Initial Study for the proposed
Ore-Cal Resource Conservation & Development Area Council
Outsen Road Fuels Reduction
Agreement # 5GG22130

&

prepared by:

Northwest CA Resource Conservation & Development Council
for the Oregon-California (ORE-CAL) Resource Conservation Council and the
Shasta Valley Resource Conservation District
215 Executive Court Ste A,
Yreka CA 96097
Under Grant #5GG22130

May 5th, 2025

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Introduction and Regulatory Context

STAGE OF CEQA DOCUMENT DEVELOPMENT

☐ **Administrative Draft.** This California Environmental Quality Act (CEQA) document is in preparation by Shasta Valley Resource Conservation District (SVRCD) staff.

☒ **Public Document.** This completed CEQA document has been filed by SVRCD at the State Clearinghouse on May 6th, and is being circulated for a 30-day state agency and public review period. The review period ends on June 6th, 2025.

☐ **Final CEQA Document.** This final CEQA document contains the changes made by the Department 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 SVRCD.

INTRODUCTION

This initial study (IS) describes the environmental impact analysis conducted for the proposed project to determine the appropriate CEQA determination. This document was prepared for SVRCD 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, Shasta Valley Resource Conservation District (SVRCD), has reviewed, and analyzed the IS and declares that the statements made in this document reflect SVRCD's independent judgement as lead agency pursuant to CEQA. SVRCD further finds that the proposed project, which includes best management practices designed to minimize environmental impacts, will not result in a significant effect on the environment.

REGULATORY GUIDANCE

This Initial Study (IS) has been prepared for Shasta Valley Resource Conservation District (SVRCD) and the ORE-CAL Resource Conservation & Development Area Council (ORE-CAL) 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, or for, 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 this project is hereby certified as categorically exempt from the California Environmental Quality Act (CEQA) review pursuant to California Code of Regulations Title 14, Section 15304 which applies to " "minor public or private alteration in the condition of land, water, and/or vegetation which do not involve removal of mature, scenic trees except for forestry and agricultural purposes." The proposed activity falls within the definition of a project type that has been determined to have no significant effect on the environment.

PURPOSE OF THE INITIAL STUDY

ORE-CAL Resource Conservation & Development Area Council has primary authority for oversight of the proposed project. The SVRCD is the lead agency under CEQA. The Initial Study (IS) presents to the public and reviewing agencies the environmental consequences of implementing the proposed project and to describe the adjustments made to the project to avoid significant effects or reduce them to a less-than-significant level. This disclosure document is being made available to the public and reviewing agencies for review and comment. The Initial Study is being circulated for public and state agency review and comment for a review period of 30 days Categorical Exemption. The 30-day public review period for this project begins on 5/5/2025, period ends on 6/6/2025.

The requirements for providing a Notice of Categorical Exemption (NOE) are found in CEQA Guidelines §15300.2. These guidelines require SVRCD to notify the general public by providing the NOE to the County Clerk/Recorder and State Clearing House for posting, sending the NOE 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 NOE 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.

SVRCD will post the NOE on- and off-site at:
Yreka City Hall
Siskiyou Board of Supervisors Chambers
SVRCD Offices
Intersections of:
Highway 3 and Outsen Road;
Highway 3 and Wicklow Woods Dr.
Richmond Lane and Taylor Ave
Highway 3 and Laura Lane

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

Outsen Project Attn: Dan Blessing
C/O SVRCD
215 Executive Ct A
Yreka, CA 96097
Phone: (530) 623-0671

Email: mlancaster@5counties.org

After comments are received from the public and reviewing agencies, SVRCD will consider those comments and may (1) file a Categorical Exemption and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project.

Project Description and Environmental Setting

PROJECT LOCATION

The project area lies west of Highway 3 between Greenhorn Park- to the north, and Lime Gulch- to the south. Approximately 30% of the project is within the boundaries of the City of Yreka and the balance is in unincorporated areas of Siskiyou County. The project is located in portions of Sections 32, 33, 34 T45N, R7W, and portions of Sections 4,5,6, 8 & 9, T44N, R7W MDB&M as shown in Figure 1.

The project area is defined topographically by ridges to the west, north and south, and grasslands and roadways to the east. In addition to the topographic features of the Project Activity Area (PAA) an existing tractor constructed 50-100' wide fire break forms the western project boundary. The fire break was installed in 2022 as part of the contingency plan for the McKinney Fire.

The project area is an identified Wildland Urban Interface (WUI) zone within the Yreka Community Wildfire Protection Plan for southwest Yreka in Siskiyou County. This project can enhance wildland fire protection for residents within the PAA as well as the residences in the greater Yreka community

The geographic scope of the project was determined by prioritizing the areas where fire prevention activities would have the greatest benefit to community safety and compliment previous fuels reduction work completed north and west of the project area. Work elements included in the project either are contained in Yreka Community Wildfire Protection Plan or have been identified by the CAL FIRE Unit battalion chief as projects that would protect rural communities. Project selection criteria were based on operational need, ingress and egress routes, fire history, risk of ignition, willingness of landowners to participate and environmental factors.

BACKGROUND AND NEED FOR THE PROJECT

The project area has a high to very high fire risk and hazard, based on CalFire Fire Hazard Severity mapping. The project site also contains significant values at risk, including approximately 60 homes. The area has not had significant fire or fuels treatment in decades- except for the construction of fire lines on the western ridge system in 2022. The western fire lines were built as contingency lines for the McKinney Fire as it moved east towards Yreka. The western fire line is a 5 mile long 50'-100' firebreak along the ridge system west of Yreka. The combination of the existing fire line, high community values and fir risk in conjunction with willing landowners, supported development of a fuels reduction plan in the project area.

The ORE-CAL Resource Conservation & Development Area Council (ORE-CAL) was awarded a Cal Fire Wildfire Prevention Grant (CCI Agreement #5GG22130) to implement treatments on a minimum of 367 acres within the 1498-acre PAA. The Shasta Valley Resource Conservation District (SVRCD) has partnered with ORE-CAL to complete the environmental review of the project. The grant funds are proposed to be used to enhance the ridgeline fire break by constructing fuel breaks off the fire line, reduce fuel levels around a minimum of 25 homes, treat evacuation routes along roadways, widen fuel breaks along utility corridors, thin forest stands with ladder fuels and dense canopies, and demonstrate vegetation maintenance options including curtain burning of dooryard waste and herbivory (grazing) to control resprouting.

The boundaries incorporate landowners who have not expressed interest in participating in fuels reduction efforts, but work is limited only to participating landowners properties. The final acreage and number of parcels included in the project was based on landowner participation and the environmental, operational, or physical constraints of each parcel. No work is proposed on parcels where landowners did not sign a letter of interest or do not want work done. **Project Design Practices To Minimize Environmental Impacts**

The potential project area, treatment acres and number of parcels are included in Figure 1 and Tables 1 and 2. The project incorporates design measures and practices to prevent significant environmental

impacts including: 1) Mechanical operation prohibitions in areas with slopes over 65 percent or 50 percent with high erosion hazard; 2) Stream setbacks- 75-foot setback from perennial/seasonal streams and wetlands, and 50-foot setback from intermittent and ephemeral streams; 3) Special Treatment Zones (STZ) and/or Equipment Exclusion Zones (EEZ) for known cultural sites and sensitive biological resources; and 4) Best Management Practices (Appendix B).

A Limited Operation Period LOP) for ground disturbing operations will be established from February 1 to August 1 to protect nesting, roosting, and denning of wildlife species utilizing the project area, unless surveys determine that there are no sensitive species nesting, roosting, and denning in the area during that period. An exception to LOP limitations is the 100' radius Defensible Space Zones around homes and other permanent structures.

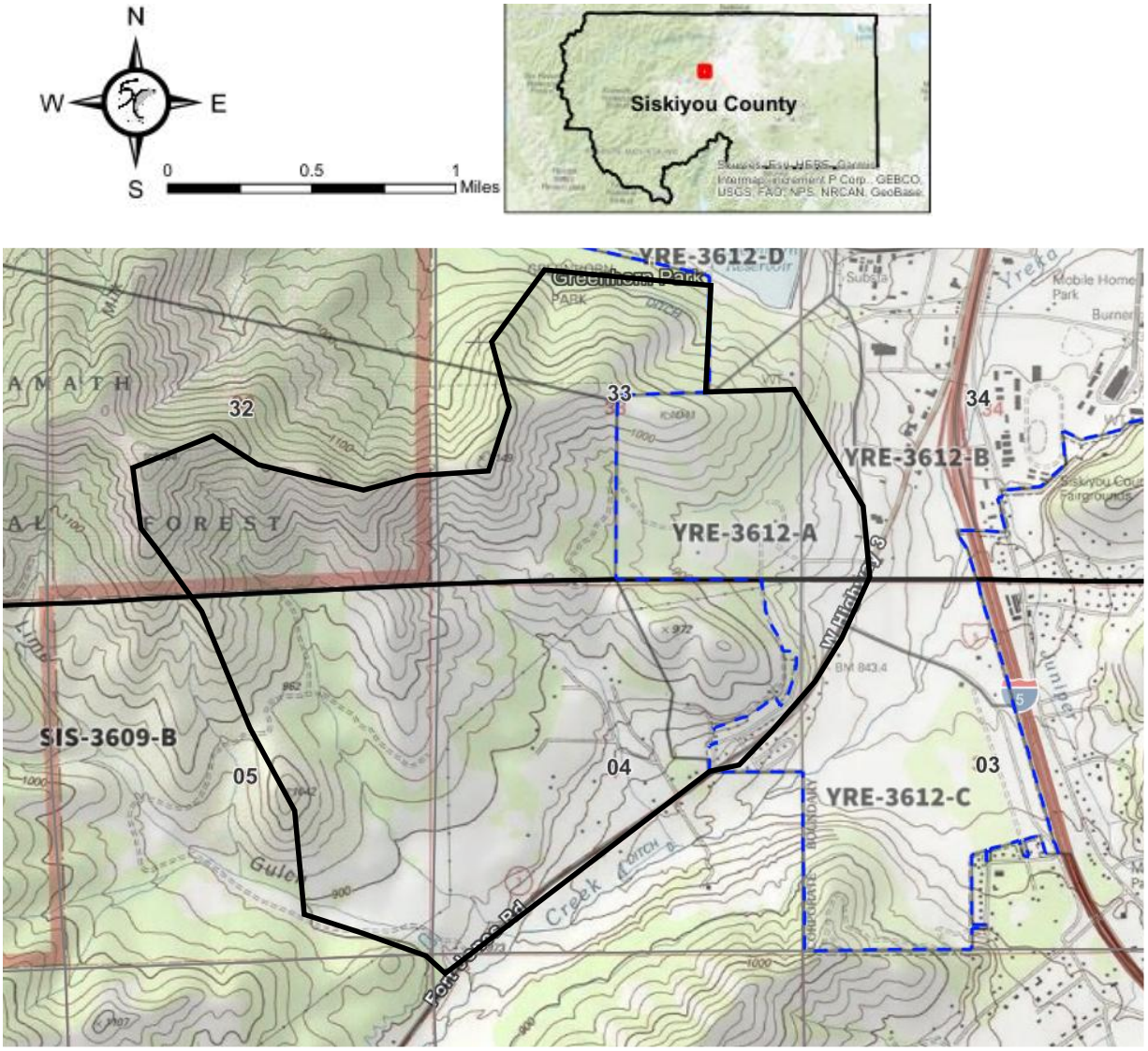


Figure 1. Outsen Road Fuels Reduction Project Map shown in black outline. Blue dash- City of Yreka boundary

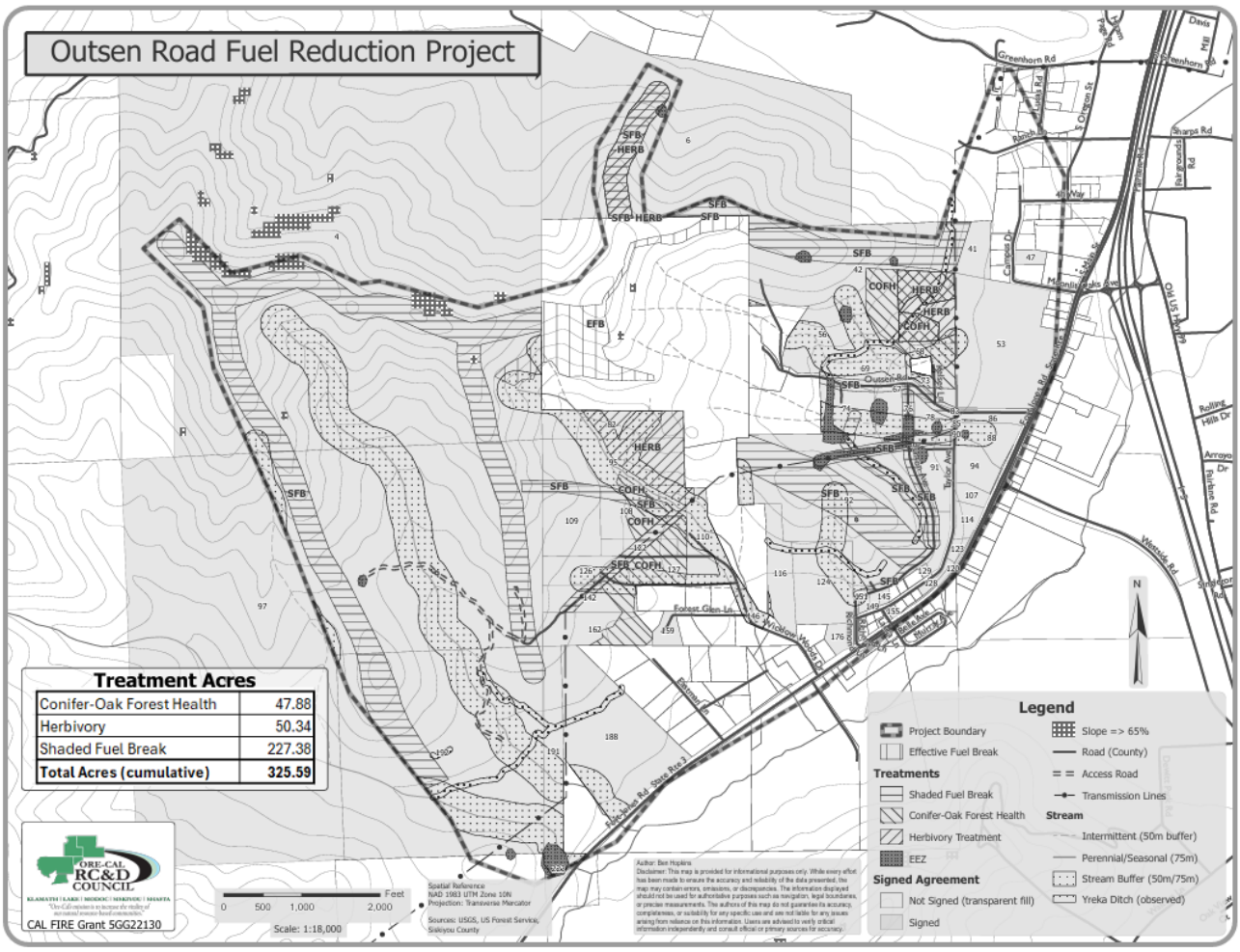


Figure 2. Proposed Treatment Areas Within the PAA

Treatment prescriptions (TP) for individual parcels within the PAA will be refined at the time of operation layout to increase protection measures, but all potential treatments surveyed for botanical, wildlife, and cultural resources as part of this review. Treatments are based on field site surveys and utilize typical designs (Appendix A). The PAA includes moderate to high-risk homesites and critical transportation routes for ingress and egress during emergencies.

Table 1. Vegetation Type and Treatment Area By Vegetation Type

Project Vegetation Type	Project Areal Acres	Maximum Potential Treatment Acres
Perennial & Annual Grasslands	286	0
Crops & Pasture	8	0
Conifer	225	40
Conifer-Hardwood	71	16
Montane Hardwood	233	70
Riparain	1	0
Chapparal	585	211
Residential	90	30
TOTAL	**1498**	**367**

Table 2. Treatment Type Acreages and Numbers of Parcels Affected By Treatment Type

Project Treatment Type	Maximum Potential Treatment Acres	Maximum Potential Parcels**
Ridgeline Shaded Fuel Break	185	7
Utility Line Fire Break*	29	16
Road/side Fire Break	17	9
Forest Fire Fuel Reduction & Forest Health	56	9
100' Home Hardening	30	25
Herbivory	50	7
TOTAL	**367**	**73**

**- Actual number of parcels may be less than the potential number of parcels as multiple treatment types may occur on a single parcel.

PROJECT GOALS AND OBJECTIVES

The project goals are to reduce fire behavior, provide fire fighters opportunities to engage fires, and protect homeowners within the PAA, as well as citizens within the city of Yreka, by modifying fire's behavior contributing to protection of property and lives while also protecting the environment.

The objectives of the project are to:

1) Reduce natural vegetation density to maintain or enhance existing fire and fuel breaks[1] along ridgelines and transportation and utility corridor routes to lessen the probability of moderate-to-high- severity wildfires spreading into and through WUI area.
2) Reduce flammable fuels around homes in the PAA
3) Demonstrate fuels maintenance options for landowners after initial fuel treatment have been completed and vegetation has resprouted or grown back
4) Demonstrate how fuels reduction will reduce the probability of loss of life and personal injury, increase effective ingress and egress, and protect critical facilities, essential services, infrastructure, continuity of government operations, and public and private property.

The Objectives will be met by:

- Modifying fuels along approximately five miles of ridgeline creating 100-400-foot-wide fuel breaks
- Modifying vegetation within 100 feet of approximately 25 homes to increase defensible space
- Modify at least 1.4 miles of roadside vegetation along internal road systems which act as the only way for fire fighters to get in and for evacuating residents to get out
- Modify vegetation adjacent to utility line rights-of-way along at least 2 miles of powerline corridors
- Modifying stands with ladder fuels and interlaced overstory canopies to reduce the risk of crown fire
- Conducting 2 community wildland fire workshops for landowners in the project area and other interested community members.
- Develop and annually update on-line Firewise training & education materials to be used in the project area and surrounding communities in coordination with the Yreka Area Fire Safe

[1] A fire break is a cleared area of all combustible materials typically constructed by hand or mechanical means.
A fuel break is an area where vegetation is treated to break up of horizontal and vertical fuels with the intent of reducing fire intensity and behavior within the fuel break. A fire break often is installed adjacent to a fuel break

Council; Conduct two workshops on vegetation maintenance. use of xeric landscaping, prescribed fire, and herbivory (grazing) to maintain treated landscape

Other benefits include:

- Protection of cultural resources
- Protection of ecosystem services such as water quality, flood control, green infrastructure, wildlife habitat, soil structure and carbon sequestration
- Provision of a safer working environment for firefighters by reducing fire severity, intensity, and rate of spread, allowing them to more effectively combat catastrophic wildfires

PROJECT START DATE

August 2025

PROJECT DESCRIPTION

The Project Activity Area (PAA) is 1498 acres, and the treatment area encompasses 367 acres distributed within the PAA (Figure 1). The proposed action consists of:

- Fuel reduction within a 100' radius of 25 homes and other permanent structures (~30 acres). This area is referred to as Defensible Space Zones
- Constructing fuelbreaks (~ 400' wide off the existing ridgetop firebreaks (constructed in 2022 as part of the McKinney Fire contingency fire contingency plan) (~156 acres)
- Constructing ~100' wide fuelbreaks on spur ridges tied to the McKinney Fire firebreak lines (~77 acres)
- Treating fuels within 100' of roads needed for evacuation of homes during a fire (17 acres)
- Thinning 150' wide fuel breaks building off existing utility line corridors[2] (17 acres),
- Thinning of small diameter trees and removal of dead and dying trees, reducing understory fuels and opening overstory canopies (56 acres)[3]
- Conducting fuel maintenance demonstrations including use of a curtain burner and grazing (herbivory) on approximately 50 acres
- Conducting two homeowner workshops on defensible space, post treatment maintenance and fire planning and home hardening

Work will focus on improving forest health, including vegetation management, forest undergrowth and increasing defensible space around homes. Treatment will focus on reducing vertical and horizontal continuity of fuels; removing competition from small, closely spaced, fire-vulnerable species; and thinning understory trees (<12" diameter) to release larger trees. Both mechanized and manual techniques will be deployed for the removal of fuels. Areas greater than 100ft^2 disturbed by equipment or stacked logs would be reseeded with sterile cover crops or mulched with certified weed-free rice straw or wheat straw. Fuel reduction, biomass disposal, vegetation treatment and site restoration activities are described in greater detail below.

The treatment contractor will conduct hazardous fuel reduction techniques appropriate for individual parcels. A Preliminary Site Assessment (PSA) was conducted on each eligible parcel to identify water courses, special-status species and habitat, cultural resources, or any other obstacles to be avoided and to develop recommended treatments. A Treatment Prescription (TP)

[2] Utility companies must maintain their rights-of-way (ROW) which are typically 60' wide. This project will not treat utility ROW areas, but will thin stands outside of the ROW.

[3] There is acreage overlap between several treatment areas. Total treated acres is ~367 acres

was developed based on the Preliminary Site Assessment, based on the typical designs (Appendix A).

Commercial-sized healthy mature or large trees (>12" dbh[4]) will not be included in the thinning operations, however dead, dying or diseased trees of all sizes may be removed. Commercial sized logs may be left on the property for the property owner to dispose of. Property owners who elect to sell commercial sized logs will be required to submit and receive approval of an appropriate Timber Harvest Document per the California Forest Practice Rules and hire a state licensed timber operator prior to any timber operations, pursuant to Title 14 California Code of Regulations.

HAZARD FUEL REDUCTION

Fuel reduction will use mechanized, manual and animal techniques. The mechanized technique will involve the use of heavy machinery and equipment such as track hoes, track chippers, track equipment with masticator heads, and logging equipment. The manual technique will involve the use of hand crews equipped with chainsaws and other field-deployable equipment. Animal treatment will consist of goat grazing of scrubs.

The mechanized technique may cover more acreage per day, but its use is limited by slope, access, perennial/seasonal consideration, and similar limitations that do not apply to the manual technique. Mechanical treatment will not occur on slopes of 65% or greater or whenever site conditions require handwork. The general contractor(s) or subcontractors will determine which technique or combination of techniques will be appropriate for each PAA following the Preliminary Site Assessment.

Mechanical Treatment

Mechanical treatment is effective for removing dense stands of vegetation and is typically used in shrub and tree fuel-removal operations. Mechanical treatments are generally the most cost-effective and are the preferred treatments under the project. Mechanical treatments that may be used during the project include:

- Mastication (track, rubber tire or skid steer mounted)
- Logging and skidding
- Bucket and boom
- Chipping and grinding

Manual Treatment

Manual treatment would involve the use of hand tools and hand-operated power tools to cut, clear, or prune herbaceous and woody species. Activities could include the following:

- Removing trees and undesirable species with chainsaws, lopper, or pruners
- Pulling, grubbing, or digging out root systems of undesired plants to prevent sprouting and regrowth
- Placing mulch around desired vegetation to limit competitive growth
- Hand piling for burning

Ground disturbance from manual treatments is typically less than mechanical treatment within an equivalent area. Manual treatments will be used in sensitive habitats such as riparian areas, on steeper slopes, within constrained areas (biological or archeological), and in areas that are inaccessible to vehicles and around structures.

Animal Treatment

Animal treatment uses goats to target a specific area. Goats consume fire fuels such as weeds, invasive plant species and tree limbs creating natural firebreaks. The natural

[4] Dbh= diameter at breast height (4.5')

grazing habits of goats provide an eco-friendly and cost-effective way to treat previously thinned defensible space without the use of herbicides. For some landowners' herbicide use is discouraged and long-term maintenance can lapse. This project will demonstrate the use of herbivory for landowners to consider in the future.

BIOMASS DISPOSAL

Biomass waste generated is anticipated to include removal of woody boles up to 12 inches dbh; sub-merchantable and non-commercial trees; green plant material from thinning and brush residuals; cut shrubs, branches, and saplings; and branches and logs from dead or mortally diseased trees.

On-Site Disposal

Some residual biomass from treatment activities may be left in place for habitat, erosion control or other purposes. Biomass that is of a size and suitable for chipping will be disposed of on-site to the extent that it is feasible without compromising the objective of reducing fire risk and fuel load. Such biomass will be handled in the following manner:

- Green waste will be cut or chipped
- Logs and large branches, free of smaller branches and leaves, will be cut into pieces and material will be masticated, chipped or lopped and scattered, converted to firewood, or left for landowners to remove for firewood or commercial processing.
- Chipped waste will be disposed of where appropriate in a manner that suppresses invasive plant and weed growth and helps stabilize soil in steep terrain. In no case will chip material be spread greater than 2 inches.
- Green waste piles will not be placed in Defensible Space Zones (they will be moved to other areas within open lands or end hauled to a disposal site).
- Green waste from branches and logs from dead or mortally diseased trees, particularly those that might be infected with sudden oak death, will not be chipped. But will be left to decompose in place help prevent spread of disease.

Key points for the above parameters include spreading to a depth of 2 inches and avoiding piling around residual trees.

Off-Site Disposal

Strategic use of biomass that is removed from the site can divert material from decay and open pile burning that landowners currently do; this will produce greenhouse gas reduction benefits outside of the forest. Three options exist for off-site disposal including use of this material as biofuels to generate electricity, sale of materials for processing as lumber, or burned as home heating fuel. The project could use biomass facilities if economical for the disposal of woody biomass generated by project activities. The nearest biomass facility is Roseburg in Weed, approximately 35 miles from the project area. As of 2024 the City of Yreka has established a "clean" burning wood waste program that can reduce emissions, smoke and dooryard burning. If it is uneconomical to haul biomass to Weed, the City of Yreka has approved use of their curtain burner to dispose of materials. Some landowners have indicated that they donate wood to local charities, organizations or neighbors for firewood.

ON-GOING VEGETATION MANAGEMENT

Most or all treatment areas will need some level of vegetation treatment post biomass removal if fuelbreaks are to remain effective. While the project does not include on-going maintenance tasks it does include demonstration options for landowners to consider in post fuels reduction vegetation management. Possible treatments include: manually thinning and disposal in coordination with the City of Yreka's fuels reduction program; herbivory (grazing) to reduce new growth; herbicide application to kill growth; or prescribe burning

of resprouting vegetation.

Manually Thinning And Disposal- Landowners often cite concerns over burning woody debris as an impediment to on-going maintenance. To assist with long term maintenance, the City of Yreka has developed a woody fuels reduction program utilizing a CalFire grant to purchase a low emissions curtain burner. The Yreka burn program allows owners to haul debris to the designated city burn site and drop off vegetation. A similar drop off program has been highly effective in Lake Shastina, except at that site open pit burning is used instead of curtain burning. At Shastina the slow, smoky burring of needles and leaves was discontinued. The curtain burning operation injects air both into and across the burning fuels increasing efficiency and reducing emissions. This allows for far greater flexibility in timing of burning operations and well as reduces smoke, carbon dioxide, nitrate, and particulate production.

Herbivory/Grazing- Animal treatment uses goats to target a specific area. Goats will consume budding brush species, the most likely source of new growth, as well as weeds, invasive plant species and tree limbs maintaining firebreaks. The natural grazing habits of goats provide a cost-effective way to treat previously thinned defensible space without the use of herbicides.

Some landowners may opt to apply herbicides to control brush resprouting for smaller areas like yards. Landowners often use "over the counter" herbicides for these areas. The labels for these herbicides specify the safe application requirements, timing and dosing. For large areas a California Licensed Pest Control Advisor (PCA) would be required. Where a PCA contractor is retained, treatments will be prescribed by the PCA for periods of the year when species are most vulnerable and will promote restoration of native or desired plant communities to reduce the potential for accumulating excessive fuel loads and increased wildfire hazards. The PCA must develop a plan for compliance with label restrictions for the chemicals being applied.

Prescribed Burning- Some landowners may consider either pile burning of debris or broadcast burning. Pile burning requires a fire permit and/or air board permit that specifies the permitted burn conditions and timing. For prescribed burns options for assistance include associations such as the Siskiyou Prescribed Burn Association

This project does not include the use of herbicides, or pile/prescribed burning for post operations maintenance and they are not analyzed herein. The project included provisions for disposal of maintenance brush in cooperation with the City of Yreka debris disposal program discussed previously.

SITE RESTORATION

Some degree of ground disturbance will be caused by the machinery and equipment used during mechanized treatments. Disturbance best management practices will address risks of significant erosion or slope destabilization. Grass seeding, slash packing or other appropriate erosion control or slope stabilization techniques will be deployed on any site where site inspection determines that disturbance would likely lead to an increased risk of erosion or slope stabilization. The technique to be used will be site-specific and will be implemented by hand crews in areas that are sensitive to soil stabilization issues. The determination of risk will be based on:

- Exposure of the disturbance
- Soil type disturbed
- The capability of the soil to support germination of grass seeding
- Timeframe (proximity to the rainy season)
- Proximity of the disturbance to a water course

PROJECT SCHEDULE

Project activities will be limited to the hours of 7:00 a.m. to 7:00 p.m. during weekdays and 8:00 a.m. to 5:00 p.m. on Saturday and Sunday. A limited operation period (LOP) will be implemented from February 1 to August 1 unless wildlife surveys determine there are no nesting or denning activities in the work are during that period. An exception to the LOP is areas within 100' of homes (Defensible Space Zones).

BEST MANAGEMENT PRACTICES

Applicable Best Management Practices (BMPs) including from the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* (December 2014) and other sources are incorporated into the project description. The BMPs are listed in the Checklist and Discussion section of this document as well as Appendix B. The treatment contractor will be required to adhere to these BMPs during project implementation.

ENVIRONMENTAL SETTING OF THE PROJECT REGION

DESCRIPTION OF THE PROJECT ACTIVITY AREA

The PAA is approximately 2.34 square miles (~1498 acres) encompassing the southwest portion of the City of Yreka and adjacent private lands. There are no public lands within the project, excepting a small section of Greenhorn Park, within the City of Yreka. The PAA is characterized by three east facing "U" shaped bowls forming the middle of the project area. The sharp north-south spur ridges between these bowls come off of the larger ridge system that forms the western boundary of the project. The southern PAA boundary is Highway 3.

The majority of homes in the PAA are located in the southern half and largely within the eastern half of the project area in the flatter "U" shaped valleys. The spur ridges terminate in natural grass and pasture lands that flatten out as one moves east towards Highway 3. The ridges dividing the bowls provide the opportunity for construction of internal fire and fuel breaks while the highway and grasslands provide protection from fires moving from the south and east into the project area.

The project area and surrounding lands have not had significant wildfires in more than 50 years (Table 3 and Figure 3) however, the 2022 McKinney Fire demonstrated the speed and intensity that a fire can threaten the region.

Table 3. Fire History of Project Area

Fires Within 5 Miles of Project Area 2002-2021			
Year	**Name**	**Acres**	**Cause**
2006	Humbug	41	Vehicle
2006	Humbug #3	23	Playing with Fire
2007	Brazie	?	Debris Burning
2010	Eastman	2	Lightning
2017	Apsuun	10	Arson
2017	Comstock	10	Arson
2017	Kilgore	?	Arson
2017	Oakwood	?	Debris Burning
2018	North	?	Ligthning
2018	Oberlin	3	Equipment

The PAA contains a wide mix of vegetation types (Table 1 and Figures 4). Eastman Lane, Forest Glen Lane, Outsen Road, Richmond Lane, Ruthie Point/Burton Ave, Taylor Avenue and Wicklow Woods Drive are the primary ingress-egress and emergency access routes within the PAA.

Figure 3- Fires of the past 20 years. Blue areas outlines= fires between 2001-2011. Magenta fire outlines= fires between 2012-2021. Project Area is shown in gray
(Source: Capradio, 2021).

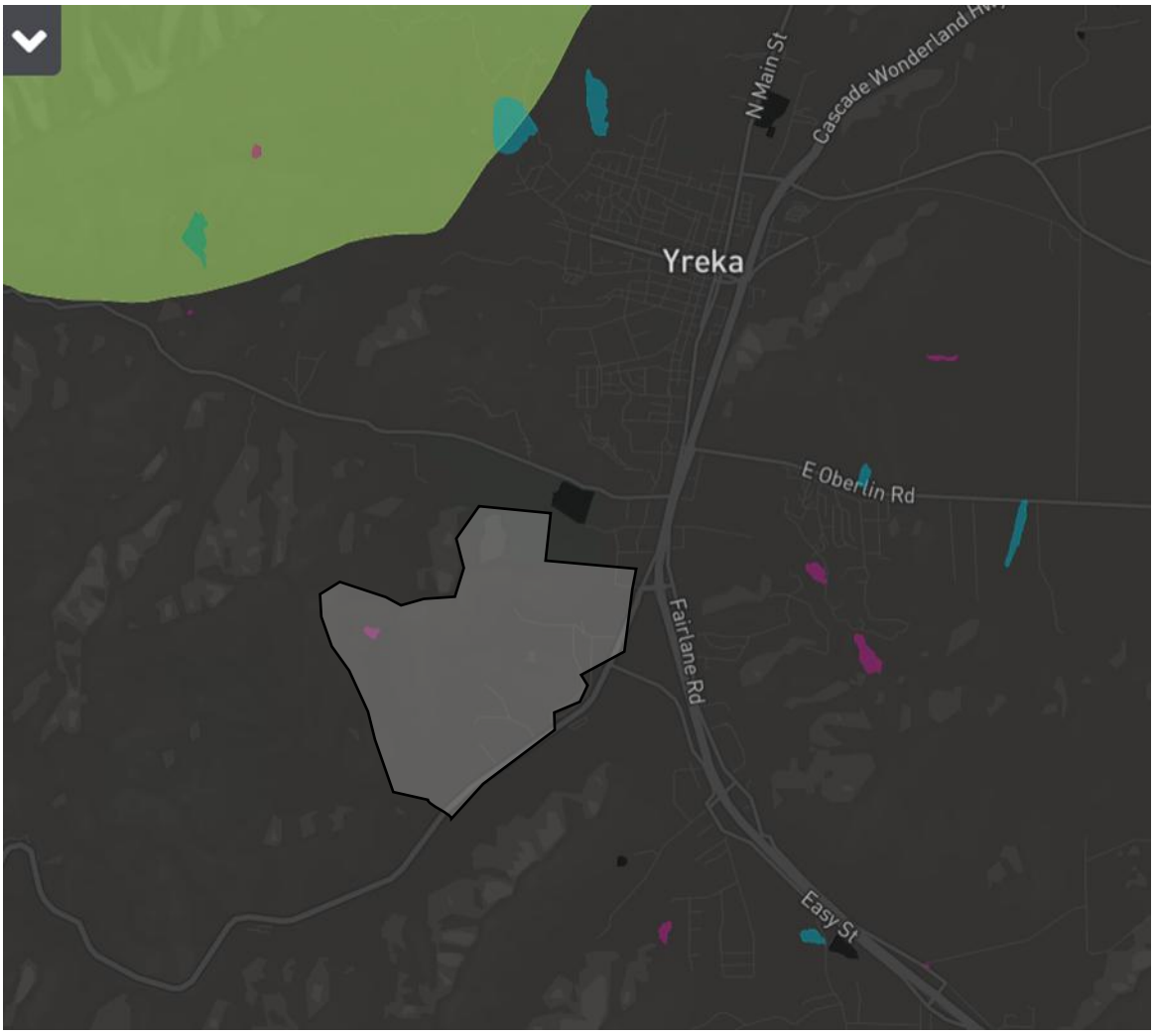
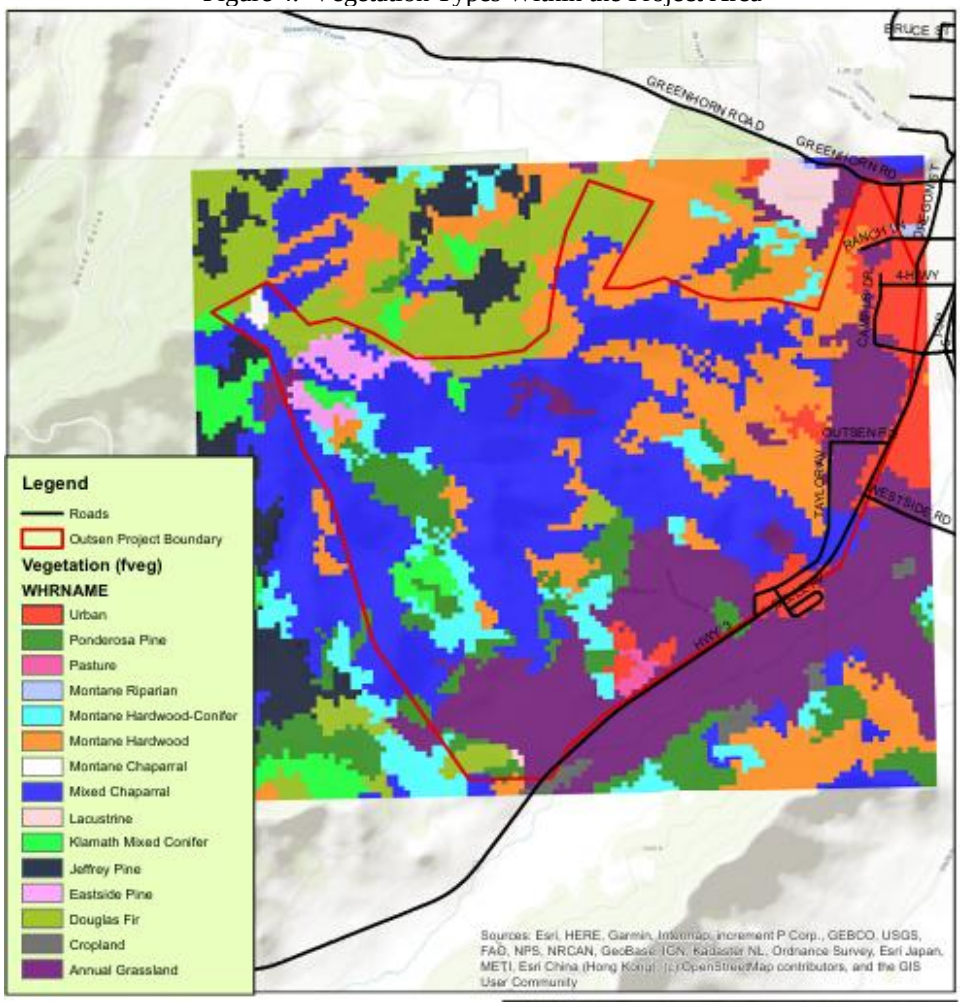


Figure 4. Vegetation Types Within the Project Area



Yreka Zoning and General Plan land use designations within the PAA include: R1- Single Family Residential; RA- Rural Agriculture; M1- Light Industrial and RSC- Recreation Open Space Conservation zones. Zoning designations are shown on Figure 5. Siskiyou County Zoning and General Plan land use designations reflect the more rural portions of the PAA and include: TP- Timber Production; Agriculture-2-B-20 & 40; and Rural Residential B-2.5 thru B-20, and Residential-3 (Figure 6). The land use designations are Resource, Agriculture, Rural Residential and Residential. Zoning and land use designations are consistent with the PAA.

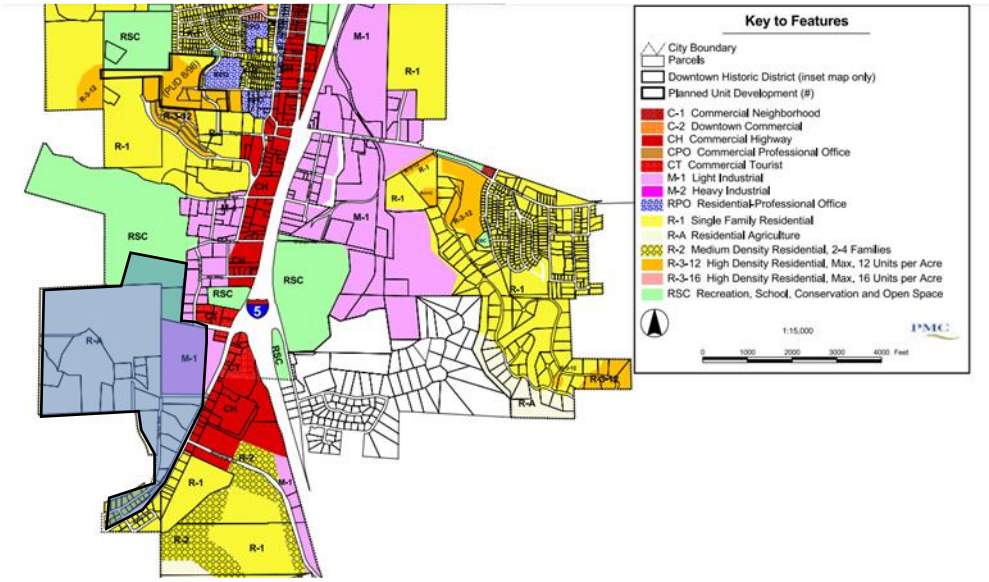
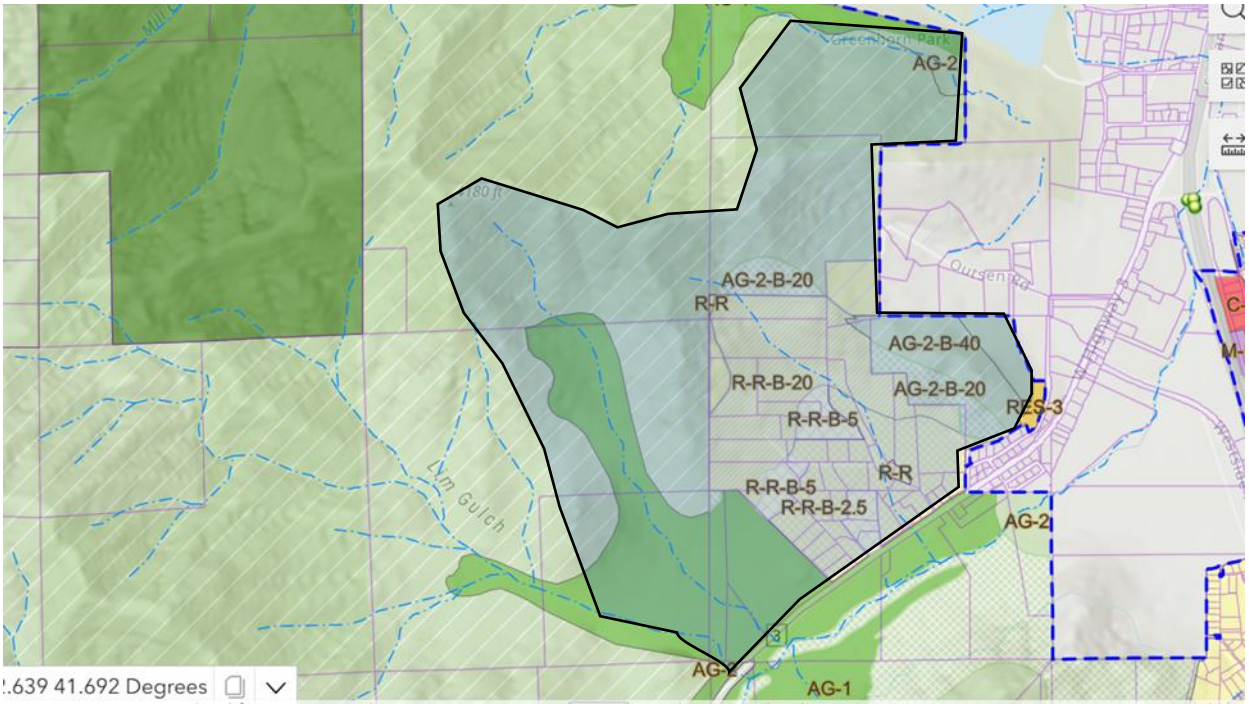


Figure 5 (Above) City of Yreka and Figure 6 (Below) Zoning and General Plan Designations



The PAA is located in the Yreka Creek-Shasta River Watershed (HUC8 18010207; Yreka Creek HUC12-180102070502). Slopes are generally flat to less than 30 percent on the eastern half of the PAA and increase sharply to >50% moving west and upslope to the ridge separating Yreka and Greenhorn Creek watersheds. The topographic aspect is generally east-southeast facing, sloping down towards Shasta Valley. Elevations range from 4000 feet above mean sea level (MLS) at the western high point to approximately 2800 at the southeastern low point.

The project area incorporates three unnamed perennial/seasonal streams as well as several ephemeral tributaries to each of these streams. All streams in the PAA drain to Yreka Creek across a broad floodplain. All of the PAA is within Zone X of the Yreka Creek Floodplain FEMA mapping (FIRM 06093C1559D). There are no fish bearing streams in the PAA. Other waterbodies within the PAA includes a large man-made pond in Lime Gulch and several smaller perennial/seasonal and perennial ponds. The Greenhorn reservoir lies just north of the PAA.

The PAA contains a variety of vegetation types as shown in Table 1 and Figure 4. Areas with potential commercial timber are limited to Montane Hardwood, Montane Hardwood-Conifer, Klamath Mixed Conifer, and Pondarosa Pine habitats.

The Soil Survey of Siskiyou County California Central Part Sheet #12 - Yreka NW Quad (Figure 7) delineates eight soil types in the PAA. Alluvial soils are found at the lowest elevations of the project area (Soil type# 104, 123, 145 and 230). These are very gravelly, sandy loams and gravelly clays. The hillside soils #146 and #148 are derived from the metamorphic and sedimentary rock and are primarily loams and gravelly loams. Lithic (rocky) soils and rock outcrops form the steep slopes in the weatern part portion of the project (Soil#'s 178 and 216). A number of smaller rock outcrops were located during surveys.

Alluvial Soils: # 104 is a very gravelly sandy loam on 0-5% slopes. This is a very deep, somewhat excessively drained soil on alluvium fans. This soil type occurs on a number of the properties on the eastern edge of the project area. #123 is a gravelly clay on 2-9% slopes. This is a very deep poorly drained soil on alluvium fans derived predominantly from serpentine. This soil type is shown on the soils map along Outsen road and was surveyed carefully. 3 #145 Are "Dumps": These soils are derived from piles of waste rock from mining operations and is not a treatment area. #230 is a gravelly sandy loam on 2-5% slopes. This is alluvium derived from mixed metamorphic and sedimentary rock. This soil type occurs on larger parcels at the base of the hills at the south end of the project area.

Soils of Metamorphic and Sedimentary Geology on Project Area Hillslopes: #146 is a gravelly loam on 5-9% slopes. This is a moderately deep, well-drained soil derived from metamorphosed rock. A number of landowners with small to moderate sized parcels occur in this soil type on the east side of the project area. #148 is a complex of loam and gravelly loam, with small areas of rock outcrop on 15-50% slopes. It is derived from metamorphic rock and occurs on the ridges and higher elevations of the project area on larger parcels of private property.

Lithic Soils and Rock Outcrops: #178 are very rocky soils and rock outcrops on 0-65% slopes. These soils are derived from sedimentary (primarily limestone) and metamorphic rock. #216 is a rock outcrop on 9-50 % slopes. These shallow soils consist primarily of exposed limestone and are excessively drained. This soil type exists in the area of property #38 which is not included in the project.

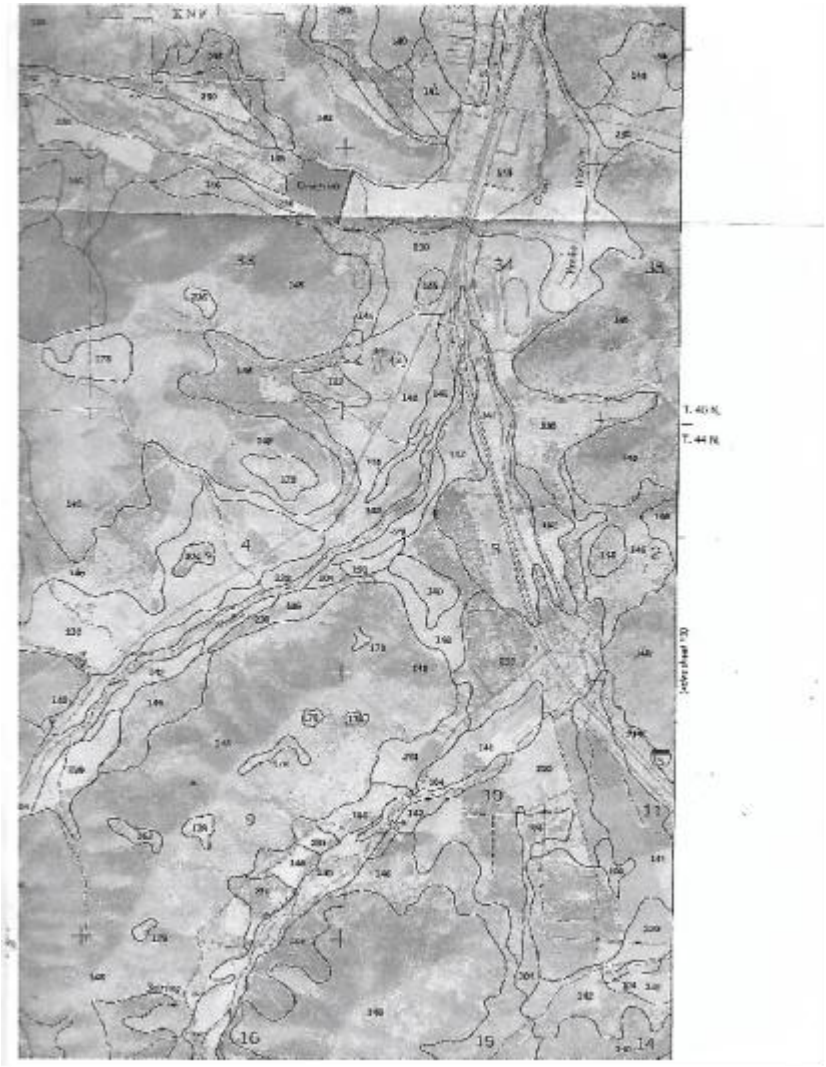
SPECIAL-STATUS WILDLIFE SPECIES

Special-status animal species include species that are (1) listed as Threatened or Endangered under the CESA or the ESA; (2) Proposed for federal listing as Threatened or Endangered; (3) identified as state or federal Candidates for listing as Threatened or Endangered; and/or (4) identified by the CDFW as Species of Special Concern or California Fully Protected Species.

A list of regionally occurring special-status wildlife species in the project site was compiled based on a review of pertinent literature and consultations with the USFWS Information for Planning and Consultation (iPAC) database, CDFW Biogeographic Information and Observation System 6 (BIOS6)/CNDDB database records, California Wildlife Habitats Relationship (CWHR) and Vegetation Classification and Mapping Program (VegCAMP) maps.

For each special-status wildlife species, habitat and other ecological requirements were evaluated and compared to the habitats in the study area and immediate vicinity to assess the presence of potential habitat in the project area. The habitat assessments for special-status species wildlife species are provided in Table 4.

Figure 7. Soil Survey Map of Siskiyou County California Central Part Sheet #12 - Yreka NW Quadrangle



Of the 42 wildlife species listed in a BIOS6 SEARCH, 26 were determined to be either CDFW Species of Special Concern, California Fully Protected Species, Candidate, Proposed or Threatened or Endangered species under the CESA[5] or FESA[5]; and have a potential to occur within the project area (refer to Table 4, below). The remaining 16 species listed in the BIOS6 search either are not listed under the criteria above or were determined to have no potential or unlikely to occur in the project area.

Potential project impacts to special-status wildlife species with potential to occur within the project area are discussed in the Biological Resources section of the Environmental Checklist and Discussion.

TABLE 4. POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES

Common Name	Scientific Name	Conservation Status (CDFW/State/Fed)	Habitat Description	Potential to Occur in Project Area
Birds				
American goshawk	*Accipiter atricapillus*	SSC/--/--	Dense, mature conifer and deciduous forest, interspersed with meadows, other openings, and riparian areas required. Nesting habitat includes north-facing slopes near water.	**No suitable habitat. No potential to occur in the PAA**

[5] CESA- CA Endangered Species Act; FESA- Federal Endangered Species Act

Bald eagle	*Haliaeetus leucocephalus*	FP/SE/FD	Near open water, nesting habitat consists of large trees usually within riparian forest	**No potential to occur in PAA, potential to occur adjacent to PAA in Greenhorn Park and west of project. Bald eagles have been observed flying over PAA and other areas.**
Burrowing owl	*Athene cunicularia*	*--/ST/FT*	Flat open areas with sparse vegetation, short grass, and bare soil. They live in burrows they dig themselves or take over from prairie dogs, ground squirrels and even tortoises	**Suitable habitat may occur in the PAA, however, burrowing habitat tends to be sparse vegetation that is not targeted for treatment. No potential impact to burrowing habitat**
Northern spotted owl	*Strix occidentalis caurina*	--/ST/FT	Coniferous forest, old growth, high multistory canopy, dominated by big trees.	**No mature conifer forests occur within treatment areas. Nopotential to occur in the PAA**
great gray owl	*Strix nebulosa*	*--/SE/--*	Utilize dense, mature conifer forests adjacent to montane meadows, where they nest in large snags and hunt for prey like small rodents.	**No mature conifer forests occur within treatment areas. No potential to occur in the PAA**
Golden eagle	*Aquila chrysaetos*	*FP/__/__*	Grasslands, intermittent forested habitat, woodland-brushlands. open country in the vicinity of hills, cliffs and bluffs.	**Suitable habitat occurs in the PAA. A no disturbance buffer around nests and the LOP reduce impact to less than significant**
Swainsons hawk	*Buteo swainsoni*	*SSC/--/--*	Utilize open areas in juniper/pine with scattered trees or along riparian systems near agricultural fields, as well as grasslands and oak savannas, where they nest and forage.	**Potential to occur in PAA, however the LOP is in place during nesting period. The project will not significantly change foraging habitat. Less than significant effect.**
greater sandhill crane	*Antigone canadensis tabida*	*FP/ST/-*	Utilizes large freshwater marshes, prairie ponds, marshy tundra during summer and on grainfields or prairies during migration and in winter.	**Very limited potential habitat occurs in the PAA, however suitable nesting habitat is within stream and wetland buffers and the LOP is in place during nesting period. No impact.**
bank swallow	*Riparia riparia*	*--/ST/--*	Nests in burrows in vertical banks or bluffs of sand or dirt, particularly along rivers, streams, gravel pits and road cuts.	**Potential to occur in PAA, however suitable nesting habitat is within stream and wetland buffers and the LOP is in place during nesting period. No impact.**
tricolored blackbird	*Agelaius tricolor*	*--/ST/SSC*	Nests in wetlands (cattails, bulrushes, willows, blackberry), agricultural fields, near stock ponds or irrigated pastures.	**Potential to occur in PAA, however suitable nesting habitat is within stream and wetland buffers and the LOP is in place during nesting period. No impact.**
			Mammals	
Badger	*Taxidea taxus*	*SSC/--/--*	Occur in shrub-steppe, grassland, semi-desert, and open forest habitats, require friable soils for digging, and prey primarily on ground squirrels, pocket gophers, and a variety of other small mammals	**Suitable habitat occurs in PAA. Work in the project area will not impact denning sites or significantly affect foraging habitat. Less than significant impact.**
Fisher	*Pekania pennanti*	SSC/--/--	Coniferous forest, old growth, Riparian forest	**Where the following exists: Old growth, riparian habitat. No suitable habitat occurs in the PAA. No impact**
Gray Wolf	*Canis lupus*	*--/SE/FE*	Use a diversity of habitats from the tundra to woodlands, forests, grasslands and deserts.	**Suitable habitat exists in the PAA, however there are no known sitings of wolves in the PAA. Wolves tend to avoid areas populated by humans.**
Pallid bat	*Antrozous pallidus*	SSC/--/--	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging	**Where the following exists: Rock outcrops, cliffs, caves; however suitable habitat for this species is not within treatment areas. No potential impact.**
desert bighorn sheep	*Ovis canadensis nelsoni*	FP/--/--	steep, rocky, open desert mountains and slopes	**The PAA does not support bighorn sheep. Work in the PAA will not impact foraging habitats of this species. No impact.**
Ringtail Cat	*Bassariscus astutus raptor*	FP/--/--	Prefers to live in rocky habitats associated with water. These areas can include riparian canyons, caves, and mine shafts.	**Suitable habitat may occur in the PAA, however, denning habitat tends to be sparse vegetation or in riparian areas that are not targeted for treatment. Habitat will be avoided with implementation of wetland and stream buffers. The LOP is in place during denning periods.**
Townsend big-eared bat	*Corynorhinus townsendii*	SSC/--/--	Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges.	**Potential to occur in: mines, tunnels, buildings. Suitable habitat for this species is not within treatment areas. No potential impact.**
			Reptiles & Amphibians	
Foothill yellow-legged frog	*Rana boylii*	SSC/SE/--	Found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadow types.	**Potential to occur where the following exists: Rocky streams with moderate riparian cover, Habitat will be avoided with implementation of wetland and stream buffers.**

Western pond turtle	*Emys marmorata*	SSC/--/--	Aquatic, marsh & swamp, ponds and wetland habitat, nest in adjacent uplands under loose dirt or leaf litter.	**Potential to occur in: where the following exists: Marsh, Swamp, Ponds, Wetlands. Habitat will be avoided with the implementation of wetland and stream buffers.**
Fish and Aquatic Vertebrates				
Coho salmon	*Oncorhynchus kisutch*	--/ST/FT	Spawning and juvenile rearing in low gradient, perennial, cool freshwater with adequate cover, pools and substrate.	**No potential to occur in the PAA**
Chinook Salmon CV Spring-run ESU	*Oncorhynchus tshawytscha*	--/ST/FT	Aquatic; Rivers and perennial and intermittent tributaries.	**No potential to occur in the PAA**
Lower Klamath marbled sculpin	*Cottus klamathensis polyporus*	*SSC/--/--*	Requires cold (<20°C) spring-fed streams that have a low gradient and adequate aquatic vegetation. They tend to occupy pools or runs with cover	**No potential to occur in the PAA**
Pacific Lamprey	*Entosphenus tridentatus*	SSC/--/--	Requires cold, clear, water for spawning and incubation. Ammocoetes need soft sediments in which to burrow during rearing.	**No potential to occur in the PAA**
steelhead - Klamath Mountains Province DPS	*Oncorhynchus mykiss*	--/--/FT	Aquatic; Rivers and perennial and intermittent tributaries	**No potential to occur in the PAA**
Invertebrates & Insects				
Monarch Butterfly	*Danaus plexippus*	--/--/FC	Forages on nectar producing plants, Milkweed required for reproduction.	**Potential to occur in PAA wherever Milkweed is found. Milkweed plants will be protected.**

FT: federally listed as threatened; **FE**: federally listed as endangered; **FC**: Candidate for listing; **FD**: Federally delisted **ST**: state listed as threatened **SE:** state listed as endangered **CDFW SSC**: Species of Special Concern; **CDFW FP**: CDFW fully protected; **CDFW WL**: CDFW watch list

SPECIAL-STATUS PLANT SPECIES

A review of the California Native Plant Society (CNPS) Rare Plant Inventory and California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) of the Yreka quadrangle and eight adjacent quadrangles was conducted in February 2024. This review provided a list of thirty special status species with potential to occur in the project area.

Those thirty species were searched in Calflora and the Jepson Eflora to identify their habitat. With this information in mind, *Eriogonum siskiyouense* was removed as it occurs at much higher elevations than the project area, *Lewisia cotyledon var heckneri* was removed due to the absence of granite or basalt rock, *Darlingtonia california* was removed due to the absence of seeps and bogs with running water, *Trifolium siskiyouense* was removed due to the absence of wet mountain meadows in the project area and *Poa rhizomata* was removed as this area is outside of the known geographic range.

The remaining twenty-six taxa are shown in (Table 5a). Additionally, information from the Jepson Eflora and Calflora helped develop Table 5b to identify potential blooming period for determining survey dates and habitats where these species may occur.

Illustrations and photographs from the Jepson eflora and Calflora, as well as experience from previous encounters with many of these species, were used to assist with recognition. During the course of the survey, visits were made to nearby known populations of *Phlox hirsuta, Balsamorhiza lanata, Lomatium peckianum, Polemonium carneum, and Allium siskiyouense* during flowering to assist with recognition and determine survey dates.

Table 5a Special Status Plant Species Which May Occur in the Project Area				
CA & Fed Rare Plant Rating	**Scientific Name**	**Common Name**	**Family**	**Nearby Known Location**
1A	***Calochortus monanthus***	Single-flowered Mariposa lily	Liliaceae	Historic Record on Western Slope of Paradise Craggy
1B.2 Federal & CA Endangered	***Phlox hirsuta***	Yreka phlox	Polemoniaceae	China Hill, Soap Ck Ridge, Greenhorn Area, Yreka
1B.1	***Orthocarpus pachystachys***	Shasta orthocarpus	Orobancaceae	S of Gazelle near Yreka Ditch
1B.2	***Balsamorhiza lanata***	wooly balsamroot	Asteraceae	S of Gazelle and On Hwy 3 just outside Yreka
1B.2	***Calochortus greenei***	Green's mariposa lily	Liliaceae	Shasta Valley
1B.2	***Calochortus persistens***	Siskiyou mariposa lily	Liliaceae	Gunsight Ridgeline & Nr Mill Ck
1B.2	***Cryptantha dissita***	serpentine cryptantha	Boraginaceae	Pop near Yreka otherwise in Santa Rosa area
1B.2	***Galium serpenticum ssp. scotticum***	Scott Mountain bedstraw	Rubiaceae	Hwy 3 Forest House Area
1B.2	***Phacelia greenei***	Scott Valley phacelia	Hydrophyaceae	Nr Hwy 3 & Forest House and Soap Creek Ridge
1B.3	***Chaenactis suffretesscens***	Shasta chaenactis	Asteraceae	Moffat Ck Near Hwy 3
1B.3	***Eriogonum ursinum var.erubescens***	blushing wild buckwheat	Polygonaceae	Gunsight Ridge and Soap Ck Ridge
2B.2	***Hymenoxis lemmonii***	alkali hymenoxys	Asteraceae	Old records near Yreka area but not specific. -
2B.2	***Lomatium peckianum***	Pecks lomatium	Apiaceae	Roadside flats near I-5 S of Yreka
2B.2	***Polemonium carneum***	Oregon polemonium	Polemoniaceae	Greenhorn Creek & Mc Adams Creek
2B.2	***Scirpus pendulus***	pendulous bulrush	Cyperaceae	Nr small drainage ditch Copco area & Cottonwood Ck.
2B.3	***Eurybia merita***	Subalpine aster	Asteraceae	Higher elevation species
3.2	***Lewisii cotyledon var. howelii***	Howells lewisia	Montiaceae	On Forest Summit and Gunsight ridge
4.2	***Androsace elongata ssp. acuta***	California androsace	Primulaceae	Greenhorn Ck Yreka, Butcher Hill, Soap Ck Ridge
4.2	***Carex geyeri***	Geyer's sedge, Elk Sedge	Cyperaceae	4 miles South of Gazelle
4.2	***Limnanthes floccosa ssp. floccosa***	wooly meadowfoam	Limnanthaceae	
4.3	***Allium siskiyouense***	Siskiyou onion	Alliaceae	Shasta Valley Lowlands
4.3	***Arabis oregana***	Oregon rockcress	Brassicaceae	Yreka, China Hill
4.3	***Clatonia obovata***	Rydberg's spring beauty	Montiaceae (Portulacaceae)	Nr McAdams Creek
4.3	***Eriogonum siskiyouense***	Siskiyou buckwheat	Polygonaceae	~ 1.2 mi SSE of Forest Summit
4.3	***Eriogonum strictum var. greenei***	Green's buckwheat	Polygonaceae	Adj to Hwy 3 on 1st big turn W of Yreka
4.3	***Triteleia crocea var.crocea***	yellow triteleia	Thermidaceae (Liliaceae)	Hwy 3 near Forest Summit

Table 5b- Additional Info for Table 5a Species With Potential Occur in the Project Area From Calflora and Jepson eflora					
Scientific Name	**Bloom Period**	**Habitat**	**Serpentine Endemic**	**Elev Range in Ft/M**	**Other Information**
Calochortus monanthus	May	Riparian, wetland meadows and seeps. Vernal meadow	Weak	About 800 m / 2624 ft	
Phlox hirsuta	April – May	Dry serpentine talus Jeff pine/cedar/ buckbrush/bitterbrush	Strict	1000-1500 m / 3280-4921 ft	Very Little Serpentine in Project Area
Orthocarpus pachystachys	May	Open grassy slopes	Strict	<1000 m <3280 ft	Very Little Serpentine in Project Area
Balsamorhiza lanata	April – June	Open woods, grassy slopes.	Weak	800-1050 m 2624-3445 ft	
Calochortus greenei	June - Aug	Shrubby hillsides and open juniper woodland in the Shasta Valley	Weak	700 – 1100 m / 2296-3608 ft	No Juniper Woodland as in the Shasta Valley in the Project Area
Calochortus persistens	June-July	Rocky summit in conifer forest area	Weak	1000-1500 m / 3280-4921 ft	No Treatment in Rocky Sites
Cryptantha dissita	April – June	Chaparral	Strict	150-900 m / 492-2952 ft	Very Little Serpentine in Project Area
Galium serpenticum ssp. scotticum	May – Aug	Steep slopes in open pine forest	Strict	1000-2000 m / 3280-6562 ft	Very Little Serpentine in Project Area
Phacelia greenei	April-June	Openings in Pine Forest	Strict	800-1800 m / 2624-5905 ft	Very Little Serpentine in Project Area
Chaenactis suffretescens	May - Sept	Yellow Pine Forest Serpentine	Strict	700-2300	Very Little Serpentine in Project Area
Eriogonum ursinum var.erubescens	June - Septemb er	Gravel ridges	Weak	1600-1900 m / 5249-6233 ft	No Treatment in Gravel Ridges and Pjct Below Habitat Elev
Hymenoxis lemmonii –(Aster)	June - August	Open areas, roadsides, meadows, drainage areas steambanks and sagebrush scrub	Weak	800-3200 m / 2624-10498 ft	Project Not in Sagebrush Habitat & No Treatment in Open Areas.
Lomatium peckianum	April – May	Roadside flats in volcanics,and foothill woodland yellow pine	Weak	800-1800 m / 2624-5905 ft	
Polemonium carneum	April - Sept	Klamath Mixed Conifer: pine, Douglas fir, cedar, and oak	Weak	>800 m / > 2624 ft	
Scirpus pendulus	June – July	Sunny wet meadow or vernally wet	Weak	< 900 m / <2952 ft	No Treatment in Sunny Wet Mdws
Eurybia merita	July - Aug	Alpine meadows with Douglas fir, lodgepole pine or spruce forests. Open woods & rocky	Weak	1300-2000 m / 4625-6561 ft	A higher elevation species Project is Below 4,600 ft.
Lewisii cotyledon var. howelii	April – July	Talus outcrops with subshrubs and perennials	Weak	370-1800 m / 1213-5905 ft	
Androsace elongata ssp. acuta	March - June	Damp, sunny, gravelly slopes in areas of woodland chaparral	Mod	380-1820 m / 1246-5971 ft	Very Little Serpentine in Project Area
Carex geyeri	May - Aug	Sagebrush scrub, Yellow Pine Forest – Open Forest Slopes	Weak	900-2100 m / 2952-6889 ft	
Limnanthes floccosa ssp. floccosa	March - May	Wetlands and vernal pool edges in the Shasta Valley Lowlands	Weak	<600 m / <2293 ft	No Vernal Pool Habitat in the Project Area
Allium siskiyouense	May - July	Rocky slopes and areas of yellow pine	Strong	900-2800 m / 2952-9186 ft	Very Little Serpentine in Project Area
Arabis oregana	April-May	Rocky hillsides, steep banks and chaparral	Strong	500-1400 m / 1640-4593 ft	Very Little Serpentine in Project Area
Clatonia obovata	May - July	Open rocky steep slope without shrub or trees	Mod	~1407 m / ~ 4618 ft	No Treatment in Rocky Areas of Pjct
Eriogonum siskiyouense	July - Sept	Sunny rocky ground on serpentine	Strong	1000-2800 m / 3280-9186 ft	Very Little Serpentine in Project Area
Eriogonum strictum var. greenei	June - Sept	Serpentine	Strict	1500 – 2400 m 4,921 - 7874 ft	Higher Elevations than Project Area & very little serpentine
Triteleia crocea var.crocea	May-June	Steep slopes in areas of open woodland.	Strong	~ 822 m / ~2,700 ft	Very Little Serpentine in Project Area

No special-status rare plant species were found in or adjacent to the project area. Also, no habitat was found for special status species with an affinity to serpentine, vernal pools, sunny wet meadows, sagebrush, stands of yellow pine or juniper dominated woodlands. (See "Other Information" column, in Table 5b). The potential for a false negative survey is relatively low. The moisture and temperatures this spring have

promoted ample growth and flowering and the area we covered during surveys was thorough.

None of the Sensitive Natural Communities identified during the botanical review were located during field surveys. Further investigation of the Manual of California Vegetation provided a full list of Natural Communities and Sensitive Natural Communities that was checked and the following Sensitive Natural Communities were in the PAA during surveys.

- *Alnus rhombifolia-Salix laevigata* (61.420.13) G3S3
- *Populus trichocarpa* (61. 120.01)
- *Prunus subcordata* (37.905.03) G4 S4 (Provisional)
- *Prunus virginiana* (37.905.01) G4 S4 (Provisional)
- *Populus trichocarpa* (61. 120.01) G5 S3
- *Populus tremuloides* (61.111.02) G5 S3
- *Quercus garryana-Ceanothus cuneatus-Festuca idahoensis*

Invasive Species

Squarrose knapweed (*Centaurea virgata* ssp. *squarrosa)* was the one Siskiyou County A-listed noxious weed found. Scattered plants and small patches of B and C rated noxious weeds were located during surveys. Species included dyer's woad-B (*Isatis tinctora*), white top-B (*Lepidium draba),* yellow starthistle-C (*Centaurea solsistalis*), medusa-head grass-C (*Elymus caput-medusae*), and tree of Heaven-C (*Ailanthus altissima).* These are recorded in the survey sheets.

Special-status plant species include plants that are (1) designated as rare by CDFW or USFWS or are listed as threatened or endangered under the California Endangered Species Act (CESA) or ESA; (2) proposed for designation as rare or listing as threatened or endangered; (3) designated as state or federal candidate species for listing as threatened or endangered; and/or (4) ranked as California Rare Plant Rank (RPR) 1A, 1B, 2A, or 2B. A list of regionally occurring special-status plant species was compiled based on a review of pertinent literature, a review of the USFWS species list, CNDDB database records, and a quad search for each PAA of CNPS database records. The California Rare Plant Ranking (CRPR) results are included in Table 5a.

For each special-status plant species, habitat and other ecological requirements were evaluated and compared to the habitats in the project and immediate vicinity to assess the presence of potential habitat. The habitat assessments for special-status species are provided in Table 5a. Project impacts to special-status plant species with potential to occur within the project area are discussed in the Biological Resources section of the Environmental Checklist and Discussion.

ARCHEOLOGY

An Archaeological Survey Report was prepared for the project by Mark Arnold. A records search was completed at the California Historical Resources Information System. An archaeological field survey was completed by professional cultural specialists with the Northwest CA RC&D Council between March and June 2024 for the purpose of identifying cultural resources within the area of potential effect (APE). Surveying was limited to where landowner access and authorization was granted. Management recommendations included in the Archaeological Survey Report will be implemented for the project to avoid impacts to cultural resources.

CURRENT LAND USE AND PREVIOUS IMPACTS

The PAA is located in a high-priority WUI area in Siskiyou County. Land use and zoning designations are included in Figures 5 & 6. The PAA consists of parcels that transition from single-family residential (typically located in the eastern, gentler sloped areas along Highway 3), transitioning to Rural Residential, Agricultural and finally Timber/Resources lands on the western, steepest slopes. The area mosaic of vegetation types supports a wide range of historic (mining, water ditches, and sawmill) and

present-day land uses, including logging, grazing, farming, recreation and residential uses.

Only two fires, both less than 20 acres in size, have burned in the PAA in the past two decades. Within a three-mile radius of the PAA there have been fewer than 200 acres burned in the same period. On average, approximately 10 acres, or less than 0.1% of the area, has burned per year since 2002. Nearly all fires within this area started from human activities (Table 3).

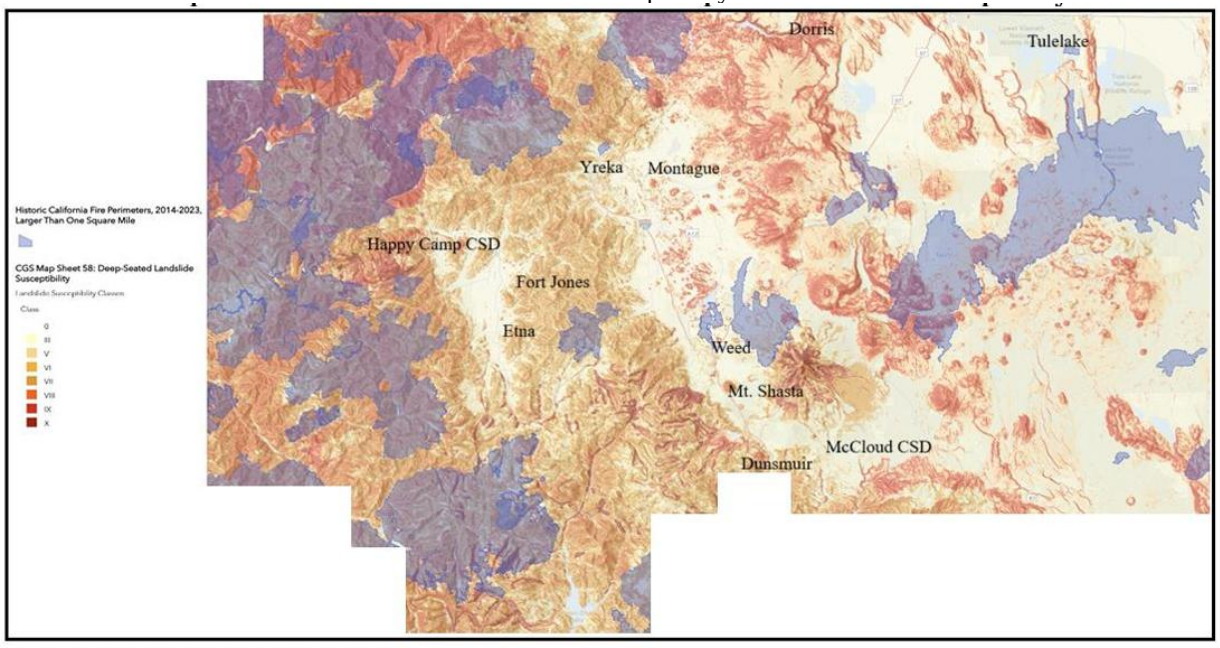
While there have not been fires in, or immediately surrounding, the PAA there have been significant high-intensity fires within the region in the same period, including the 2022 McKinney Fire. These fires have threatened the greater community of Yreka and the surrounding WUI areas. The lack of fire and other periodic disturbances in the PAA has allowed the development of relatively dense forest and chaparral stands, especially on steeper slopes.

In recognition of the fire threats the community of Yreka, Fire Safe Council, CalFire, US Forest Service, Shasta Valley RCD, ORE-CAL, and others have partnered to construct fuel breaks and firelines around the community to the north and northwest of the PAA. During the 2022 McKinney Fire ~100' wide firebreaks were constructed along the western boundary of the PAA as a contingency fire line. These firebreaks are an integral part of the planned Outsen Fuels Reduction Project. This project includes defensible space clearing on spur ridges and slopes under 65% in the project area as well.

The residential development of the area has resulted in a well-developed road system of both public and private roads. The subdivision of the area over time has meant that access to, and maintenance of critical fire/fuel management areas (such as ridge tops) can be constrained by gates and boundary controls.

Due to the geographic extent of the project, existing conditions vary throughout the project area and within each individual PAA. In general, the PAAs include areas where dense vegetation is encroaching along county roadways and/or primary emergency evacuation or access routes for communities in WUI areas of the County. There are currently ongoing fuel treatment activities by private landowners and other entities within the project area. The project will involve coordination of activities between entities to ensure effective project implementation and avoid duplication of effort.

Figure 8- Siskiyou County Local Hazard Mitigation Plan Update (2024)- Historic Wildfire Areas as Related to Deep-Seated Landslide Susceptibility



Source: California Department of Conservation

Conclusion of the Categorical Exemption Declaration

ENVIRONMENTAL PERMITS

There are no required environmental permits associated with the project. The project will not involve activities within a stream or bank of a stream, does not require construction of new roads or landings, will not create pads or homesites, or barter, sell or exchange conifer timber products from timberlands as defined in the CA Forest Practice Act.

If individual landowners opt to barter, sell or exchange timber products as part of independent activities, they will be required to file a timber harvest plan or exemption with CalFire and comply with the Forest Practice Rules of the District.

The project implementation of the Best Management Practices (Appendix B) implemented during the project as well as project design minimized impacts to less than significant effect.

SUMMARY OF FINDINGS

This IS was prepared to assess the projects potential effects on the environment and an appraisal of the significance of those effects. Based on this IS and BMP implementation, it has been determined that the proposed project will not have any significant effects on the environment. This conclusion is supported by the following findings:

1. The proposed project will have no effect related to agriculture and forest resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, transportation, utility and service systems and wildfire.
2. The proposed project will have a less-than-significant impact on aesthetics, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, and noise.
3. No mitigation is required to reduce potentially significant impacts related to biological resources, cultural resources, tribal cultural resources, and mandatory findings of significance.

The Initial Study-Environmental Checklist included in this document discusses the results of resource-specific environmental impact analyses that were conducted. This initial study revealed that potentially significant environmental effects could result from the proposed project. However, the SVRCD revised its project plans, avoided sensitive resources, eliminated impact or reduced environmental impacts to a less than significant level. The SVRCD has found, in consideration of the entire record, that there is no substantial evidence that the proposed project as currently revised would result in a significant effect upon the environment. The Initial Study 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.

Project Title: Outsen Fuels Reduction Project

Lead Agency Name and Address: Shasta Valley Resource Conservation District, 215 Executive Ct A, Yreka, Ca 96097

Contact Person & Phone Number:
SVRCD Project Manager: (530) 572-3120
ORE-CAL, Grantee George Jennings (530) 226-6249
Document Preparer: Northwest CA RC&DC (530) 623-0671

Project Location: Wildland Urban Interface (WUI) in the Yreka Area (see Figure 1) within portions of Sections 32, 33, 34 T45N, R7W, Portions Section 4,5,8 & 9, T44N, R7W MDB&M

Project Sponsor (Name and Address): Ore-Cal Resource Conservation and Development Area Council PO Box 383 Yreka, CA 96097

General Plan Designation: Agricultural Grazing, Mineral Resource, Mixed Use, Habitat Resource 40 and 80-acre density, Recreation Resource, Public Land, Rural Residential A, Rural Residential B, and Timber (see Figure 5 & 6).

Zoning: Multiple Districts (see Figure 5 & 6).

Description of Project: Hazardous Fuels Reduction

Surrounding Land Uses and Setting: Residential, Rural Residential, Agriculture, Timber, Commercial, and other land uses

Other public agencies whose approval may be required: NA

Environmental Factors Potentially Affected

☒ Aesthetics	☒ Greenhouse Gas Emissions	☐ Public Services
☒ Agriculture Resources	☒ Hazards & Hazardous Materials	☐ Recreation
☒ Air Quality	☒ Hydrology and Water Quality	☐ Transportation
☒ Biological Resources	☐ Land Use and Planning	☐ Utilities and Service Systems
☒ Cultural Resources	☐ Mineral Resources	☒ Wildfire
☐ Energy	☒ Noise	☒ Mandatory Findings of Significance
☒ Geology and Soils	☐ Population and Housing	

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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

I have made the determination with the completion of the Initial Study that this project is categorically exempt based on reviewing the project details in an Initial Study. The project falls under Section 15304 as defined by the California Environmental Quality Act (CEQA) guidelines; California Code of Regulations Title 14, Section 15304 which applies to "minor public or private alteration in the condition of land, water, and/or vegetation which do not involve removal of mature, scenic trees except for forestry and agricultural purposes."

The proposed activity has been determined to have no significant effect on the environment, signifying that it is unlikely to have significant environmental impacts and therefore does not require further environmental review, allowing the project to proceed without a full environmental impact report (EIR).

Date _____

Environmental Checklist and Discussion

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a) The Siskiyou County General Plan (1973) and Yreka City General Plan (2002) do not identify specific scenic vistas within the PAA. Both plans note the open vistas and abundant natural viewing areas of the region combined with extensive open space lands provide extensive visual vistas. The Yreka General Plan contains one policy related to the project visual effects: "*PROGRAM CO.3.C. The City will work with appropriate forest management agencies to help protect the viewshed from the City in particular the view to the ridges around the City and Planning Area."*.

The project will result in vegetation removal that could be noticeable when viewed in both close proximities to work areas and from a distance, but the changes will be consistent with the natural variability of mixed grass, oak woodland, chapparal and conifer stands of the area. The most visible areas to distant viewers would be along the western ridge where existing 50'-100' wide fire lines exist. Additional thinning work will be done along existing treated areas (roadways, utility corridors, around homes) and on mid slope forest lands. The thinning and fuels reduction work is not inconsistent with the existing managed landscape.

Treatments along the main western ridgeline and spur ridges will use the existing fire lines as anchors and thin patches of contiguous vegetation downslope of the fire lines. The treatment will create a mosaic of open areas and native chapparal and tree stands. Thinning of stands is designed to reduce fire behavior, reduce visual impacts, and retain wildlife cover. The mosaic thinning will be less noticeable from all viewsheds when compared to existing fire breaks northwest of the project area.

Where native trees are established within ridgeline fuelbreak treatment areas the prescription calls for retaining trees greater than 6 inches in diameter at 4.5' (dbh) unless thinning is needed to break up horizontal or vertical continuity of fuels or they are dead or will be dead within 1-3 years. In all areas large healthy trees will be retained with a spacing of 15'-30' apart (~60 to 170 trees/acre depending on average tree diameters). Utilizing mosaic clearing patterns and in consideration of existing fuels reduction programs in the greater Yreka community, the impacts to scenic vistas will not be substantially adversely affected by this project. **Less-than-significant impact.**

b) The project area does not include officially designated State Scenic Highways. **No impact.**

c) The project is located in non-urbanized areas. The PAA is adjacent to public and private roadways and portions of the project will form background vistas visible to the general public. The project includes removal of vegetation, small-diameter trees, and closely spaced trees within 75 feet either side of the following private and public roadway centerlines: Outsen, Wicklow Woods, Ruthie Point/Burton, Taylor and several

unnamed roads or unnamed driveways. The project will also treat areas outside the maintenance corridor of utility lines traversing the project area. Dead and dying trees within 100 feet of the roadway and utility centerlines will also be removed.

Within treatment areas, trees spaced approximately 15-30 feet apart (depending on species, diameter and density) will remain. The removal of vegetation will result in a change to the existing character of the site which could be noticeable however the change will not be substantially different from existing conditions since vegetation management around homes, along roads and near powerlines is not uncommon.. The project will not substantially degrade the existing visual character or quality of public views of the site and the surroundings area, nor would it conflict with zoning or any other regulations governing scenic quality. **Less-than-significant impact**.

d) The project does not include the installation or use of any new lighting sources or structures that would be a new source of glare. The project will not create substantial light or glare that would affect day or nighttime views in the area. **No impact.**

II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

a) The project area includes two parcels shown on the California Department of Conservation California Important Farmland maps. Most farmland within the project area is used for grazing and will not be affected by the project. Hazardous fuel reduction activities within the project area will not result in the conversion of Farmland to a non-agricultural uses**. No impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

b) The PAA includes two parcels totaling approximately 400 acres of the PAA enrolled in a Williamson Act Contract as mapped by the California Department of Conservation California Williamson Act Enrollment Finder. The project does not propose alterations to lands used for farming, pasture, haying or will not result in a development or change in use of these lands to non-agricultural uses. **No impact.**

c) None of the landholding within the treatment areas will be rezoned. The project would not result in rezoning 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). **No impact**.

d) Forested lands are located within the project areas. Approximately 50 percent of the area to be treated (~170 acres) includes forested landscapes. Forested land types include Ponderosa Pine, Klamath Mixed Conifer, Montane Hardwood-Conifer, and Montane Hardwood stands. The project will result in fuel reduction and thinning that will aid in protecting forested lands from wildfire. Forested lands that currently meet, or exceed, basal area or point count stocking standards as defined in California Forest Practice regulations will continue to meet those standards. Stands that do not meet those standards will not remove healthy conifers. **No impact**.

e) The project does not involve changes in the existing environment which could result in conversion of farmland into non-agricultural use or conversion of forest land to non-forest use. **No impact.**

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

a) The Siskiyou Air Quality Management District ai basins are in attainment for all air quality standards. The project utilizes non-burning fuels reduction (mastication, chipping, or commercial utilization), use of an curtain air burner located at the City of Yreka, or removal to a certified biomass facility for fuels reduction. The project will not generate open air emissions. Material may be transported to a sawmill or bio-mass facility at landowner's discretion and in compliance with the CA Forest Practice Act rules and subject to an independent permitting program.

The project does not include a permanent source of ozone emissions. The project will result in short-term emissions of ozone precursors (Reactive organic gases (ROG) and nitrogen oxides (NOx) through mobile sources including equipment, contractor worker trips, and offsite disposal of biomass as feedstock for biomass facilities. Emissions generated from using biomass from the project as fuel for biomass facilities will not exceed the permitted capacity or volume allowed by the applicable permits for each biomass facility. All emissions will be short-term in nature. BMPs will be implemented during the project as described under b) below that will minimize ozone emissions generated by vehicles and equipment used during project implementation. The project will not conflict with or obstruct the Air Quality Plan. **Less-than-significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

b) Siskiyou County is designated as in attainment for ozone, PM2.5, and PM10 California Ambient Air Quality Standards (CAAQS). The project will result in minor, short-term emissions of PM10 and ozone precursors (ROG and NOx). The following BMPs which include applicable BMPs contained in the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* will be implemented by the treatment contractor during project activities:

- All exposed unpaved surfaces shall be watered during hauling periods to limit dust generation. All haul trucks transporting soil, chips, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto public roads from project operations shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.
- Clear signage shall be provided for project workers at all access points.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency, or their designee, regarding dust complaints. This person shall respond and take corrective action.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- The idling time of diesel-powered equipment will be minimized to two minutes.
- All equipment, diesel trucks, and generators are required to be equipped with Best Available Control Technology for emission reductions of NOx and PM.

- Monitor dust-generating activities and implement appropriate measures for maximum dust control.
- All equipment used onsite will be California Air Resources Board (CARB) compliant.

The BMPs listed above will minimize emissions of PM2.5, PM10 and ozone precursors generated by the project. Project emissions will be temporary and will cease upon completion of the project. The project will not result in a cumulatively considerable net increase of PM10 or ozone precursors. **Less-than-significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

c) BMPs listed in b) above will be implemented for the project to control emissions generated by vehicles and mechanical equipment used for the project. Emissions will also be generated through use of biomass from the project as fuel at biomass facilities. The project will not result in an increase in the permitted capacities or emissions of these facilities. Equipment and vehicles will not generate substantial pollutants and will not be operated in any one location for an extended period of time. The project will not expose sensitive receptors to substantial pollutant concentrations. **Less-than-significant impact.**

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

d) BMPs listed in b) above will be implemented for the project to control emissions generated by vehicles and mechanical equipment used for the project. Emissions will also be generated through use of biomass from the project as fuel at biomass facilities. The project will not result in an increase in the permitted capacities or emissions of these facilities. Equipment and vehicles will not generate substantial pollutants and will not be operated in any one location for an extended period of time. The project will not expose sensitive receptors to substantial pollutant concentrations. **Less-than-significant impact.**

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

e) The project will require equipment that could result in diesel exhaust odors. Odor emissions are highly dispersive, and equipment will not be operated in any one location for an extended period of time. In addition, the PAA is located in a rural area with low population density. BMPs listed in b) above will be implemented by the treatment contractor for the project including limits on equipment idling times that will minimize equipment diesel exhaust emissions. The project will not result in odors or other emissions that would adversely affect a substantial number of people. **Less-than-significant-impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

a. The evaluation of potential impacts on candidate, sensitive, and special-status plant and wildlife species is based on records searches, field evaluations conducted by NWCA RC&DC (NWCA) specialists, and habitat requirements for each species.

Records searches included a review of California Natural Diversity Database (CNDDB) records for special-status plants and wildlife (CDFW, 2024); California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for Special-Status Plant Species (CNPS, 2024); federal records for Listed, Proposed, and Candidate plant and wildlife species under jurisdiction of the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (USFWS, 2025; NMFS, 2025a); critical habitat data maintained by the USFWS and NMFS (USFWS, 2024 and NMFS, 2021, 2025a); Essential Fish Habitat (EFH) records for anadromous fish species under the jurisdiction of NMFS (NMFS, 2025b), Calflora (2024) and the Jepson Eflora (2024).

Review of the USFWS, CDFW, and NMFS wildlife species list for the study area and areas 5 miles around the project area[6] identified 26 federal or state listed or candidate for listing species as shown in Table 2 in the project description; however, the PAA does not contain designated critical habitat for federally listed wildlife species[7].

Of the 26 wildlife species listed within a 5 mile radius, the PAA lacks suitable habitat or range for the following species:

American goshawk, great gray owl, and northern spotted owl- the PAA lacks the mature conifer forest associated with these species for nests or roosting habitat;

Greater sandhill crane, lower Klamath marbled sculpin, Klamath River lamprey, coho salmon, steelhead, and chinook salmon- lacks wetlands/perennial water habitats for these species;

Desert bighorn sheep- lacks the steep, rocky, open desert mountains and slopes for this species

Special-status plant with potential to occur within the PAA are included in Table 5 in the Project Description and Environmental Setting. Of the 30 plant species occurring within an 5 mile radius, the following were eliminated from review:

Eriogonum siskiyouense was removed as it occurs at much higher elevations than the project area;

Lewisia cotyledon var heckneri was removed due to the absence of granite or basalt rock;

Darlingtonia california was removed due to the absence of seeps and bogs with running water;

Trifolium siskiyouense was removed due to the absence of wet mountain meadows in the project area;

Poa rhizomata was removed as this area is outside of the known geographic range.

To determine the presence/absence of special-status plant and animal species, RC&DC biologist conducted botanical and wildlife surveys- Preliminary Site Assessments (PSA)- between March 19 and May 9, 2024. Additional wildlife and botanical surveying were done incidentally to other field work from May through December 2024. Botanical and wildlife surveys for the species listed in Tables 4 & 5 were completed for each potential

[6] (bios6_1734123155142-1)

[7] Yreka Creek and other perennial streams within 5 miles are included in designated critical habitat for SONCC Coho salmon ESU and Essential Fish Habitat (EFH) for Coho and Chinook salmon. Because Yreka Creek is not present in the project site, there would be no direct impact to Coho or Chinook salmon, critical habitat for SONCC Coho salmon, or EFH.

project treatment site within the PAA. Surveying was based on suitable habitat types and included both transects and intuitive sampling.

The special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. Some of the special-status wildlife species may not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics.

Raptors

Raptors, also referred to as "birds of prey", are protected under State law[8] even if they are not candidate or listed species. As such all raptors observed during surveying were noted and examinations for nesting were done concurrent with survey and other field work. Common raptors observed in the field included red-tailed hawks and turkey vultures. A red-tailed hawk nest was located within a potential treatment activity area.

A California “Fully Protected” species, golden eagle was noted in the PAA. A second “Fully Protected” and state “Endangered” species, bald eagle, was observed flying over the project area on numerous occasions but no aerie was observed in the PAA. A known aerie is located approximately 0.5 miles outside of the PAA. Evidence of a CDFW “Watch List” species, Coopers hawk (tail feathers) was noted in the PAA but not nests found.

The PAA may have suitable nesting habitat for burrowing owls. The burrowing owl lives underground in burrows they’ve dug themselves or taken over from a prairie dog, ground squirrel, or tortoise. They live in grasslands and other open habitats and nest in March-April with the young fledged 6-8 weeks later (May-June). Burrowing owls may, or may not, reuse burrows year after year. The project treatment areas are not located in likely burrowing owl nesting habitat and should not impact nesting periods or time until young fledge.

The project description includes a limited operation period (LOP) prohibition on operations between February 1 and August 1, surveying and monitoring of listed and candidate species (which was completed in 2024), and mosaic thinning designed to minimize effects on biological resources. The project also includes Raptor Best Management Practices (BMPs) to monitor nesting sites of all known raptors in consultation with CDFW biological staff. The implementation of BMPS buffers, timing restrictions, monitoring and mosaic pattern of the project treatments will result in **less than significant impacts** to raptors.

Pacific Flyway Migratory Birds

The project area is located within the Pacific Flyway, and it is possible that migratory birds could nest in suitable habitat in, or adjacent, to the PAA. Review of Inaturalist observations for Greenhorn Reservoir area north of the project lists numerous observations of songbirds and migratory bird use of the area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from removal of a tree/shrub containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

The potential for adversely affecting nesting birds can be avoided/minimized by implementing the limited operating period requiring that vegetation removal and other ground-disturbance activities associated with construction occur after much of the nesting period has ended. The project incorporates a limited operation period during the peak of the nesting period (February1-August 1).

Implementation of the limited operating period, disturbance avoidance protocols and the BMPs (Appendix “B”) combined with mosaic vegetation patterns ensure that the project’s potential direct and indirect impacts on special-status species, migratory birds and wildlife and their habitats are **less than significant**.

Mammals

Common mammals identified by observation, tracks, nest, or scat during PSA and other field work between

[8] Fish and Game Code, Sections 3503, 3503.5, 3505 & 3513. CA Code of Regulation, Title 14, Sections 251.1, 652 and 783-786.6

March 2024 and December 2024 included black bear (*Ursus americanus*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus)*, coyote (*Canis latrans*), Columbian blacktail deer (*Odocoileus hemionus)*, jackrabbit (*Lepus californicus)*, skunk (*Mephitis sp*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), ground squirrel (*Otospermophilus spp.)*, chipmunks (*Eutamias Spp*), dusty footed woodrat (*Neotoma fuscipes),* and various mice (*Peromyscus spp.*). These species are relatively common and utilize a wide range of habitat types and features. The abundance of available habitat combined with the LOP for the project area result in **less than significant effects** to these species.

Bats- The PAA may contain suitable habitat for common bat species such as the little brown myotis (*Myotis lucifugus*) as well as listed species contained in Table 2 including pallid, spotted and Townsend big eared bats. Bat species roost in rock crevices, caves, mine shafts, under bridges, in buildings and tree hollows. Some hibernate; many remain active all year in low to mid-elevations. The Townsend big eared bat is extremely sensitive to disturbance of roosting sites. A single visit may result in the abandonment of the roost.

The bat species in the PAA typically produce young in spring (May and June). Young are weaned in 6-8 weeks and fly in a few weeks after birth. Suitable roosting habitat such as mines, caves, rock outcrops, or cliffs and these areas will not be disturbed under this project. The LOP during the critical rearing period will further reduce impacts to **less than significant effect**.

Gray Wolf- Wolves, Federally Endangered, prefer a year-round abundance of natural prey, secluded denning and rendezvous sites, and minimal human disturbance. Dens may be a hollow log or a tunnel excavated in loose soil. Den sites are often near water and are usually elevated to detect approaching enemies. The Whaleback Wolf Pack occurs east of the project area. There may be an unknown number of individual wolves that have dispersed from this pack (or adjacent states) and can become established in new territories. Field work and biological surveying did not find evidence of wolves or dens in the project area.

The project is located in an area with human disturbance; thus wolves would likely not den in the PAA. The project will not significantly change foraging, hunting or denning opportunities for wolves if they should transit into the area. **Less than significant impact.**

American Badger- The badger is a California Species of Special Consideration, but is not a listed species. A badger sett, or den, with evidence of recent use was located in a forest road cutbank within a project treatment area in April 2024. Subsequent visits indicated that the den had been abandoned, at least seasonally. Badgers use at the sett may increase seasonally, particularly during the late winter/early spring (in preparation for cubs) and autumn (in preparation for winter). Badger cubs are born completely dependent upon parental care for survival and so will stay in the sett feeding on milk for the first three months of their life. By the time the cubs are independent enough to explore outside the sett (typically April-June) the cubs are able to survive above ground.

Monitoring of the known sett location by a qualified biologist will be done to determine occupation prior to the start of operations. A 500' no operations buffer around the sett was established in consultation with CDFW and included in project maps for the contractor. The LOP will protect the sett site during denning periods to avoid impacts on cubs. The project description incorporates wildlife BMPs (Appendix "B"), a limited operation period (LOP) prohibiting operations between February 1 and August 1, and mosaic thinning to protect the denning period for young badgers. The implementation of BMPS buffers, timing restrictions, monitoring and mosaic pattern of the project treatments will result in **less than significant effect.**

Ringtail Cat- The ringtail cat is a "Fully Protected" species in California because it is both easy to domesticate and is trapped for its fur. The ringtail is in the raccoon family and is native to arid regions of North America. It is widely distributed and well-adapted to its distributed areas. The project will not result in the direct take of the species and will not significantly alter suitable habitat. The implementation

of BMPS buffers, timing restrictions, monitoring and mosaic patterns of the project treatments will result in **less than significant impacts.**

Reptiles and Amphibians

During the PSA common reptiles and amphibians observed included southern long-toed salamander (*Ambystoma macrodactylum sigillatum*), blue-tailed skink (*Plestiodon fasciatus*), western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Elgaria coerulea*), Pacific gopher snake (*Pituophis catenifer catenifer*), and western rattlesnake (*Crotalus oreganus*). Protective measures for listed or candidate reptiles and amphibians species (discussed below) provide protection measures for more common species as well. The common species are well adapted to the wide variety of habitats within the PAA and vast surrounding areas. The project will not have a significant effect on the populations of these species.

Western Pond Turtle - The western pond turtle is a Federally Proposed Threatened [FPT], and a State Species of Special Consideration associated with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments such as ponds and slow flowing stream segments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg laying. Nesting and courtship typically occur during spring. Nests are generally constructed within 500 feet of a suitable waterbody. Pond turtles can leave aquatic sites in the fall and overwinter in uplands nearby, returning to aquatic sites in spring.

There are few suitable pond or permanent streams within the PAA and project treatment areas are not located within 75 feet of permanent/seasonnal water sources. The majority of treatment acres are on ridges well away from water sources, around existing homes, roads or utility lines. There is minimal potential for pond turtles to be in treatment sites. Stream buffers for seasonal and intermittent streams provide buffers in areas most likely to be inhabited by western pond turtles and seasonal LOPs reduce impact to this species to **less than significant effect**.

Fish and Aquatic Species

Coho And Chinook Salmon, Conservancy Fairy Shrimp, Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Lower Klamath Marbled Sculpin, Highcap Lanx, Western Pearlshell, And Western Ridged Mussel- The PAA and treatment areas lacks suitable perennial stream, river, wetland, or vernal pond habitat needed to support the Listed, Sensitive, Special Concern Or CNDDB Watch Species listed aboveBecause there is no habitat for these species the project will have no direct impacton them..

Indirect effects could potentially occur if sediments or other pollutants enter Yreka Creek and other surface water features in the area and degrade habitat downstream. The project description includes provisions to prevent downstream water quality impacts including: avoid operations on 65% or steeper and 50% or steeper for areas of high erosion potential; incorporates BMP's to protect soils during saturated conditions; incorporates stream buffers for perennial, seasonal, and intermittent streams; and incorporates mosaic thinning/fuel reduction treatment patterns. These measures combined with retention of chipped biomass on the ground will minimize sediment impacts or discharges to water bodies resulting **in less than significant impact**.

Insects

Monarch Butterfly- The monarch butterfly is currently designated as a candidate species for federal listing under the Endangered Species Act. In December 2024 the US Fish and Wildlife Service proposed listing the species as Threatened. Monarch butterflies are reliant on milkweed species for development and survival. Adults migrate from their overwintering sites on the California Coast, Baja California, and to some extent, the central Mexico mountains, in February and March, and reach the northern limit of their North America range in California, Oregon, Washington, Idaho, and Nevada in early to mid-June.

Eggs are laid solely on milkweed plants within the monarch butterfly summer breeding range (which includes all of Siskiyou County). Once hatched, larvae reach the adult stage in 20 to 35 days; most adults live two to five weeks. Several generations can be produced within one season, with the last generation beginning the southern migration to their overwintering range in August and September, where the butterflies live between six and nine months before migrating north again for the summer.

Narrow-leaf milkweed (*Asclepias fascicularis*) was observed during the PAA. Given the known presence of milkweeds in the PAA, it is possible for monarch butterflies to utilize themas summer breeding habitat. The project LOP protects eggs and larvae from disturbance as they mature and the best management practices to retain milkweed plants and establish a buffer around plants within treatment areas further protects monarch habitat and the project will have **less than significant effect** to the species.

Monarch Butterfly Best Management Practices:

- A field survey shall be undertaken to determine if milkweeds (Asclepias spp.) are present in or adjacent to treatment areas. If no milkweeds are present, no further action is required.
- If milkweeds are present in or adjacent to the work area a 10' diameter buffer around individual or clumps of plants shall be delineated with temporary high-visibility indicators such as marking whiskers, pin flags, stakes with flagging tape, or other markers to protect the pants; the markers/flags shall be maintained in good condition throughout the duration of ground disturbing work.

Bumble Bees- The Franklin's bumble bee, Crotch's bumble bee, and western bumble bee are all listed species that historically may have occurred in the PAA but have not been observed in decades in the area. The Morrison's bumble bee is noted in bios surveys in the general area, but is not a listed or candidate species. However, there is interest in iMorrison bumble bee status as surveys have shown a declining population trend. The most common bumble bee in the PAA is the yellow-faced bumble bee (*Bombus vosnesenskii*) which has stable populations.

Franklin's bumble bee has a very limited geographic distribution. The species may be found in Douglas, Josephine, and Jackson counties in Oregon, and in Siskiyou and Trinity counties in California. Crotch's bumble bees occur in California, southwestern Nevada, and Baja California and western and Morrison's bumble bees are found in open scrub habitat.

Important food plants for these bumble bee species include *lupinus* (all); *Agastache, Monardella*, and *Vicia* species for Franklin bumble bees; *Asclepias, Chaenactis, Phacelia*, and *Salvia* for Crotch's bumble bee. The western and Morrison's bumble bees feed on a broad array of flowering resources, including alfalfa.

Although the project area occurs within the potential range of Franklin's bumble bee, the species was last observed in California in 1998. Similarly, the project area is within the historic range of Crotch's and western bumble bee's but it is not within the current known active range of any of these species[9] (CDFW, 2023a and (CDFW, 2023b).

CNNDB records show one record each for Franklin's, Crotch's, western and Morrison's bumble bees within a five-mile radius of the project area; however, none of these species were observed during follow-up surveys in subsequent years. Bumble Bee Watch (The Xerces Society et al., 2024) and iNaturalist (iNaturalist, n.d.) do not include any reports of these bumble bee species being found within a five-mile-radius of the project site. Because Franklin's bumble bee is not expected to be present, and the project is outside of the known range for Crotch's and western bumble bees so these species will not be impacted. However, the combination of a limited operating period during the peak of the flower period of preferred species, implementation of best management practices, and the target treatment areas typically do not

[9] Bumble Bee Watch (The Xerces Society et al., 2024) and iNaturalist (iNaturalist, n.d.) do not include any reports of Franklin's, Crotch's, or Morrison's bumble bees being found within a five-mile-radius of the project site. CNNDB records show one record for each of these bumble bee species within a five-mile radius of the project area; however, the species were not observed during follow-up surveys in subsequent years.

target the flowering species used by these species, the project will have a less than **significant effect** on bumble bee species.

Plants

California Native Plant Society (CNPS) Rare Plant Inventory

A review of the California Native Plant Society (CNPS) Rare Plant Inventory and California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) of the Yreka quadrangle and eight adjacent quadrangles was conducted in February 2024. This review provided a list of thirty special status species with potential to occur in the project area.

Those thirty species were searched in Calflora and the Jepson Eflora to identify their habitat. With this information in mind, *Eriogonum siskiyouense* was removed as it occurs at much higher elevations than the project area, *Lewisia cotyledon var heckneri* was removed due to the absence of granite or basalt rock, *Darlingtonia california* was removed due to the absence of seeps and bogs with running water, *Trifolium siskiyouense* was removed due to the absence of wet mountain meadows in the project area and *Poa rhizomata* was removed as this area is outside of the known geographic range.

The remaining twenty-six taxa are shown in Table 5a. Table 5b includes relation to the project site habitats. Surveys were conducted on foot by traversing all properties to be treated between March 19 and May 9, 2024. All vascular plants were identified to species level and natural communities recorded. The primary focus was on fuel treatment areas including roadway access, ridges and areas with high fuel loads of brush and trees and any habitat for special status plant species.

Surveys began in late March to locate early blooming special-status species. Almost all of the later blooming special status species occur in unique habitats such as open rocky areas that did not occur in the project area or are areas that will not be treated.

No special-status rare plant species were found in or adjacent to the project area. Also, no habitat was found for special status species with an affinity to serpentine, vernal pools, sunny wet meadows, sagebrush, stands of yellow pine or juniper dominated woodlands. The potential for a false negative survey is relatively low. The moisture and temperatures in the spring of 2024 promoted ample growth and flowering and survey coverage was thorough. **No Impact to special-status rare plant species.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Questions B and C- Sensitive natural communities are native plant communities that CDFW has identified as having limited distribution in the State or within a region, and that are vulnerable to environmental impacts of development. Sensitive natural communities may or may not contain special-status species. CDFW assigns State rarity and threat rankings for terrestrial natural communities. Natural communities ranked S1 (critically

imperiled), S2 (imperiled), and S3 (vulnerable) are considered sensitive natural communities. Wetlands and riparian habitats are considered sensitive communities.

Habitat Types/Sensitive Natural Communities

Vegetation maps for Natural Communities in this area of northern California are not available on VegCAMP, therefore the Manual of California Vegetation (MCV) online was queried. The query from MCV generated a list of G1-G3 and S1-S3 Natural Communities for the Klamath Mountains and Southern Cascade regions (See Table 6a and 6b).

Table 6a. Natural Communities of the Klamath Mountains with G1-G3 or S1-S3 Ranking (A Manual of California Vegetation Online)…. Vegetation.cnps.org/

Scientific Name	Alliance ID	Common name	Primary lifeform	Global rarity	State rarity
Aesculus californica	12	California buckeye groves	Tree	G3	S3
Allium spp. - Streptanthus spp. - Hesperolinon spp. Serpentinite	504	Onion - twistflower - dwarf-flax serpentinite rock outcrop	Herb	G2G3	S2S3
Alopecurus geniculatus	315	Water foxtail meadows	Herb	G3?	S3?
Arctostaphylos (canescens, manzanita, stanfordiana)	531	Hoary, common, and Stanford manzanita chaparral	Shrub	G3	S3
Carex heteroneura	348	Different-nerve sedge patches	Herb	G3?	S3?
Carex luzulina	353	Woodland sedge fens	Herb	G3	S2?
Carex nudata	357	Torrent sedge patches	Herb	G3	S3
Chamaecyparis lawsoniana	29	Port Orford cedar forest and woodland	Tree	G3	S3.1
Dulichium arundinaceum	384	Three-way sedge meadows	Herb	G3?	S1
Frangula californica - Rhododendron occidentale - Salix breweri	547	California coffeeberry - western azalea scrub - Brewer's willow	Shrub	G3	S3
Glyceria Ã—occidentalis	398	Northwest manna grass marshes	Herb	G3?	S3?
Hesperocyparis bakeri	18	Baker cypress stands	Tree	G2	S2.2
Hesperocyparis (sargentii, macnabiana)	591	Ultramafic cypress woodland	Tree	G3	S3
Isoetes (bolanderi, echinospora, howellii, nuttallii, occidentalis)	404	Quillwort beds	Herb	G3	S3?
Leymus cinereus - Leymus triticoides	543	Ashy ryegrass - Creeping wildrye turfs	Herb	G3	S3
Nassella spp. - Melica spp.	536	Needle grass - Melic grass grassland	Herb	G3G4	S3S4
Notholithocarpus densiflorus var. echinoides	227	Shrub tanoak chaparral	Shrub	G3	S3
Picea breweriana	42	Brewer spruce forest and woodland	Tree	G3	S2
Pinus balfouriana	47	Foxtail pine woodland	Tree	G3	S3
Pseudotsuga menziesii - Calocedrus decurrens	75	Douglas fir - incense cedar forest and woodland	Tree	G3	S3
Quercus lobata	84	Valley oak woodland and forest	Tree	G3	S3
Quercus lobata Riparian	571	Valley oak riparian forest and woodland	Tree	G3	S3
Quercus sadleriana	260	Sadler oak or deer oak brush fields	Shrub	G3	S3
Salix jepsonii	281	Jepson willow thickets	Shrub	G3	S3
Sequoia sempervirens	93	Redwood forest and woodland	Tree	G3	S3

Torreyochloa pallida	477	Floating mats of weak manna grass	Herb	G3	S3?
Triantha occidentalis - Narthecium californicum	478	Western false asphodel - California bog asphodel fens	Herb	G2?	S2?
Trifolium longipes	479	Long-stalk clover meadows	Herb	G3?	S3?
Vitis arizonica - Vitis girdiana	518	Wild grape shrubland	Shrub	G3	S3

Table 6b. Natural Communities of the Southern Cascades with G1-G3 or S1-S3 Ranking (A Manual of California Vegetation Online)…. Vegetation.cnps.org/

Scientific name	Alliance ID	Common name	Primary lifeform	Global rarity	State rarity
Allium spp. - Streptanthus spp. - Hesperolinon spp. Serpentinite	504	Onion - twistflower - dwarf-flax serpentinite rock outcrop	Herb	G2G3	S2S3
Alopecurus geniculatus	315	Water foxtail meadows	Herb	G3?	S3?
Anemopsis californica - Helianthus nuttallii - Solidago spectabilis	319	Yerba mansa - Nuttall's sunflower - Nevada goldenrod alkaline wet meadows	Herb	G3	S2
Carex heteroneura	348	Different-nerve sedge patches	Herb	G3?	S3?
Carex luzulina	353	Woodland sedge fens	Herb	G3	S2?
Carex nudata	357	Torrent sedge patches	Herb	G3	S3
Dulichium arundinaceum	384	Three-way sedge meadows	Herb	G3?	S1
Glyceria Ã—occidentalis	398	Northwest manna grass marshes	Herb	G3?	S3?
Hesperocyparis bakeri	18	Baker cypress stands	Tree	G2	S2.2
Hesperocyparis (sargentii, macnabiana)	591	Ultramafic cypress woodland	Tree	G3	S3
Juncus nevadensis	409	Sierra rush marshes	Herb	G3?	S3
Leymus cinereus - Leymus triticoides	543	Ashy ryegrass - Creeping wildrye turfs	Herb	G3	S3
Notholithocarpus densiflorus var. echinoides	227	Shrub tanoak chaparral	Shrub	G3	S3
Oxypolis occidentalis	439	Western cowbane meadows	Herb	G3	S3
Salix eastwoodiae	277	Sierran willow thickets	Shrub	G3	S3
Torreyochloa pallida	477	Floating mats of weak manna grass	Herb	G3	S3?
Triantha occidentalis - Narthecium californicum	478	Western false asphodel - California bog asphodel fens	Herb	G2?	S2?
Trifolium longipes	479	Long-stalk clover meadows	Herb	G3?	S3?

None of the Sensitive Natural Communities (SNC) identified during the botanical review were located during surveys. Further investigation of the Manual of California Vegetation provided a full list of Natural Communities and Sensitive Natural Communities that was checked, and the following Sensitive Natural Communities were located in the PAA during surveys.

- Alnus rhombifolia-Salix laevigata (61.420.13) G3S3
- Populus trichocarpa (61. 120.01)
- Prunus subcordata (37.905.03) G4 S4 (Provisional)
- Prunus virginiana (37.905.01) G4 S4 (Provisional)
- Populus trichocarpa (61. 120.01) G5 S3
- Populus tremuloides (61.111.02) G5 S3
- Quercus garryana-Ceanothus cuneatus-Festuca idahoensis

The Alnus, Populus,and Prunus SNCs identified in the surveys are not located within proposed treatment areas and all are within stream buffer areas. The Quercus SNC's will not be adversely affected by removal of decadent brush, dead limbs or tress and will actually benefit from these measures. **No Impact.**

Wetlands and Other Jurisdictional Waters
Refer to Rare and Sensitive Natural Communities discussion above. The project description incorporates buffers of wetland and jurisdictional waters where no activities are proposed. **No impact**.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Project implementation would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, nor would it impede the use of native wildlife nursery sites. The study area contains no fish-bearing streams; therefore, the proposed project would not adversely affect fish movement.

Native wildlife nursery sites are locations where native fish and wildlife gather for breeding and raising young. These areas may include spawning areas for fish, fawning areas for deer, and nesting rookeries for birds. There is no habitat for native or migratory fish located in the project site. CDFW identifies critical winter range for deer in the PAA (CDFW, 2020). The project would improve deer browse species within the treatment areas by increasing spacing and encouraging regrowth of browse species over time. The project may remove limited amounts of brush cover near 25 homes that deer utilize, however, the area treated around homes is neither optimal deer cover or not anticipated to be heavily utilized by wildlife due to presences of people, pets, vehicles and other disturbances. The use of mosaic vegetation management will allow wildlife to retain cover even within treatment areas. The treatment area is a small percentage of the suitable winter, fawning, and nursery habitat within the PAA and the PAA is only a small percentage of the suitable habitat types in the general area or the resident or migratory deer herds. The LOP and stream and wetland buffers protect deer fawning periods.

Project activities will occur in areas with existing human presence and disturbance (adjacent to roadways and residential land uses). Project activities could temporarily deter wildlife movement through the project area. Activities will not occur in any single location for an extended period of time and opportunities will be available for wildlife to move through adjacent undeveloped areas outside of the active treatment area while treatment activities occur.

The project will include removal of shrubs, small trees, densely spaced trees, and dead and dying trees within the treatment areas, but abundant habitat is available in areas adjacent to the project site. As discussed under a) above, BMPs will be implemented to avoid impacts to nesting birds in the project vicinity. In addition, the project will not include activities within 75 feet of perennial/seasonal streams or wetlands or 50 feet of ephemeral and intermittent streams. The project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. **Less-than-significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

e and f) Siskiyou County does not have a tree preservation policy or ordinance. The project does not conflict with any local policies or ordinances protecting biological resources or tree preservation policy/ordinance. No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan exist within the project area. **No impact.**

V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☒

a) The PAA was surveyed for historical and archaeological resources with additional survey effort within and adjacent to proposed treatment areas. Prior to surveying landowners were interviewed regarding known historical or archaeological features of their property. Surveys consisted of intuitive and cursory methodologies in areas likely to contain artifacts (along waterways, wetlands, springs, adjacent to known features, ridges, meadows, ecotones, flats, and roads). Surveying included 30m transects done in March-May 2024 when the ground was free of snow and before brush and grass growth significantly reduced visibility. Supplemental, incidental, surveying was done during other layout and planning activities including botanical surveying. Ground visibility during surveying was variable with leaf, needle duff, woody litter and dense brush inhibiting views of bare ground in some areas. In these areas, a combination of foot scrapes, tool scrapes, and examination of disturbed soils and burrows/gopher hole soil mounds, road, stream, and other naturally occurring banks were examined for evidence of historical/archaeological features. Much of the survey effort occurred in the morning and after rain events which can help highlight reflective objects (such as chert or obsidian).

The survey area included approximately 800 acres, including all roads and proposed treatment areas. Based on the field surveys, several previously undocumented isolated historic features were noted including isolated metal cans (1-3 cans per site), depression era glass shards (1-5 shards), barbed wire fencing (1-3 rolls), auto parts, and similar historical isolated features. An approximately 100ft^2 metal and glass dump site previously recorded was relocated.

The historic Yreka Ditch crosses through the PAA. Segments of the ditch have been obliterated while other portions retain the original shape and form. In one location a lumber wood works was noted. These features are not uncommon on the ditch and can be studied in the book “History of Yreka Ditch, 1853 to 2002” (Silva, 2002). No work is proposed in the vicinity of these features, which lie within a 50’ ephemeral stream buffer zone.

An isolated obsidian point and core were located in separate locations. Each site was mapped noting features,

GPS location, and photo documented. One undetermined rock wall feature was noted and protected.

All historical/archaeological sites were mapped and excluded from proposed treatment areas and will not be disturbed during project activities. Site records were prepared for each site and provided to the landowners. If a site occurs within 100' of a treatment area, the site record will be submitted to the Northeast Information Center at Chico State University to document the features. However, if a landowner opts to not do treatment operations within 100', the site records will remain with the landowner.

b) See discussion to a) above. Best management practices during project implementation will ensure the project will not cause a substantial adverse change to the significance of an archaeological resource. **Less-than-significant impact.**

A confidential Archaeological Survey Report was prepared. All identified features were mapped and delineated for avoidance during operations. Even with surveying, the potential to find additional sites exists. For this reason, the following Cultural & Archaeological Best Management Practices from the FEMA Final Programmatic EIR for Recurring Actions in Arizona, California, and Nevada will be implemented:

Cultural & Archaeological Best Management Practices

1. Archaeological resources within the Project Area will be designated for Special Conditions during implementation contracting. Special Conditions contract provisions for cultural resources protection include the following provisions:
   a) Prior to the commencement of operations, the Project Manager will ensure that all Special Treatment Zones (STZ) are clearly described and illustrated in plans and specifications.
   b) All parties (SVRCD, Project Manager, Registered Professional Forester [RPF], or equipment operators familiar with resource management work will review the plans.
   c) Prior to commencement of operations, a CAL FIRE Certified Archaeological Surveyor or professional archaeologist familiar with the site, shall demarcate all sites with STZ flagging. Exclusionary flagging will be based on the site sketch map. No buffer around the site boundary is required for Special Condition sites. STZ flagging that is older than six months will be inspected and refreshed prior to operations.
   d) Fuel reduction work will not occur within the STZ area
   e) No tree planting will occur within STZ.
   f) A CAL FIRE Certified Archaeological Surveyor or professional archaeologist will periodically inspect sites to ensure that BMPs are effective and the STZ has not been breached.

Cultural Resources- Unanticipated Discovery Best Management Practices

1. If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. A qualified professional archaeologist should be contacted to evaluate the situation. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert, basalt, or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

Project activities will avoid cultural resource features and. Impacts to cultural resources will be **less than significant.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

The project does not include excavation activities and is not anticipated to disturb human remains. In the unlikely event of discovery of human remains, the following BMP contained in the FEMA Final Programmatic EIR for Recurring Actions in Arizona, California, and Nevada will be implemented for the project follows:

Encountering Native American Remains Best Management Practice

1. There shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains until:
   - The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and if the coroner determines the remains to be Native American:
   - The coroner shall contact the agency responsible within 24 hours.
   - The responsible shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
2. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods.

In addition to the BMP listed above, measures included in the report prepared by the qualified archeologist for unanticipated discovery of human remains will be implemented. Impacts related to disturbance of human remains will be less than significant with implementation of the BMP above. **Less than significant impact.**

VI. ENERGY. Would the project

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local Plan for renewable energy or energy efficiency?	☐	☐	☐	☒

a) The project will not result in wasteful or inefficient consumption of energy. The project will require temporary consumption of energy resources (diesel fuel and gasoline) for equipment used for biomass removal and off-site disposal of biomass. Compliance with state, federal, and local regulations (limiting engine idling times, etc.) will reduce and/or minimize short-term energy demand during the project to the extent feasible and would not result in wasteful or inefficient use of energy. **No impact.**

b) Refer to discussion in a) above. **No impact**.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐

i) Alquist-Priolo earthquake fault zones show that there are no mapped fault zones in the project area or vicinity (DOC, 2024). **No impact.**

ii) The California Department of Conservation Fault Activity Map of California shows that the closest potentially active fault is the Yellow Butte Fault located more than 10 miles southeast of the project area. Although these fault lines could produce low to moderate ground shaking, earthquake activity has not been a serious hazard in the County's history. The project does not include permanent development or additional permanent occupancy. The project will not increase the risk of loss, injury or death involving rupture of a known earthquake fault. **No impact.**

iii) The project site is not within a mapped Liquefaction Zone where liquefaction and landslides may occur during a strong earthquake (California State Geoportal 2024). Liquefaction is most likely to occur in alluvial and stream channel deposits, especially when the groundwater table is high. The project includes stream buffers in areas with potential alluvial and stream deposits, however, no treatment activities are proposed in these areas. The project does not include construction of structures, therefore it will not result in the risk of loss, injury or death from seismic-related ground failure associated with structures. Impacts associated with seismic activity and seismic-related ground failure, including liquefaction, would be **less than significant impact.**

iv) The Landslide Susceptibility Map included in the 2025 Siskiyou County Local Hazard Mitigation Plan indicates that treatment areas within the PAA are proposed to have a low susceptibility for landslide hazards (Siskiyou County, 2025a). Landslides occur throughout Siskiyou County, although they have not been considered a major problem in the Yreka area where the project is located.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

b) The project could result in erosion within the treatment areas as the result of disturbance from mechanical equipment and removal of vegetation. Review of the Natural Resources Conservation Service (NRCS) soil surveys of the project area found no soil complexes with high or extreme erosion potential within the PAA. As discussed in the project description, no work will be conducted in areas on slopes greater than 65 percent or on slopes greater than 50 percent with high or extreme erosion hazard rating. The project does not require construction of new landings, roads or pads or extensive site grading.

BMPs including applicable measures contained in the FEMA *Programmatic Environmental Assessment,*

Recurring Actions in Arizona, California, and Nevada will be implemented for the project by the treatment contractor to reduce the potential for erosion impacts. Erosion Impact Avoidance BMPs include:

- Highly erosible soils will be identified in the field by the contractor and applicable controls applied per RWQCB guidance Order No. R1-2024-0001
- Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, and buffer zones to prevent excessive or unnecessary disturbances and exposure.
- Avoid excavation and soil disturbance during wet weather. The Limited Operating Period limits winter season operations between February 1 and August 1th. Precipitation and saturated soil conditions, which can contribute to soil erosion, typically do not occure until mid-November or later. Operations during the fall/early winter, before the LOP is implemented, will be determined on a case-by-case basis by the contractor and project manager based on soil and weather conditions.
- Mechanical operations shall stop if Saturated Soil Conditions (SSC) occur. SSC means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during Timber Operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.
- Use erosion control features such as wood chips, jute or straw matting; fiber rolls or other mulch material to stabilize disturbed soils greater than 100 ft2.
- Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them, if used.
- Conduct routine inspections of erosion control measures, especially before and immediately after rainstorms, and repair if necessary.

As part of site restoration, grass seeding, slash packing, or other appropriate erosion control or slope stabilization techniques will be deployed on any site where site inspection determines that disturbance would likely lead to an increased risk of erosion or slope stabilization. Site restoration and implementation of the BMPs listed above will result in a **less-than-significant impact** related to soil erosion or loss of topsoil from project activities.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

c) The Landslide Susceptibility Map included in the 2025 Siskiyou County Local Hazard Mitigation Plan indicates that treatment areas within the PAA are proposed to have a low susceptibility for landslide hazards (Siskiyou County, 2025a). As discussed in the project description, no work will be conducted in areas on slopes greater than 65 percent or on slopes greater than 50 percent with high or extreme erosion hazard rating. The project does not require construction of new landings, roads or pads or extensive site grading. The BMPs listed in b) above will be implemented for the project. The project is not anticipated to result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **Less than significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒

d) The project does not include construction of buildings or structures. The project will not create a substantial direct or indirect risk to life or property from expansive soils. **No impact.**

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

e) The project will not require installation of a septic tank or alternative wastewater disposal system. **No impact.**

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

f) There are no known paleontological resources or unique geologic features within the project area based on a review of U.C. Berkeley Museum of Paleontology (UCMP) records (https://paleobiodb.org/navigator/). The UCMP showed that 125 paleontological resources sites have been discovered in Siskiyou County (UCMP, 2023a). Within these sites, 121 fossils have been recorded in the County (UCMP, 2023b); however, specific locations of these specimens are not disclosed.

Because paleontological resources and fossils are found primarily within sedimentary rock deposits, fossilized paleontological resources may be present in the PAA; however soils derived from sedimentary deposits tend to support grasses and light shrub vegetation types which are not targeted in this project. The treatments does not involve significant earthmoving or site grading. However, the following Paleontological BMP contained in FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* (December 2014) will be implemented in the event that unanticipated paleontological resources are uncovered during the course of the project.
Paleontological Best Management Practice

1. The project proponent shall notify a qualified paleontologist of unanticipated discoveries, made by either the cultural resources monitor or construction personnel and subsequently document the discovery as needed. In the event of an unanticipated discovery of a breas, true, and/or trace fossil during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before activities are allowed to resume at the location of the find.

VII. GREENHOUSE GAS EMISSIONS.
Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

The project will result in greenhouse gas emissions from operation of mechanical equipment and vehicle trips to transport workers, equipment, and offsite biomass disposal. Best Management Practices (BMPs)

described in the Air Quality Section of this document will be implemented during the project, which will minimize emissions of greenhouses gases generated by operation of vehicles and equipment used for the project. Off-site biomass disposal may include transport of removed biomass to biomass facilities (Weed, CA) for use as fuel, or to the City of Yreka curtain burner. The project will not result in an increase in permitted production of biomass facilities. Due to the temporary nature of the project, the project is not likely to produce significant greenhouse gas emissions. An estimate of greenhouse gas emissions generated by vehicle and equipment operation is included in Table 7.
Generally, a standard of 10,000 metric tons of CO2 has been used to identify significant impacts. Based on the analysis in Table 7, the project generation of CO2, approximately 13 tons, falls below this threshold. All equipment used onsite will meet the CARB requirements for emissions. Idling times will be minimized. The removal of the dead trees and use in either cogeneration facilities or use of the City of Yreka curtain burner may reduce overall greenhouse gas emissions (GHG) from the project compared to open pile burning.

The removal of vegetation for fuel or burning under the efficient air mixing within the City of Yreka curtain burner will limit the nitrogen process and reduce overall GHG emissions. Because of the small scope of the project, treatments are not likely to produce significant GHG emissions which could result in adverse impacts on the environment. Project activities will be limited to a short timeframe and will not result in a long-term increase in GHG emissions. The improved growing conditions will improve residual stands photosynthetic capacity, increase vigor in residual trees and result in an overall increase in carbon sequestration rates. No significant impacts from GHGs are expected from the proposed project. **Less-than- significant impact.**

Table 7 GREENHOUSE GAS EMISSIONS

General Information			
Project Name	Outsen		
Project Acres	367		
Total Project Days	40		
Exhaust CO2 Emissions			
Total Round Trip Miles	24		
# of Crew Vans/Trucks	2		
# of Chainsaws	4		
# of Chippers	1		
# Masticators	1		
# Log Skidders	1		
# Skidder	1		
# Loaders	1		
# 10 YD Dump Trucks	2		
Diesel Kilograms/Gal	3.22		
Gas Kilograms/Gal	2.98		
Pounds of CO2/Kilogram	2.20		
Conversion Factor Pounds to Ton	2000		
Conversion Factor Tons of			
Biomass to Tons CO2	1.65		
Chainsaw Gas Gal/Day/Saw	1.5		
Chipper Gal/Day	10		
Masticator Diesel Gal/Day	50		
Skidder Diesel Gal/Day	10		
Loader Diesel Gal/Day	10		
Dump Truck MPG	5		
Crew Van/Truck MPG	12		
Crew Van/Truck Total Miles	1,920	Van/Truck Total Gal Gas Needed	160
Dump Truck Total Miles	400	Chainsaws Total Gal Gas Needed	240
Total Gal of Diesel Needed	2,880	Chipper Total Gal Diesel Needed	400
Total Kilograms of Diesel Produced	9,274	Total Kilograms of Gas Produced	2,384
Diesel Total Pounds of CO2 Produced	20,445	Gas Total Pounds of CO2 Produce	5,256
Diesel Total Tons CO2	10.2	Gas Total Tons of CO2 Produced	2.6
Smoke or Decay CO2 Emmissions			
Est. Biomass Tons Per Acre Removed (Fuel Model)		Assumes 0.5 Tons/Ac biomass residue after mastication	
Biomass Total Tons Removed			
Total Tons of CO2			
Final Outputs			
Total Tons of CO2 for Project	13		
Sequestration Rate 0.7 Tons/Ac/Yr (oak woodland)	0.7		
Total Sequestration Rate/Yr For Project Area	257		
Years Required for Complete Sequestration	0		

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

b. Onsite equipment and vehicles would generate greenhouse gas emissions. Emissions would be short-term and cease upon completion of the project. The project would not result in substantial greenhouse gas emissions or conflict with any adopted plans, policies, or regulations adopted for the purpose of reducing greenhouse gas emissions. Less than significant impact.

VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

a. The project will require the use of hazardous materials including gasoline, diesel, oil, and lubricants required for vehicle and equipment operation. In addition, the following BMPs contained in the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* (December 2014) will be implemented by the treatment contractor for the handling and use of hazardous materials for the project:

1. Vehicles and equipment will be inspected and approved before use to ensure that they will not leak hazardous materials such as oil, hydraulic fluid, or fuel. All equipment will be equipped with spark arrestors and fire extinguishers.
2. Fueling will take place in designated staging areas, outside native vegetation or wetlands.
3. The contractor will prepare a Spill Prevention and Response Plan and have emergency cleanup gear for spills (spill containment and absorption materials) and fire-suppression equipment available onsite at all times.
4. Leaks, drips, and other spills will be cleaned up immediately to avoid soil or groundwater contamination. Cleanup of a spill on soil will include removing the contaminated soil using the emergency spill cleanup gear. Contaminated soil and disposable gear used to clean a hazardous materials spill will be properly disposed of following State and Federal hazardous material disposal regulations.
5. Major vehicle maintenance and washing will be done offsite.
6. Spent fluids including motor oil, radiator coolant, and used vehicle batteries will be collected, stored, and recycled as hazardous waste offsite.
7. Spilled dry materials will be swept up immediately.
8. No smoking will be allowed in work areas.

The implementation of these practices will result in **less-than-significant impact.**

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

b. The project will require the use of hazardous materials (fuel and oil) within equipment and vehicles during biomass removal. Significant quantities of these materials will not be stored within the project area. The following BMPs contained in the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* (December 2014) will be implemented during project implementation:

1. If hazardous materials are encountered or accidentally released as a result of the project, the following procedures will be implemented:

    a. Work shall stop in the vicinity of any discovered contamination or release.
    b. The scope and immediacy of the problem shall be identified.
    c. Coordination with the responsible agencies shall take place.
    d. The necessary investigation and remediation activities shall be conducted to resolve the situation before continuing construction work.

The project will not **c**reate a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials with implementation of the BMPs listed above as well as those listed under a) above. **Less-than- significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

c) The project area is not within a quarter mile of an existing or proposed school. The project will not require handling of acutely hazardous materials, substances, or waste. **No impact**.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

d) A Search of the EnviroStor database of hazardous waste facilities and sites with known contamination or cleanup sites including Federal Superfund, State Response, Voluntary Cleanup, School Cleanup, Evaluation, School Investigation, Military Evaluation, Tiered Permit and Corrective Action sites was conducted for the project site. One cleanup site is located in the PAA. The site, the former Pine Mountain Lumber Company (Envirostor ID: 47240006)[10] had a final Preliminary Environmental Assessment (PEA) completed in 2023. The Final PEA divided the Pine Mountain property into a residential Operating Unit (OU) and a commercial OU and recommended that a removal action on the commercial OU be completed first. The draft removal action workplan (RAW) for the commercial OU is anticipated to be available for public review in 2025 but has not been released at the time of this analysis.

In addition, a query of the Geotracker database[11] was also conducted to determine if leaking underground storage tanks (LUST) cleanup sites, cleanup program sites, military cleanup sites, military privatized sites, and military UST sites were present within the project area. No LUST sites were identified. While a hazardous contamination cleanup site is located in the PAA, there are no clean-up or underground storage tank sites within the proposed treatment areas. The project will not expose people to known contaminated sites. **No impact.**

[10] https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=47240006
[11] https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=c220c67462e14763a8e0c4df75550278

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

e. The PAA is not within two miles of a public or private airport. **No impact.**

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

f. The project will not interfere with any emergency response plan or evacuation plan. The project will provide for safe ingress and egress of evacuating residents and responding emergency personnel in the event of a fire. **No impact.**

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

g. Equipment and vehicle operation as well as increased human presence in the project area could result in a temporary increased risk of fire during biomass removal activities. As described in a) above, BMPs will be implemented during project implementation which include the storage of fire suppression equipment onsite at all times by contractors. Project activities will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Upon completion, the project will provide for safe ingress and egress of evacuated residents and emergency personnel during wildland fires, increase defensible space to effectively fight fires from the roads and reduce roadside fuels to slow the spread of a fire started in or adjacent to the roadway. **Less-than-significant impact.**

IX. HYDROLOGY AND WATER QUALITY.
Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Perennial/seasonal, intermittent/ephemeral streams as well as ponds and small wetland areas are located within the PAA. Hydrology within the project area is shown in Figure 2. In addition, the project site includes two small wetlands mapped by the U.S. Fish & Wildlife Service National Wetland Inventory. No treatment are proposed in U.S. Fish & Wildlife Service National Wetland Inventory mapped areas.

The project does not include activities within 75 feet of perennial/seasonal streams or wetlands or within 50 feet of ephemeral or intermittent streams. The following applicable BMP included in the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* will be implemented by the treatment contractor when working near waters of the U.S. or wetlands to protect

surface water quality during project implementation and minimize potential water quality impacts from ground disturbance or spills or leaks:

1. Prior to project work, wetlands located in the project area will be flagged for exclusion.
2. Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands and adjacent, ponds, streams, or riparian woodland/scrub. The contractor will not be allowed to stockpile brush, loose soils, or other debris material on stream banks.
3. Native plant species should be used in erosion control or revegetation seed mix. Any hydroseed mulch used for revegetation must also be certified weed-free. Dry farmed straw will not be used, and certified weed-free straw will be required where erosion control straw is to be used. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion-control measures will be placed between water or wetland and the outer edge of the project site.
4. All off-road project equipment will be cleaned of potential noxious weed sources (mud, vegetation) before entry into the project area. Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment compartments or specialized inspection tools is not required.
5. Vehicles and equipment will be parked on pavement, existing road, or specified staging areas.
6. Trash generated by covered activities should be promptly removed and properly removed from the site.
7. Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non- sensitive nonnative grassland land cove types, when these sites are available, to minimize risk of direct discharge into riparian area or other sensitive land cover types.
8. All temporarily disturbed areas, such as staging areas, will be returned to pre-project or ecologically improved conditions as required by responsible agencies.
9. Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks, or into wetland areas. Never store or leave debris in the street or near a creek where it may contact runoff.

Best Management Practices included above, as well as soil erosion BMPs described in the Geology and Soils section of this document, will minimize project impacts to surface water quality. In addition, the project will comply with RWQCB guidance Order No. R1-2024 (*Waste Discharge Requirements General Order for Discharges Related to Timberland Management Activities for Non-Federal and Federal Lands*) and will be required to comply with the terms and conditions of the Order including implementation of best management practices and/or water quality protection measures and monitoring and reporting. The project does not include activities that could result in impacts to groundwater quality. The project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **Less- than-significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

b) The project will require minimal use of water for dust suppression during biomass removal activities. The source of water will depend on the location of the treatment area but will come from existing residential wells or community water systems. Water use will be short-term and cease upon completion of biomass removal activities. The project will not substantially decrease groundwater supplies or interfere with groundwater recharge. **No impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

c) The project will not alter the course of any streams or rivers. The project will include a 75-foot buffer from perennial/seasonal streams and wetlands and a 50-foot buffer from ephemeral and intermittent streams. The project does not include changes to project site topography or addition of impervious surfaces. The project includes site restoration for areas where ground disturbance will be caused by machinery and equipment in areas sensitive to soil stabilization issues. **Less-than-significant impact.**

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

d) The project does not include substantial alteration of the existing drainage pattern of the project area or increase in impervious surfaces. See a) and c) above. The project will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. **Less than significant impact.**

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒

e) The project will not result in a substantial increase in the rate or amount of surface runoff from the project site. As discussed under a) above BMPs for erosion control and water quality will be implemented for the project that will minimize pollutants in runoff from the project site. **No impact.**

f) Otherwise substantially degrade water quality?	☐	☐	☒	☐

f) As discussed in a) through e) above, the project will not substantially alter the existing drainage pattern of the site or substantially increase the rate or amount of surface runoff. The project will not impede or redirect flows. **Less than significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

g)-j) The project will not result in the creation of housing or placement of structures or creation or alteration of dams or levees. All of the PAA is within Zone X of the Yreka Creek Floodplain FEMA mapping (FIRM 06093C1559D). **No impact.**

k) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

k) The project does not include work within 75 feet of perennial/seasonal streams or wetlands or within 50 feet of ephemeral and intermittent streams.

X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a)-c) The project does not involve construction of roads, structures or other physical features that would divide an established community, conflict with a land use plan, or policies and regulations. There are no adopted habitat conservation plans or natural community conservation plans in the PAA. The implementation of the project and BMPs will contribute to reduced fuel loads and potentially fire intensity which is consistent with the community fire planning efforts of both the City of Yreka and the Fire Safe planning for the region while avoiding and reducing the environmental effects of the project. **No impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a) The project does not include development activities, changes in land use, or mineral extraction activities. The project will not result in the loss of availability of mineral resources. **No impact.**
b) Project activities will not result in the loss of availability of a locally important mineral resource recovery stie. **No impact.**

XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

a) The project will not result in any permanent sources of noise. The project will generate short- term increases in ambient noise levels in the project vicinity from the operation of mechanical equipment (masticators, chippers, and chainsaws) and minor increased vehicle traffic. The project impacts on individual sites will be short as hazard vegetation is removed from the parcel and the operations move onto the next parcel. Short-term noise generated by the project will be transitory.

The following BMPs contained in the FEMA *Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada* (December 2014) will be implemented for the project:

1. Provide advance notification to surrounding land uses disclosing the treatment schedule, including the various types of activities that would be occurring throughout the duration of the treatment period.
2. Noise-generating treatment activities, including truck traffic coming to and from the site for any purpose, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. during weekdays and 8:00 a.m. to 5:00 p.m. on Saturday and Sunday.
3. All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
4. Contractor shall be responsible for maintaining equipment in best possible working condition.
5. Mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receivers.
6. Locate equipment as far as possible from nearby noise-sensitive receptors.
7. The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. No project-related public address or music system shall be audible at the location of any adjacent noise-sensitive receptor.

8. The contractor shall notify adjacent property owners, property managers, and business owners of adjacent parcels of the schedule in writing and in advance of the work. The notification shall include the name and phone number of a project representative or site supervisor.
9. The onsite supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeals process to the Owner shall be established prior to commencement of treatment that shall allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

The project is not anticipated to result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the Siskiyou County General Plan or applicable standards of other agencies. **Less-than-significant impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

b) The project does not include equipment or processes that would result in significant levels of vibration or groundborne noise, such as pile driving or blasting. Mechanical equipment such as grinders and masticators will result in low levels of ground vibration perceptible in the immediate vicinity of the equipment. Equipment will not operate in a single location for an extended period. The project will not generate excessive levels of vibration that could result in structural damage or annoyance levels. Less-than-significant impact.

☐	☐	☒	☐

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

c) The PAA is not located within two miles of an airport. No impact.

XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

a) The project will not induce substantial population growth. The project does not include the expansion of any roads or infrastructure. The project does not include construction of new homes or businesses that would result in unplanned population growth. **No impact.**

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

b) The project would not displace people or housing requiring the construction of replacement housing elsewhere. **No impact.**

XIV. PUBLIC SERVICES.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) The project does not include construction of new structures or involve activities that would adversely affect fire protection service or police service ratios, response times, or other objectives. The project will not result in the need for new or physically altered schools. The project will not increase the use of local parks or require construction of new or altered parks to maintain acceptable service ratios or other performance objectives. The project will not result in the need for new or physically altered other public facilities. **No Impact**.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

- The project will have no impact on recreation. No new demand will be generated for the use of existing area parks or recreational facilities. No impact.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

- The project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. No impact.

XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

a) The project will not conflict with any program, plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities. The project may result in a minor temporary increase in traffic in the specific location of project activities, however project activities will be transitory and will not occur in a single area for an extended time period. The following BMPs including applicable BMPs contained in the FEMA Programmatic Environmental Assessment, Recurring Actions in Arizona, California, and Nevada (December 2014) will be implemented for the project:

1. When possible, crews will travel outside of peak hour traffic times, thereby minimizing peak traffic time impacts.
2. All vehicles related to project, including contractor vehicles and trucks, will use designated Truck Routes where those are available.
3. Detour signs shall be used when necessary for vehicles, bicycle and pedestrian ways.
4. All detour signs during the project would be designed to meet the responsible agency standards.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐

With these practices in place, **a less-than-significant effect** is anticipated.

- Siskiyou County has not adopted VMT-based transportation significance thresholds. The project will result in a short-term increase in vehicle miles traveled that will cease upon project completion. The project will not result in a long-term increase in VMT and will not conflict or be inconsistent with CEQA guidelines 15064.3(b). Less-than-significant impact.

e) Result in inadequate emergency access?	☐	☐	☐	☒

- Emergency access will not be impaired by the project. The project is proposed to improve ingress and egress in the event of a wildfire. **No impact.**

XVII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

a) See discussion in Cultural Resources.

On April 9th, 2025, SVRCD contacted Native American Tribes that were identified by the Native American Heritage Commission (NAHC) with a request to provide comments on the proposed project. On April 9th, 2025 Mark Arnold, consulting archaeologist, followed up with the NAHC consultants by email and phone call. At this time, we have received no comments from the tribes. We will be following up with phone calls.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:			
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a)-g) The project will not result in increased capacity or demand for and increase the need for expansion of, construction of, or relocation of water supplies, wastewater treatment, stormwater drainage, landfills, electric power, natural gas, or telecommunications facilities. **No impact.**

XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

a) The project site is within both local and state responsibility areas (SRA). Within SRA the PAA is classified as very high fire hazard severity zones. The project will reduce fire behavior and intensity and provide safer emergency ingress and egress. The project will not impair an adopted emergency response plan or emergency evacuation plan. **No Impact.**

b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

b-d) The project could temporarily increase wildfire risk due to operation of vehicles and mechanized equipment and increased human presence in the project area during project activities. BMPs listed in the

Hazards and Hazardous Materials section of this document include the following that will also reduce the risk of wildfire caused by project activities: At all operations the following BMP shall be implemented:

1. A sealed box of tools shall be located, within the operating area, at a point accessible in the event of fire. This fire toolbox shall contain: one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire.
2. One or more serviceable chainsaws of three and one-half or more horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area.
3. Each passenger vehicle, used on such operation shall be equipped with one shovel and one ax, and any other vehicle used on the operation shall be equipped with one shovel.
4. Each tractor used in such operation shall be equipped with one shovel.
5. Vehicles and equipment will be inspected and approved before use to ensure that they will not leak hazardous materials such as oil, hydraulic fluid, or fuel. All equipment will be equipped with spark arrestors and fire extinguishers.
6. No smoking will be allowed in work areas.

Upon completion, reduction of fuel loads and interruption of fuel continuity will decrease the likelihood of ignition, increase the probability of success of fire suppression activities, reduce severity of a fire and provide safer ingress and egress for evacuation and fire response.

The project will not require installation or maintenance of associated infrastructure or fire breaks not described in this document that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.

a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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APPENDIX A
TYPICAL DESIGNS BY CWHR CLASS-OUTSEN FUELS REDUCTION PROJECT

This thinning/fuels reduction prescription and photolog series is intended to assist land use planners, landowners and others as a general reference of examples of desired future conditions. The vegetation classification referenced in this photolog utilize the CA Department of Fish and Wildlife Habitat Relations (WHR) vegetation types (CDFG, 1988). The WHR vegetation mapping system is convenient for planners and landowners to download for their study area.

The WHR cross walks forest, timber and wildlife values to allow for wildlife modeling and assessment of values at risk. A note of caution in using WHR- significant changes in vegetation can occur since the last update of the vegetation layer. Wildland fires, timber land conversion and drought impact all result in sudden and significant vegetation changes.

Photos used in this photolog are representative of WHR types, but individual stands will vary by species composition, age, and density. The photos are representative only based on the dominant overstory species and are not intended to be the only desired condition. In some instances, retention of habitat values within a desired condition may allow for variance in desired condition. There is substantial diversity of understory species based on gradients from north to south and elevation bands. All Photos were taken by Mark Lancaster, Registered Professional Forester in 2021-2024.

Desired overstory crown density, post treatment, is typically 30%-60% variable thinning based on slope, aspect, elevation, resource values desired and other factors. The desired future conditions are based on a combination of published research on crown closure on fire behavior and intensity[i], and 44 years of empirical wildland and prescribed fire experience in combination with forest thinning work of the author.

The science of optimizing forest stands is evolving as is understory growth response to changes in overstory canopy closure. Additional values such as increased late spring summer runoff and other factors may influence canopy closure goals. Canopies respond to opening with increased growth, which requires periodic and routine maintenance (e.g. understory burning, mowing, thinning, etc) to maintain desired conditions.

Management considerations should include consultation with biologists, foresters and fuel specialists as necessary.

The photos used in this photolog were not specifically intended to represent the desired, optimal or typical condition of stands. They are a reference guide to the conceptual changes in stands that may be used to modify fire behavior. Retention of variable stand density is not readily apparent in Fuel Break sections but would be in larger landscape-based applications of stand management.

Typical Thinned Stands Photolog for Northern CA

Based on CA Department of Fish and Wildlife Habitat Relations Type Classification

Tree Habitat		Habitat Stage																
		1	2S	2P	2M	2D	3S	3P	3M	3D	4S	4P	4M	4D	5S	5P	5M	5D	6
SCN	Subalpine Conifer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
RFR	Red Fir	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
LPN	Lodgepole Pine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
SMC	Sierran Mixed Conifer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
WFR	White Fir	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
KMC	Klamath Mixed Conifer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DFR	Douglas-Fir	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
JPN	Jeffrey Pine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
PPN	Ponderosa Pine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
EPN	Eastside Pine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
RDW	Redwood	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PJN	Pinyon-Juniper	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
JUN	Juniper	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
CPC	Closed-Cone Pine-Cypress	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
ASP	Aspen	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MHC	Montane Hardwood-Conifer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MHW	Montane Hardwood	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
BOW	Blue Oak Woodland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
BOP	Blue Oak—Digger Pine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
VOW	Valley Oak Woodland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
COW	Coastal Oak Woodland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
MRI	Montane Riparian	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VRI	Valley Foothill Riparian	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Standards For Tree Size

WHR	WHR Size Class	Conifer Crown Diameter	Hardwood Crown Diameter	dbh
1	Seedling Tree	n/a	n/a	<1"
2	Sapling Tree	n/a	<15'	1"–6"
3	Pole Tree	<12'	15'–30'	6"–11"
4	Small Tree	12'–24'	30'–45'	11"–24"
5	Medium/Large Tree	>24'	>45'	>24"
6	Multi-Layered Tree	Size class 5 trees over a distinct layer of size class 4 or 3 trees, total tree canopy exceeds 60% closure		

Standards For Canopy Closure

WHR	WHR Closure Class	Ground Cover (Canopy Closure)
S	Sparse Cover	10–24%
P	Open Cover	25–39%
M	Moderate Cover	40–59%
D	Dense Cover	60–100%

Shrub Habitat	Habitat Stage																	
	1	2S	2P	2M	2D	3S	3P	3M	3D	4S	4P	4M	4D					
Alpine Dwarf Shrub	●	●	●	●		●	●	●		●	●	●						
Low Sagebrush	●	●	●	●		●	●	●		●	●	●						
Bitterbrush	●	●	●	●	●	●	●	●	●	●	●	●	●					
Sagebrush	●	●	●	●	●	●	●	●	●	●	●	●	●					
Montane Chaparral	●	●	●	●	●	●	●	●	●	●	●	●	●					
Mixed Chaparral	●	●	●	●	●	●	●	●	●	●	●	●	●					
Chamise-Redshank Chaparral	●	●	●	●	●	●	●	●	●	●	●	●	●					
Coastal Scrub	●	●	●	●	●	●	●	●	●	●	●	●	●					

Standards For Shrub Size

WHR Size Class	Crown Decadence
Seedling Shrub	(seedlings or sprouts <3 years)
Young Shrub	None
Mature Shrub	1–25%
Decadent Shrub	>25%

Standards For Canopy Closure

WHR	WHR Closure Class	Ground Cover (Canopy Closure)
S	Sparse Cover	10–24%
P	Open Cover	25–39%
M	Moderate Cover	40–59%
D	Dense Cover	60–100%

Aquatic Types		Zones and Substrates																	
		1	2O	2M	2S	2G	2R	2B	3O	3M	3S	3G	3R	3B	4O	4M	4S	4G	4R	4B
MAR	Marine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EST	Estuarine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LAC	Lacustrine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
RIV	Riverine	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Standards For Aquatic Zones

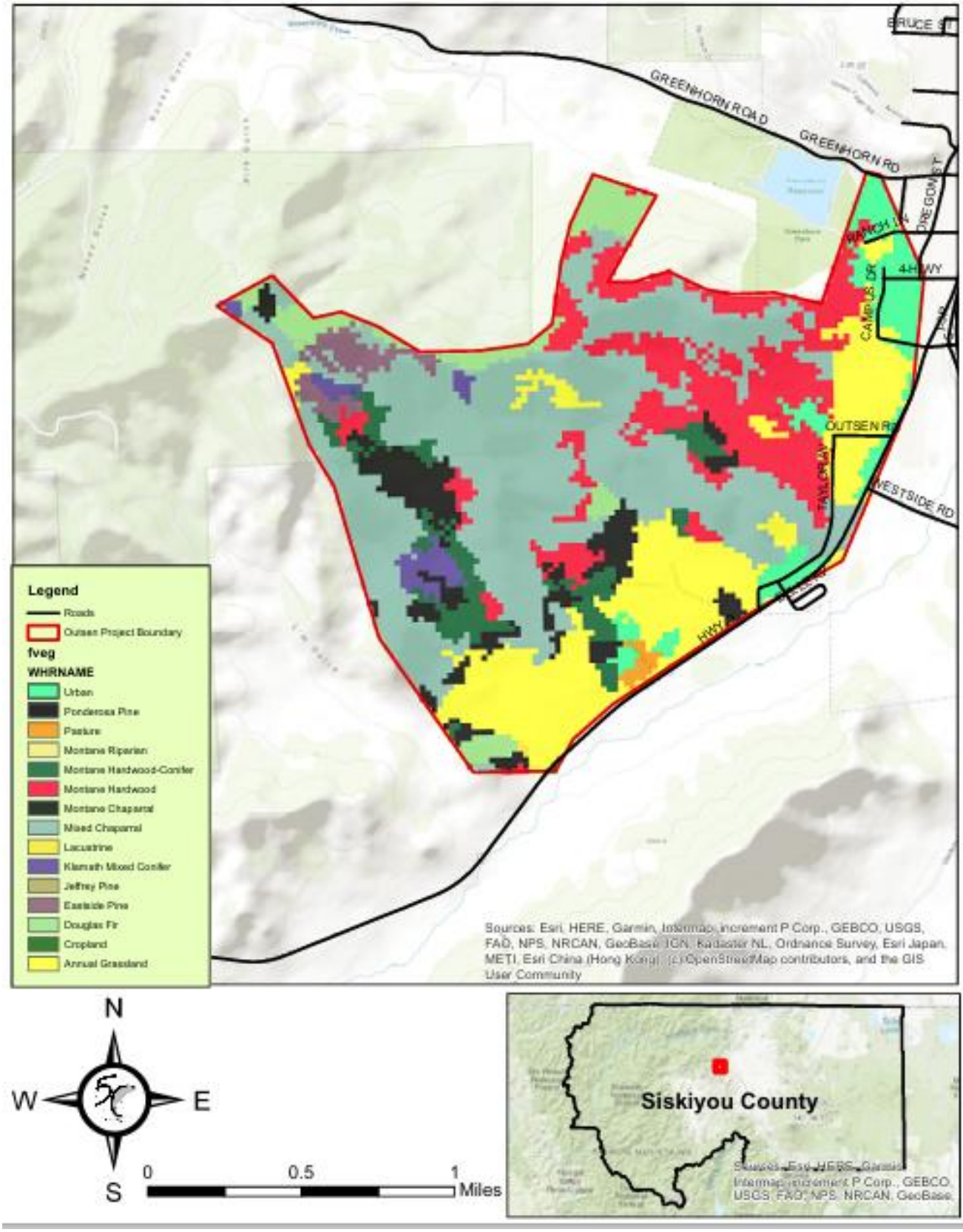
Aquatic Zone	Zone Number	Standard
Pelagic (1, 2) Limnetic (3) Open Water (4)	1	Open Waters, not closely associated with shoreline or bottom
Subitidal (1, 2) Submerged (3, 4)	2	Substrate continually submerged
Intertidal (1, 2) Periodically Flooded (3, 4)	3	Substrate flooded from time to time (includes tidal action and splash zone)
Shore (1, 2, 3, 4)	4	Substrate is continually exposed and not occupied by vegetation (less than 2% canopy closure)

1-Marine; 2-Estuarine; 3-Lacustrine; 4-Riverine

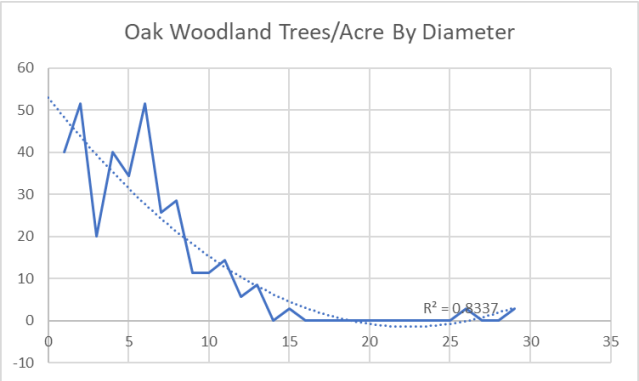
Standards For Aquatic Substrates

Substrate	Substrate Letter	Standard
Organic	O	Substrate is composed predominantly of organic material
Mud	M	Wet, soft earth (clays and silts; less than 0.074 mm (0.003 in) diameter covering at least 75% of the surface
Sand	S	Coarse grained mineral sediments 0.074 mm (0.003 in) to 2 mm (0.08 in) covering at least 75% of the surface
Gravel/Cobble	G	Rock fragments 2 mm (0.08 in) to 7.6 mm (3 in) covering at least 75% of the surface
Rubble/Boulders	R	Rock fragments greater than 7.6 mm (3 in) covering at least 75% of the surface
Bedrock	B	Bedrock covers at least 75% of the surface

Outsen Road Fuels Reduction Project

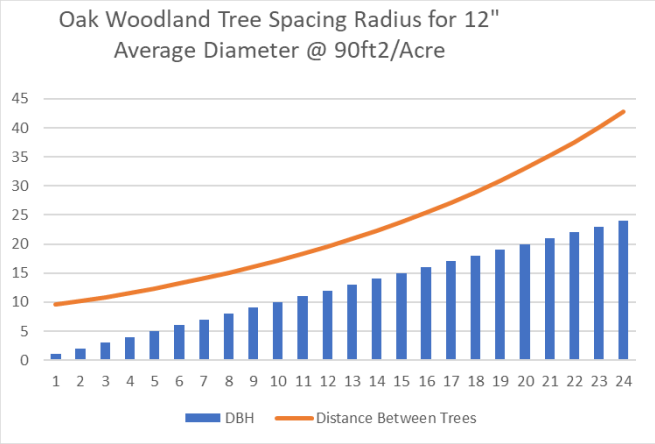


Montane Hardwood, Montane Hardwod-Conifer, and Residental Area Oak Stands
Typical Thinning/Fuels Reduction Prescription



Above- Existing Average Oak Wooldland Stand Trees/Acre

Below- Typical Spacing For ~90ft^2 Basal Area Per Acre For A Standing Averaging 12" DBH*



*Based on ~11% mortality per 1" diameter class increase in growth

Existing Average Stand Basal Area[12]= ~100ft^2 Note: Range of density is highly variable

Target Basal Area Post Harvest= 50-90ft^2 based on starting stand density and health of trees in stand

Existing Average #Trees Per Acre = 351 Note: Range is highly variable

Target Residual Trees Post Harvest= 81 trees based on starting stand density and health of trees in stand

Existing Average DBH= 7.1" Note: Range is highly variable

Average DBH Post Harvest Per Acre= 11.4" based on starting stand density and health of trees in stand

- Retain all healthy mature or large oak trees (>12" dbh)
- Space remaining trees to eliminate overlapping or continuous canopies
- Prune dead limbs and ladder fuels from residual oak trees
- Remove juniper under 12" dbh
- Remove juniper >12" where canopies are overlapping or interlaced with residual oaks
- Remove dead, dying or diseased trees of all sizes or species

Commercial-sized logs may be left on the property for the property owner to dispose[13]

Understory & Slash Treatment

- Understory Removal- Target ladder brush and other fuels under or adjacent to residual trees

[12] Based on a limited number of cruise plots in stratified oak stand type randomly placed. The number of plots limits statistical accuracy of data

[13] Property owners who elect to sell commercial sized logs will be required to submit and receive approval of an appropriate Timber Harvest Document per the California Forest Practice Rules and hire a state licensed timber operator prior to any timber operations, pursuant to Title 14 California Code of Regulations.

- Retain mosaic clumps of brush and other vegetation separated from residual trees by rule of thumb of minimum radius between retained brush clumps and residual trees = 4xbrush height (e.g. 6' tall brush clumps should not be retained if closer than 24' to residual trees)
- Slash under 6" diameter shall be either chipped, masticated, or removed from site
- Slash >6" diameter may be left for landowner use or removed

Approximate Treatment Acres Oak Prescription	Project Areal Acres	Parcels By Vegetation Type*	Maximum Potential Treatment Acres
Conifer-Hardwood	71	70	16
Montane Hardwood	233	60	70
Residential	90	40	15
TOTAL	**394**	**170**	**101**

Spacing based on 90ft^2 basal area per acre @12" average dbh assuming 11% average mortality for each 1" average dbh increase

DBH	Tree/Ac	Distance Between Trees	BA/Ac	Spacing ft2	Radius between trees
1	480	9.5	2.6	91	10
2	421	10.2	9.2	103	10
3	370	10.9	18.1	118	11
4	324	11.6	28.3	134	12
5	285	12.4	38.8	153	12
6	250	13.2	49.0	174	13
7	219	14.1	58.6	199	14
8	192	15.1	67.1	227	15
9	169	16.1	74.5	258	16
10	148	17.2	80.8	294	17
11	130	18.3	85.7	335	18
12	114	19.5	89.5	382	20
13	100	20.9	92.2	435	21
14	88	22.3	93.8	496	22
15	77	23.8	94.5	565	24
16	68	25.4	94.4	644	25
17	59	27.1	93.5	734	27
18	52	28.9	92.0	837	29
19	46	30.9	89.9	954	31
20	40	33.0	87.4	1087	33
21	35	35.2	84.6	1239	35
22	31	37.6	81.5	1411	38
23	27	40.1	78.1	1608	40
24	24	42.8	74.7	1833	43

MONTANE HARDWOOD STAND

Montane Hardwood (MHW) 3D stand (above) and treated 3M stand (below) ~50% and 60% canopy closure.

MONTANE HARDWOOD-CONIFER STAND

Utility Corridor Treatment Area in MHC stands untreated

MONTANE HARDWOOD-CONIFER STAND

Montane Hardwood Conifer (MHC) 4P untreated stand with >80% understory closure (above) and same stand with cleared understory and ~<40% overstory closure (below)

Ponderosa Pine mortality in a Mixed Hardwood Conifer stand in the Outsen Project Area. Within this stand dead and dying conifers would be removed

Treatment Acres Juniper, Montane Chaparral, Mixed Chaparral Stands and Residential Area

Stand Prescription

- Retain all healthy mature or large trees (>12" dbh)
- Space trees to eliminate overlapping or continuous canopies
- Prune dead limbs and ladder fuels from residual trees
- Remove dead, dying or diseased trees of all sizes or species

Understory & Slash Treatment

- Chapparal Stands- Target ladder brush and other fuels under or adjacent to residual trees
- Retain mosaic clumps of brush and other vegetation separated by rule of thumb of minimum radius between retained brush clumps = 8xbrush height (e.g. 6' tall brush clumps should not be retained if closer than 48' apart)
- All treatment vegation shall be either chipped, masticated, or removed from site

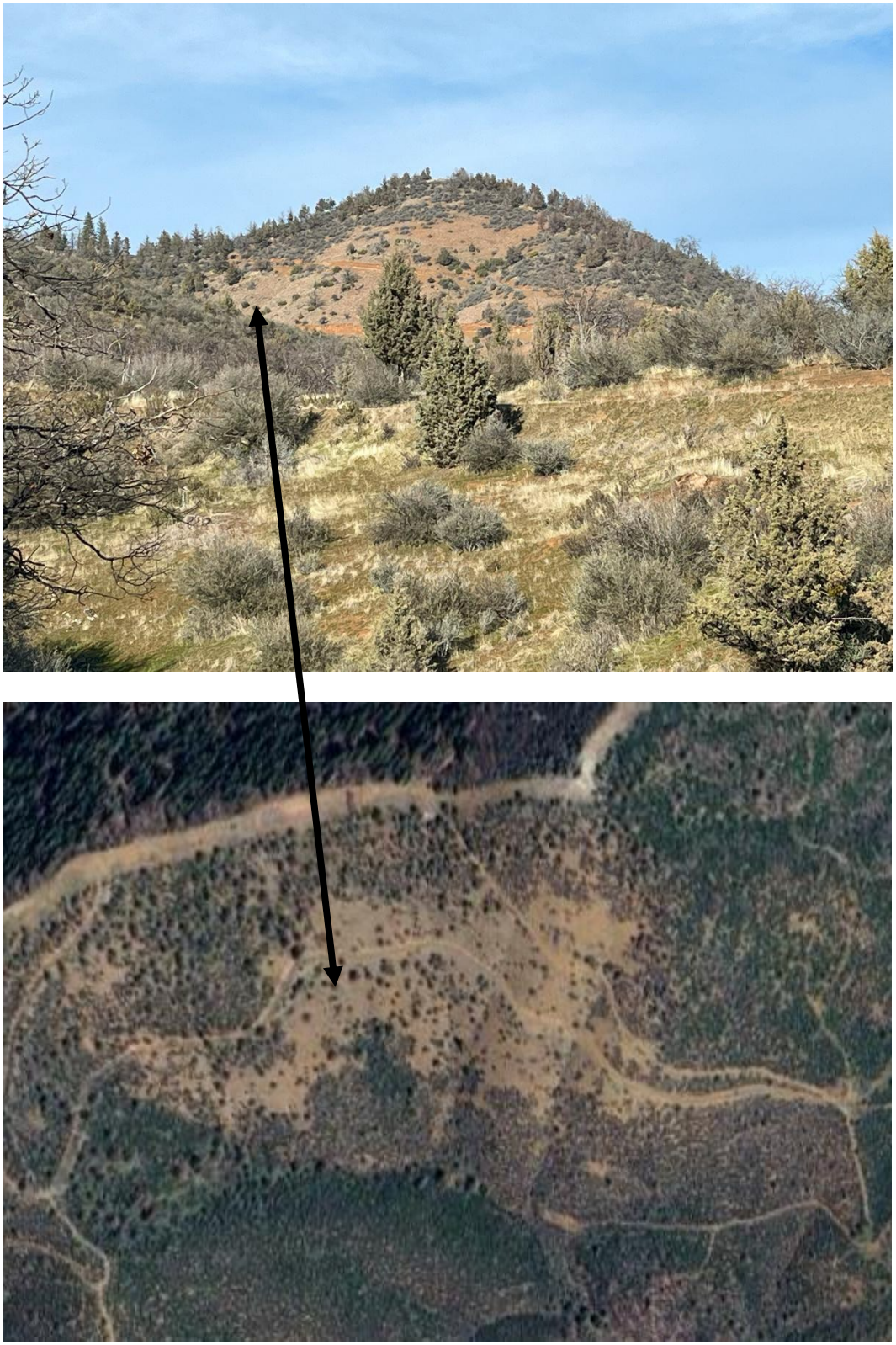
Treatment Acres Juniper, Montane Chaparral And Mixed Chaparral Stands	Project Areal Acres	Parcels By Vegetation	Maximum Potential
Chapparal	585	70	211
Residential	90	40	5
TOTAL	**674**	**110**	**216**

Example of Chapparal Thinning for One Acre (Below)

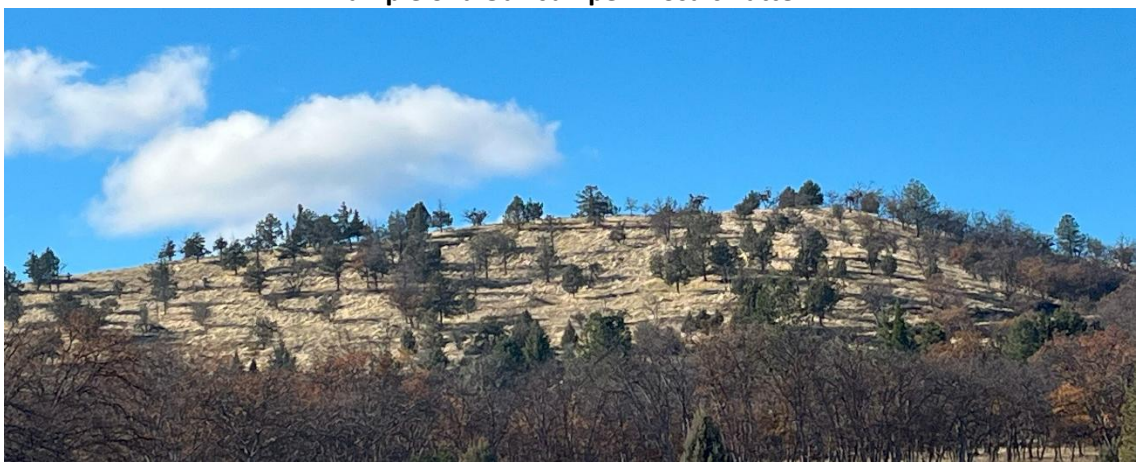
JUNIPER

Western juniper ~60% crown closure (JUN) 3D (above) and 4P with <25% canopy closure (below)

Typical Example of a Chapparal Mosaic Pattern Within Outsen Project Area



Example of a Oak-Juniper Mosaic Pattern



Above White Oak-Western Juniper Mosaic In Yreka. Below middle ground showing oak-juniper mosaic in Yreka area.

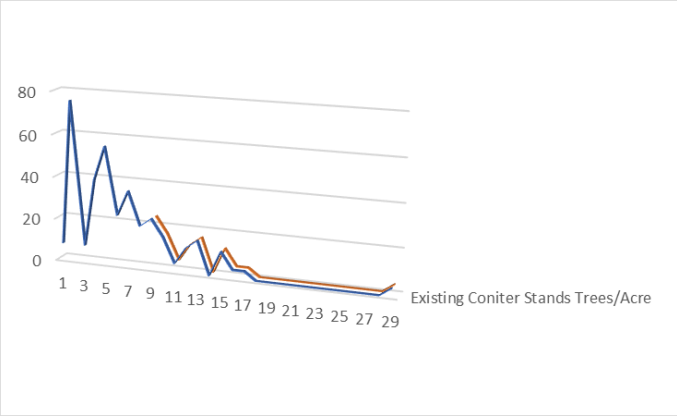
MONTANE CHAPARRAL AND MIXED CHAPARRAL STANDS

Montane Chaparral mature and dense stands (above). Within chaparral stands thinning strategies can consist of removal and retention of islands for wildlife habitat cover.

LOW SAGEBRUSH STAND

Low Sagebrush mature moderately dense (above). Similar vegetation type treated during the Lava Fire (Below) (2021).

Pondersoa Pine, Klamath Mixed Conifer Stand and Residential Area Stands
Typical Thinning/Fuels Reduction Prescription



Above- Blue line is existing trees/acre by DBH. Orange line is residual trees per acre post-treatment

Existing Average Stand Basal Area[14]= ~125ft^2 Note: Range of density is highly variable

Basal Area Post Harvest=75-95ft^2 based on starting stand density and health of trees in stand

Existing Average #Trees Per Acre = 340 Note: Range is highly variable

Residual Trees Post Harvest= 100 trees based on starting stand density and health of trees in stand

Existing Average DBH= 6.9" Note: Range is highly variable

Average DBH Post Harvest = 13.1 Note: Range is highly variable

- Retain all healthy mature or large trees (>12" dbh)
- Space remaining trees to eliminate overlapping or continuous canopies
- Prune dead limbs and ladder fuels from residual oak trees
- Remove juniper
- Remove dead, dying or diseased trees of all sizes or species

Commercial-sized logs may be left on the property for the property owner to dispose[15]

Understory & Slash Treatment

- Understory Removal- Target ladder brush and other fuels under or adjacent to residual trees
- Retain mosaic clumps of brush and other vegetation separated from residual trees by rule of thumb of minimum radius between retained brush clumps and residual trees = 4xbrush height (e.g. 6' tall brush clumps should not be retained if closer than 24' to residual trees)
- Slash under 6" diameter shall be either chipped, masticated, or removed from site
- Slash >6" diameter may be left for landowner use or removed

Treatment Acres Conifer Stands	Project Areal Acres	Parcels By Vegetation	Maximum Potential
Conifer	225	20	40
Residential	90	40	10
TOTAL	**314**	**60**	**50**

[14] Based on a limited number of cruise plots in stratified stands type randomly placed. The number of plots limits statistical accuracy of data

[15] Property owners who elect to sell commercial sized logs will be required to submit and receive approval of an appropriate Timber Harvest Document per the California Forest Practice Rules and hire a state licensed timber operator prior to any timber operations, pursuant to Title 14 California Code of Regulations.

EASTSIDE PINE STAND

Eastside Pine (EPN) 4D with 60% crown closure (above). PPN4M with 40% crown closure and road acting as fire break (below)

PONDERSOA PINE STAND

Ponderosa Pine (PPN) 3D unthinned stand with >70% crown closure (above). Ponderosa Pine 3M (Below) with ~60% crown closure.

Ponderosa Pine plantation (PPN) 2D stand with 80% crown closure (above). PPN 2M stand with 40% crown closure and understory growth response (below).

KLAMATH MIXED CONIFER STAND

Klamath Mixed Conifer (KMC) 4D with ~60% crown closure (above) and same stand thinned for fuel break and converted to KMC 4M within fuel break segment.

APPNDIX B
SUMMARY OF BEST MANAGEMENT PRACTICES

Air Quality Best Management Practices

- All exposed unpaved surfaces shall be watered during hauling periods to limit dust generation. All haul trucks transporting soil, chips, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto public roads from project operations shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.
- Clear signage shall be provided for project workers at all access points.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency, or their designee, regarding dust complaints. This person shall respond and take corrective action.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- The idling time of diesel-powered equipment will be minimized to two minutes.
- All equipment, diesel trucks, and generators are required to be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.
- All equipment used onsite will be California Air Resources Board (CARB) compliant.

Botanical Best Management Practices

1. An invasive species management plan (ISMP) shall be prepared to provide guidance that prevents the spread of noxious weeds. If a significant population of Cal-IPC listed invasive species is observed, then equipment shall be cleaned at the contaminated site before proceeding to any other sites.

Cultural & Archaeological Best Management Practices

2. Archaeological resources within the Project Area will be designated for Special Conditions during implementation contracting. Special Conditions contract provisions for cultural resources protection include the following provisions:

a) Prior to the commencement of operations, the Project Manager will ensure that all Equipment Exclusion Zones IEEZ) and Special Treatment Zones (STZ) are clearly described and illustrated in plans, and specifications.

b) All parties (SVRCD, Project Manager, Registered Professional Forester [RPF], or equipment operators familiar with resource management work will review the plans.

c) Prior to commencement of operations, a CAL FIRE Certified Archaeological Surveyor for sites under the purview of CalFire regulations and/or professional archaeologist familiar with the site, shall demarcate all sites with STZ flagging. Exclusionary flagging will be based on the site sketch map. No buffer around the site boundary is required for Special Condition sites. STZ flagging that is older than six months will be inspected and refreshed prior to operations.

d) A CAL FIRE Certified Archaeological Surveyor (for sites under the purview of CalFire regulations) and/or a professional archaeologist will periodically inspect sites to ensure that BMPs are effective and the STZ has not been breached.

Cultural Resources- Unanticipated Discovery Best Management Practices

2. If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. A qualified professional archaeologist should be contacted to evaluate the situation. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

3. Encountering Native American Remains

a) Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the regarding treatment of the remains is provided.

4. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and if the coroner determines the remains to be Native American:

- The coroner shall contact the responsible agency within 24 hours.

- The responsible agency shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods.

Erosion Impact Avoidance Best Management Practices

- Riparian and Wetland Exclusion- Treatment Prescription (TP) will exclude activities within 75 feet of Perennial/seasonal streams and wetlands (including vernal pools) and 50-feet from ephemeral and intermittent streams. The exclusion area will be marked with flagging. Biomass removal, quipment staging, operation of mechanical equipment, and on-site disposal of removed biomass shall not occur within the marked buffers.

- Highly erosive soils will be identified in the field by the contractor and applicable controls applied per RWQCB guidance Order No. R1-2024-0001

- Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, and buffer zones to prevent excessive or unnecessary disturbances and exposure.

- Avoid excavation and soil disturbance during wet weather. The Limited Operating Period limits winter season operations between February and May. While operations during the fall/early winter, before the LOP is implemented, will be determined on a case-by-case basis by the contractor and project manager based on soil and weather conditions.

- Mechanical operations shall stop if Saturated Soil Conditions (SSC) occur. SSC means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during Timber Operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

- Use standard erosion control features such as hydro-seeding, wood chips, jute or straw matting; fiber rolls other mulch material to stabilize disturbed soils greater than 100 ft2.

- Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them, if used.

- Conduct routine inspections of erosion control measures, especially before and immediately after rainstorms, and repair if necessary.

Fire Prevention During Project Activities Best Management Practices

1. A sealed box of tools shall be located, within the operating area, at a point accessible in the event of fire. This fire toolbox shall contain: one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire.

2. One or more serviceable chainsaws of three and one-half or more horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area.

3. Each passenger vehicle, used on such operation shall be equipped with one shovel and one ax, and any other vehicle used on the operation shall be equipped with one shovel.

4. Each tractor used in such operation shall be equipped with one shovel.

5. Vehicles and equipment will be inspected and approved before use to ensure that they will not leak hazardous materials such as oil, hydraulic fluid, or fuel. All equipment will be equipped with spark arrestors and fire extinguishers.

6. No smoking will be allowed in work areas.

Handling And Use Of Hazardous Materials Best Management Practices

1. Vehicles and equipment will be inspected and approved before use to ensure that they will not leak hazardous materials such as oil, hydraulic fluid, or fuel. All equipment will be equipped with spark arrestors and fire extinguishers.

2. Fueling will take place in designated staging areas, outside native vegetation or wetlands.

3. The contractor will prepare a Spill Prevention and Response Plan and have emergency cleanup gear for spills (spill containment and absorption materials) and fire-suppression equipment available onsite at all times.

4. Leaks, drips, and other spills will be cleaned up immediately to avoid soil or groundwater contamination. Cleanup of a spill on soil will include removing the contaminated soil using the emergency spill cleanup gear. Contaminated soil and disposable gear used to clean a hazardous materials spill will be properly disposed of following State and Federal hazardous material disposal regulations.

5. Major vehicle maintenance and washing will be done offsite.

6. Spent fluids including motor oil, radiator coolant, and used vehicle batteries will be collected, stored, and recycled as hazardous waste offsite.

7. Spilled dry materials will be swept up immediately.

8. No smoking will be allowed in work areas.

9. If hazardous materials are encountered or accidentally released as a result of the project, the following procedures will be implemented:

    a) Work shall stop in the vicinity of any discovered contamination or release.

    b) The scope and immediacy of the problem shall be identified.

    c) Coordination with the responsible agencies shall take place.

d) The necessary investigation and remediation activities shall be conducted to resolve the situation before continuing construction work.

Hydrology

1. Prior to project work, wetlands located in the project area will be flagged for exclusion.
2. Riparian and Wetland Exclusion- Treatment Prescription (TP) will exclude activities within 75 feet of Perennial/seasonal streams and wetlands (including vernal pools) and 50-feet from ephemeral and intermittent streams. The exclusion area will be marked with flagging. Biomass removal, quipment staging, operation of mechanical equipment, and on-site disposal of removed biomass shall not occur within the marked buffers.
3. Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands and adjacent, ponds, streams, or riparian woodland/scrub. The contractor will not be allowed to stockpile brush, loose soils, or other debris material on stream banks.
4. Native plant species should be used in erosion control or revegetation seed mix. Any hydroseed mulch used for revegetation must also be certified weed-free. Dry farmed strawwill not be used, and certified weed-free straw will be required where erosion control straw is to be used. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion-control measures will be placed between water or wetland and the outer edge of the project site.
5. All off-road project equipment will be cleaned of potential noxious weed sources (mud, vegetation) before entry into the project area. Equipment will be considered fee of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment compartments or specialized inspection tools is not required.
6. Vehicles and equipment will be parked on pavement, existing road, or specified staging areas.
7. Trash generated by covered activities should be promptly removed and properly removed from the site.
8. Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non- sensitive nonnative grassland land cove types, when these sites are available, to minimize risk of direct discharge into riparian area or other sensitive land cover types.
9. All temporarily disturbed areas, such as staging areas, will be returned to pre-project or ecologically improved conditions as required by responsible agencies.
10. Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks, or into wetland areas. Never store or leave debris in the street or near a creek where it may contact runoff.

Noise Best Management Practices

1. Provide advance notification to surrounding land uses disclosing the treatment schedule, including the various types of activities that would be occurring throughout the duration of the treatment period.

2. Noise-generating treatment activities, including truck traffic coming to and from the site for any purpose, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. during weekdays and 8:00 a.m. to 5:00 p.m. on Saturday and Sunday.

3. All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

4. The contractor shall be responsible for maintaining equipment in best possible working condition.

5. Mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receivers.

6. Locate equipment as far as possible from nearby noise-sensitive receptors.

7. The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. No project-related public address or music system shall be audible at the location of any adjacent noise-sensitive receptor.

8. The contractor shall notify adjacent property owners, property managers, and business owners of adjacent parcels of the schedule in writing and in advance of the work. The notification shall include the name and phone number of a project representative or site supervisor.

9. The onsite supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeals process to the Owner shall be established prior to commencement of treatment that shall allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

Paleontological Protection Best Management Practices

1. The project proponent shall notify a qualified paleontologist of unanticipated discoveries, made by either the cultural resources monitor or construction personnel and subsequently document the discovery as needed. In the event of an unanticipated discovery of a breas, true, and/or trace fossil during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before activities are allowed to resume at the location of the find.

Transportation Best Management Practices

1. When possible, crews will travel outside of peak hour traffic times, thereby minimizing peak traffic time impacts.

2. All vehicles related to project, including contractor vehicles and trucks, will use designated Truck Routes where those are available.

3. Detour signs shall be used when necessary for vehicles, bicycle and pedestrian ways.

4. All detour signs during the project would be designed to meet the responsible agency standards.

Wildlife Best Management Practices

Special Status Species Best Management Practices

1. Riparian and Wetland Exclusion- Treatment Prescription (TP) will exclude activities within 75 feet of Perennial/seasonal streams and wetlands (including vernal pools) and 50-feet from ephemeral and intermittent streams. The exclusion area will be marked with flagging. Biomass removal, equipment staging, operation of mechanical equipment, and on-site disposal of removed biomass shall not occur within the marked buffers.

2. A Limited Operating Period will be in place between February 1- August 1 of each year. During this period no mechanical operations shall occur except within 100' of a residential structure or outbuilding where fuels reduction is proposed for structural safety.

3. If special-status species have been previously identified in an area prior to the start of ground-disturbing activities a focused pretreatment survey for special-status species will be completed by a CDFW- approved biologist. If the survey does not find special status species the operator may propose to conduct operations during the LOP period.

4. If special-status species are found during focused pretreatment surveys, the CDFW will be contacted within one working day, and a suitable protocol shall be approved by CDFW for relocation or deferral of operations.

5. Exclusion flagging and/or exclusion fencing (such as Ertec E-fenceTM or an equivalent) will be installed around special-status species sites prior to any treatment when special status species are not actively dispersing or foraging. The fencing will remain in place until all project activities in the vicinity of suitable upland dispersal habitat are completed.

6. To prevent Special Status Species from becoming entangled or trapped in erosion control materials, plastic monofilament netting (erosion control matting) or similar material will not be used for erosion control. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

7. Trees with maternity bat roost structures (i.e. cavities in the trunk or branches, woodpecker holes, loose bark, cracks) identified for removal shall occur between September 1 to October 30.

8. Prior to any treatment where Special Status Species have been detected a USFWS/CDFW-qualified biologist will conduct an education program for operational personnel. At a minimum, the training will include a description of Special Status Species and their habitats; the potential occurrence of these species in the project area; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries in which work may occur. A fact sheet conveying this information will be prepared and distributed to all crews and project personnel entering the project area. Upon completion of the program, personnel will sign

a form stating that they attended the program and understand all of the avoidance and minimization measures for the Special Status Species.

Best Management Practices

1. During the Preliminary Site Assessment of each eligible parcel the presence of caves or bridges within the treatment area were noted. No caves or bridges are located within the project area, no further measures are necessary.

2. If additional project sites are added and bridges or caces are present within 50 feet of project activities, caves and bridges in the project area will be assessed during the Preliminary Site Assessment for potential bat roost structures (crevice roosts tend to be approximately 3/4 to 1 1/2 inches across and at least 18 inches deep. In most cases, they run from one side of the bridge to the other, and between three and several hundred meters above ground). If found, a qualified biologist will assess the structure for signs of bat presence (i.e., guano, insect pieces, etc.). If no roost is present, then no buffer is needed. If a roost is present, then a 50-foot non-disturbance buffer shall be implemented around the roost structure to prevent changes to the thermal stability and protective cover surrounding the roost structure that could result from tree removal.

Raptor Best Management Practices

1. Pretreatment surveys for raptors, other special-status birds, and appropriate nesting habitat will be conducted within 50 feet of the project area no more than three days prior to ground-disturbing activities. If an active nest is found, CDFW will be consulted to determine the appropriate buffer area to be established around the nesting site and the type of buffer to be used, which typically is ESA fencing. If the establishment of a buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

2. A qualified biologist will conduct weekly monitoring during project work, to evaluate the identified nest for potential disturbances associated with treatment activities. Project work within the buffer is prohibited until the qualified biologist determines the nest is no longer active.

3. If an active nest is found after project work begins, treatment activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

Migratory Bird Best Management Practices

1. Limited Operating Period- The measures below would be implemented for project activities during the nesting season (February 15 through August 31).

2. A qualified biologist will conduct pretreatment surveys for nesting migratory birds in the project area no more than three days prior to the start of ground disturbing activities. If pretreatment surveys indicate the presence of any migratory bird nests where activities would directly result in bird injury or death, a buffer zone of 50 feet will be placed around the nest.

3. Buffers will be established around active migratory bird nests where project activities would directly result in bird injury or death. The size of the buffer may vary for different species and will be determined in coordination with the responsible agency. A qualified biologist will delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape.

4. Buffer zones will be maintained around all active nest sites until the young have fledged and are foraging independently. In the event that an active nest is found after the completion of pretreatment surveys and after work begins, all treatment activities within a 50-foot radius will be stopped until a qualified biologist has evaluated the nest and erected the appropriate buffer around it.

5. If an active nest is found in an area after project work begins, treatment activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the responsible agency will be contacted for further avoidance and minimization guidelines.

Monarch Butterfly BMPs

1. A field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (Asclepias spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

2. If milkweeds are present in or adjacent to the work area a 10' diameter buffer around individual or clumps of plants shall be delineated with temporary high-visibility indicators such as marking whiskers, pin flags, stakes with flagging tape, or other markers to protect the plants; the markers/flags shall be maintained in good condition throughout the duration of ground disturbing work.

[i] An excellent power point presentation on variable density thinning and fire effects can be downloaded at: https://www.slideshare.net/slideshow/variable-thinning-using-historical-stand-structure-data-to-create-fireresilient-forests-and-enhance-ecosystem-services-in-a-changing-climate-69362591/69362591

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