes less than 35 percent. In areas where sustained slopes exceed 35 percent, limit mechanical operations such as skidding, tractor piling, grapple piling and mechanized tree felling except where supported by on-the-ground evaluation by an interdisciplinary team that includes a watershed specialist. Trees are permitted to be hand-felled and end-lined on slopes over 35 percent (within unburned and low soil burn severity areas only), but any furrow produced by end-lining that exceeds 25 feet long by 6 inches deep shall be recontoured (“filled in”) to prevent concentrated flow and hillslope erosion.

Mitigation Measure GEO-3: *Soil Moisture* - Operate mechanical equipment when soil moisture is less than 20 percent by weight. Use Forest Service standard contract provision Erosion Prevention and Control to suspend operations due to the rainy season, high water, and other adverse operating conditions, to protect resources. If Forest Service soil scientist or hydrologist is unavailable to sample soil, contract administrators shall use ball method to test for operability.

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.

Mitigation Measure GEO-8: *Existing Landings and Skid Trails* – Reuse existing landings and skid trails wherever possible. Placement of landings and skid trails should avoid, where possible, high soil burn severity areas.

Mitigation Measure GEO-9: *Waterbars* - All skid trails will be waterbarred and have slash scattered on them to provide a minimum of 50 percent cover where conditions allow. Where suitable material exists, post treatment soil cover will range from 50 to 70 percent, with variations resulting from slope steepness and fuel reduction treatments.

Mitigation Measure GEO-10: *New Landings* - New landings will be located on gentle slopes (less than 20 percent) to minimize earthwork, and will avoid unstable areas, steep slopes below landslide benches, and slope positions where they could deliver sediment to streams. Cuts and fills will not exceed 5 feet in height unless field-reviewed and approved by an earth scientist beforehand. Landings will have natural, non-constructed designs. All new landing fill slopes and access road fill slopes (greater than 100 square feet) would be mulched initially, and then the mulch would be maintained throughout the life of the project.

Mitigation Measure GEO-11: *Tilling* - Following completion of all management activities, till (subsoil to 18 inches) with a winged-subsoiler (preferred) all landings identified for rehabilitation, and main skid trails (up to 200 feet entering landings) that have fine textured soils. Tillage will be completed outside of the tree dripline so as not to impact root systems. For rocky soil, scarification will be used to restore sites. These areas should be mulched using certified weed-free materials or on-site slash that is lopped and scattered or chipped at a rate of 1.5 to 2 tons per acre (approximately 4 to 6 inches in depth) over a minimum of 75 percent of the exposed soils, where necessary, to prevent erosion.

Mitigation Measure GEO-12: *Ultramafic Soils* - All field personnel who will be working near earth-moving, or other dust-producing activities in areas underlain by ultramafic rock will be informed that naturally occurring asbestos commonly occurs in that rock, and they will be provided with a map showing such areas.

Mitigation Measure GEO-13: *Ultramafic Soils and Dust Abatement* - Dust production in ultramafic areas will be prevented or minimized by applying effective dust abatement measures, such as: applying water or other dust inhibitors to materials being worked. Where dust prevention in

ultramafic areas is not possible, appropriate protection and mitigation measures will be applied so that Forest Service and contractor field personnel will not inhale such dust. These measures include but are not limited to closing windows on vehicles, turning on positive ventilation systems, and using appropriate air filtration masks.

Mitigation Measure GEO-14: Ultramafic Soils and Waste Rock - If rock or soil waste is generated from ultramafic areas, such waste will be disposed of only where the underlying rock is also ultramafic, and it will not be mixed with other waste from non-ultramafic areas. When transporting naturally occurring asbestos-containing material, avoid overloading trucks and cover with tarps to reduce dust. Ensure that piles of excavated material are wet and cover with tarps to reduce dust.

Mitigation Measure GEO-15: Ultramafic Soils and Mechanical Operations - Mechanical operations should operate on slightly moist or moist soils to reduce dust levels within area that could contain naturally occurring asbestos in ultramafic soils.

Mitigation Measure GEO-16: Ultramafic Soils and Side cast - Recommend that side casting of material should be kept to a minimum and ample watering of roads or areas where ultramafic material exists to minimize exposure to potential naturally occurring asbestos.

Hydrology:

Mitigation Measure HYD-1: Equipment Exclusion Zone (EEZ)– Equipment exclusion zones will be established to protect aquatic resources and water quality in the post-burn landscape based on soil burn severity and time since the fire (See Table 1).

Table 1. Aquatic management zone types, conditions, and associated equipment exclusion zone buffers

| Aquatic management zone type | Time since fire occurred (years) | Soil burn severity* | Minimum equipment exclusion zone buffer width (feet) |
|---|----------------------------------|---------------------|--|
| Perennial, intermittent, and ephemeral streams, special aquatic features, lakes, wetlands, springs, landslide areas | Greater than 2 years | Moderate or High | 100 |
| Perennial, intermittent, and ephemeral streams, special aquatic features, lakes, wetlands, springs, landslide areas | Greater than 2 years | Low or Unburned | 50** |

Refers to most prominent soil burn severity within the aquatic management zone, as identified in burned area emergency response soil burn severity maps. For mosaic burn, defer to the most restrictive buffer width.

**Exception per mitigation measure BIO-AQUA-15: Within suitable habitat for aquatic and terrestrial Regional Forester sensitive species, implement a minimum 100-foot equipment exclusion zone around perennial and intermittent rivers, streams, other waterbodies, and wet/sensitive areas including seeps, springs, and meadows.

Mitigation Measure HYD-2: Wet weather - All ground-disturbing activities within or outside of the normal operating season (May 1 to October 31) will be implemented according to the Lassen National Forest wet weather operation standards.

Mitigation Measure HYD-3: High Priority Soils - High-priority wet, sensitive, or compactable soil sites (WETNESS sites identified by the hydrologist) will be field reviewed by a hydrologist, soil scientist, or designee to determine site sensitivity and applicable equipment exclusion zone.

Mitigation Measure HYD-4: Roads - Road sites identified by the hydrologist or designee as having high sediment delivery potential will be field reviewed prior to contract development to identify: (1) if mitigations are needed, and (2) what site-specific best management practices or road improvements are appropriate.

Mitigation Measure HYD-5: Skid Trail Stream Crossings- Designated skid trails crossing ephemeral stream channels may be approved for access to otherwise inaccessible areas, but only upon consultation with an aquatic specialist or designee.

Mitigation Measure HYD-6: Skid Trails and Landslides - No skid trails will be built on active landslides or inner gorges, and no existing skid trails on active landslides or inner gorges will be used.

Mitigation Measure HYD-7: Refueling - Refueling will not take place within aquatic management zones except at designated landings in locations where most disconnected from water resources. A spill containment kit will be in place where refueling and servicing take place.

Mitigation Measure HYD-8: Borate - Borate will not be applied to stumps within 25 feet from the stream channel. Large quantities of borate will not be stored, mixed or handled within 100 feet of any stream channel, wetland, or wet area (or farther as needed to ensure plan compliance). Follow label instructions for use near waterbodies. Spills within aquatic management zones will be immediately reported to the local Forest Service watershed specialist.

Mitigation Measure HYD-9: Equipment Exclusion Zones - All equipment exclusion zones will be flagged, signed, or both within proposed treatment units and identified as “equipment exclusion” on project maps or as “buffer strips” in contracts.

Mitigation Measure HYD-10: 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-11: Heavy equipment – Off-road heavy equipment access is prohibited within the Equipment Exclusion Zone. This includes skidders, forwarders, masticators, chippers, and more. Heavy equipment may operate from the roadway within the equipment exclusion zone. There would be no off-road heavy equipment use on slopes greater than 35 percent for low or unburned soil burn severity, or 25 percent for high or moderate soil burn severity within the Aquatic Management Zone.

Mitigation Measure HYD-12: Commercial Product Removal – Commercial product removal may occur within the aquatic management zone and the equipment exclusion zone where fuel loading is excessive and where forest plan standards for large or coarse wood are met, so long as equipment exclusion in the equipment exclusion zone restrictions can be met. Aquatics specialists and fuels specialists should be consulted for determination of “excessive fuel loadings.”

In the equipment exclusion zone, yarding or end-lining may be used to remove forest wood products in low soil burn severity areas with slopes less than 25 percent. There would be no yarding

or end-lining in the equipment exclusion zone in areas of high or moderate soil burn severity. Exceptions may be considered where the equipment exclusion zone is located on the uphill side of a road on a road that runs parallel to a stream, provided that: (1) adequate road drainage is maintained and (2) the site has site-specific approval by an aquatic specialist. All furrows created in the aquatic management zone or equipment exclusion zone will be fully repaired (recontoured and covered with effective ground cover or erosion control).

Mitigation Measure HYD-13: Skidding – Skidding would not occur within the equipment exclusion zone. Exceptions may be considered on the uphill side of the road on roads that parallel streams, if approved by an aquatic specialist and providing that proper road drainage is maintained. All skid trails in the aquatic management zone would have site-specific mitigations (such as erosion control), as determined by an aquatic specialist, and would be fully repaired (decompacted and covered with effective ground cover or erosion control).

Mitigation Measure HYD-14: Stream crossings – There would be no temporary stream crossings, except where approved by an aquatic specialist. Exceptions would not be allowed on perennial streams, streams with flowing or standing water, areas of high and moderate soil burn severity, or on areas of low soil burn severity with slopes greater than 25 percent. All stream crossings in the aquatic management zone would be fully repaired (recontoured, decompacted, and covered with effective ground cover or erosion control).

Mitigation Measure HYD-15: Landings – Landings would be minimized in the aquatic management zone. There would be no new landings in the aquatic management zone, but existing landings may be used in the outer aquatic management zone outside of the equipment exclusion zone. Exceptions to these restrictions may be considered on the uphill side of the road on roads that parallel streams, if approved by an aquatic specialist, and providing that proper road drainage is maintained. Exceptions would not be allowed on areas with high or moderate soil burn severity or areas of low soil burn severity with slopes greater than 25 percent. All landings in the aquatic management zone would be fully repaired (decompacted and covered with effective ground cover or erosion control).

Mitigation Measure HYD-16: Slash piles – Piles would be piled by hand within the equipment exclusion zone. Large and coarse wood interacting with the stream or active floodplain would not be piled unless the fuels hazard is excessive and forest plan standards for wood are met for a given stream reach. Pile size in the equipment exclusion zone would be limited to approximately 5 feet by 5 feet by 6 feet.

Mitigation Measure HYD-17: Pile burning – Hand piles within the equipment exclusion zone would be located greater than 50 feet from streams and 25 feet from groundwater-dependent ecosystems, meadows, springs. Pile burning would aim for low soil burn severity and minimize spread to the extent possible.

Mitigation Measure HYD-18: Chipping or Masticating – Chippers or masticators may operate within the equipment exclusion zone on existing roadbeds. Within the equipment exclusion zone there would be no deep concentrations (greater than 4 inches) of chips or masticated material. Chips would not be directed at stream channels, wet areas, or waterbodies. There would be no deep concentrations of chips in road ditch lines, or anywhere that could interfere with proper road drainage, within the aquatic management zone.

Mitigation Measure HYD-19: Firewood cutting – No firewood cutting within the equipment exclusion zone. Firewood piles should follow guidelines for “landings” as described previously.

Mitigation Measure HYD-20: Canopy Cover - In unburned areas or areas burned with low burn severity, avoid all loss of canopy cover to the extent possible. Retain canopy cover above 60 percent on average for a given treatment unit, except where conditions pose an imminent threat to life and safety. Identify unburned and low burn severity areas on site-specific maps prior to implementation.

Mitigation Measure HYD-21: 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.

Recreation:

Mitigation Measure REC-1: Recreational Sites - Avoid implementing activities within the boundaries of developed recreational sites during recreation season (May 15 through September 15). Minimize impacts to high-traffic recreation sites both day and night. These sites would include concession and Forest-run campgrounds and day use areas, popular trails, or trailheads. If hazard tree removal is necessary to address an emergent public safety concern, complete activities prior to opening for the season or issue a temporary closure.

Mitigation Measure REC-2: Signage - Provide safety signing along trails and roads, as well as trail closures in active project areas.

Mitigation Measure REC-3: Public Access - Maintain continued public and permit holder access during implementation, whenever feasible. If access cannot be maintained, please consult with District Recreation Staff for coordination and information dissemination to establish alternative routes or temporary closures.

Mitigation Measure REC-4: Visitor Information - Provide visitor information about area, road, and trail closures, or other recreation setting changes caused by project activities in news releases, on-site, and on the national forest’s website.

Mitigation Measure REC-5: Project Related Woody Material and Recreational Sites - Completely remove all project-related woody material from developed and dispersed recreation sites including logs, branches, slash, and more, in a manner that minimizes disturbance to soil and natural forest duff layers, rehabilitate soil disturbance to natural existing condition. Use local leaf litter and small woody debris to disguise project-related ground disturbance within sight of roads, trails and within campgrounds.

Mitigation Measure REC-6: Stumps - In areas within all developed recreation sites (campgrounds, day use sites, trailheads, or others), flush cut all stumps, unless stumps are designated for grinding.

Mitigation Measure REC-7: Landings - Locate new landings away from developed and dispersed recreation areas (staging areas) where feasible. Avoid placing landings and other centralized project activities near private property.

Mitigation Measure REC-8: Replacement of Signage and Barriers - Protect all improvements including trails, roads, campground facilities, water system features, signs, barriers, mines, or bridges. If any signage or barriers (including boulders or fencing) or improvements are removed or damaged, they must be reinstalled in the same location and manner immediately following vegetation management operations.

Mitigation Measure REC-9: Non-Motorized System Trails - Minimize overlaying skid trails and haul roads on non-motorized system trails. If trails are used as skid trails or haul roads, trail cleanup and rehabilitation will be included in the contract. Skid trail crossings across designated forest trails and roads will be kept to a minimum. Any crossings shall be perpendicular to designated forest trails and roads. To reduce the potential for establishment of user created routes, rehabilitation must be completed in a timely manner to ensure the public does not begin using them for motorized or non-motorized recreation. The rehabilitation plan shall include returning to natural contour, scarification, seeding with native mix and installing natural barriers as needed. Trail width shall not be increased. Changes to trail alignment and surfacing will be minimized; the trail will not be straightened, nor its surface changed with an alternate material unless such actions are needed to enhance the trail and protect resources. Trees to be removed along trails will be designated and remaining trees left unmarked. Stumps will be cut as low as possible, and cuts angled away from trails.

Mitigation Measure REC-10: Protect Range Improvements - Protect range improvements and repair any damage in consultation with the range permittee.

Mitigation Measure REC-11: Temporary Closure of Recreational Areas - Recreation areas (designated roads, trails, trailheads, staging areas, and dispersed camp sites) may be temporarily closed to provide for public safety during active tree removal operations, but would otherwise remain open unless specifically agreed to by the recreation officer or trails manager.

Mitigation Measure REC-12: Limit Trail Closures - Limit all closures of trail segments to Monday through Friday, excluding Mondays of holiday weekends (Memorial Day, Labor Day, or others). No closures will be authorized on weekends. All trails shall be opened for safe use on weekends and holidays.

Mitigation Measure REC-13: Public Notification - Provide for public safety and education by posting signs to inform public of project activities. Whenever possible, post notices on forest website prior to hazard tree cutting. Keep information current.

Tribal Cultural Resources:

Mitigation Measure TRIBE-1: Tribal Consultation - Tribal consultation pursuant the NHPA will occur in accordance with the R5 PA for each hazard tree undertaking. Forests will provide tribal representatives the opportunity to monitor treatment activities, if so requested.

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, 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, Recreation, 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.

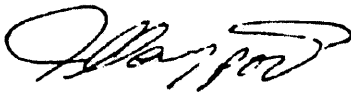
Environmental Factors Potentially Affected

| | | |
|--|---|---|
| <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

2/27/2025

Date

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; therefore, it does not meet the visual quality objectives. 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; therefore, it is unlikely that visual quality objectives would currently meet the forest plan standards. By treating the slash and activity fuels through piling and burning, 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. Mitigation measure AES-1: *Stump Heights* would be implemented to minimize these impacts. 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 and meet or exceed a partial retention visual quality objective. 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.

| | | | | |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| 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? | 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.

| | | | | |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| 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? | 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

| | | | | |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| 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? | 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).

| | | | | |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract? | 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.

| | | | | |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| 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))? | 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.

| | | | | |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| d) Would the project result in the loss of forest land or conversion of forest land to non-forest use? | 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"/> |

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.

| | | | | |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| 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? | 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 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

| | | | | |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| a) Would the project conflict with or obstruct implementation of the applicable air quality plan? | 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 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. National forests are required by law to comply with State law and local rules established by the air districts. The primary effect to air quality from national forests is from smoke produced by wildland fires. Prescribed burning is regulated by the air districts, whereas uncontrolled wildfires are not regulated.

| | | | | |
|---|--|--|--|--|
| 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? | 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"/> |
|---|--|--|--|--|

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.

| | | | | |
|--|--|--|--|--|
| c) Would the project expose sensitive receptors to substantial pollutant concentrations? | 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"/> |
|--|--|--|--|--|

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

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

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

BIOLOGICAL RESOURCES

| 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? | 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"/> |

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, Forest Service threatened, 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, 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), and a search of Lassen National Forest sensitive plant species databases for known occurrences within 300-foot buffer beyond the action area. Plants found over 300 feet away from the project area boundary are considered to have no effect as they are outside the disturbance area. 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 LNF and CNDDDB 2-mile search, search of the BIOS system, available endangered species data from the LNF, USFWS and CDFW 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, we do not know the nature or extent of effects to sensitive plant populations from the fires and fire suppression activities, 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. Private landowners are not required to protect sensitive plant species or treat invasive plants, whereas forest managers are required to evaluate management activities on National Forest System lands (except wildfire suppression) for impacts to these resources.

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, 56

sensitive plant species were evaluated. Sensitive plant known occurrences include 21 on the Lassen National Forest. 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 #1-6** and **BIO-INV #1-6** have been proposed to reduce the impact to sensitive plant species to less than significant.

Aquatics and Fisheries Resources:

Approximately 12 percent of the project area was 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. The zone contains 5 sensitive species including amphibians and the western pond turtle (See Table 2).

Mitigation Measures **BIO-AQUA #1-24** and **HYD-#1-20** 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.

Numerous protected activity centers for California spotted owls and northern goshawks have been rendered unusable as high severity fire burned through all, or large proportions of, the habitat in these high value areas. Habitat for other species such as Sierra marten, Pacific fisher, sensitive bat species, riparian obligate birds, amphibians, reptiles, and invertebrates was also 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.

Twenty-nine (29) terrestrial sensitive wildlife species (CA Species of Special Concern and Region 5 Forest Sensitive Species) and 5 federally threatened, endangered, candidate species, including the gray wolf, 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 agency's actions are 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 higher maintenance level and 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 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 units, it may be somewhat degraded with the removal of hazard trees, by removing important elements of the habitat (snags). Hazard trees in these areas are assumed to exist as the occasional single tree, or in scattered small pockets of trees. Felling these hazard 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 hazard 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 hazard 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 along secondary and unpaved roads located in high quality fisher habitat, we would consider 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. Such options may include cutting the hazard 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, given that the vast majority of treatment would occur along roads 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 #1-20** 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 is two-part: the area within the 300-foot buffer on either side of affected roads, trails, and fences within the given fire perimeter and the area within 0.25 mile of the treatment units. This spatial bounding would capture the physical change to the habitat within the 300-foot buffer from implementation of the proposed actions, and 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 Wildlife Biological Evaluation/Biological Assessment and the Aquatic Biological Evaluation/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 #1-6, BIO-INV #1-6, BIO-AQUA #1-24, and BIO-WILD #1-20** 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.