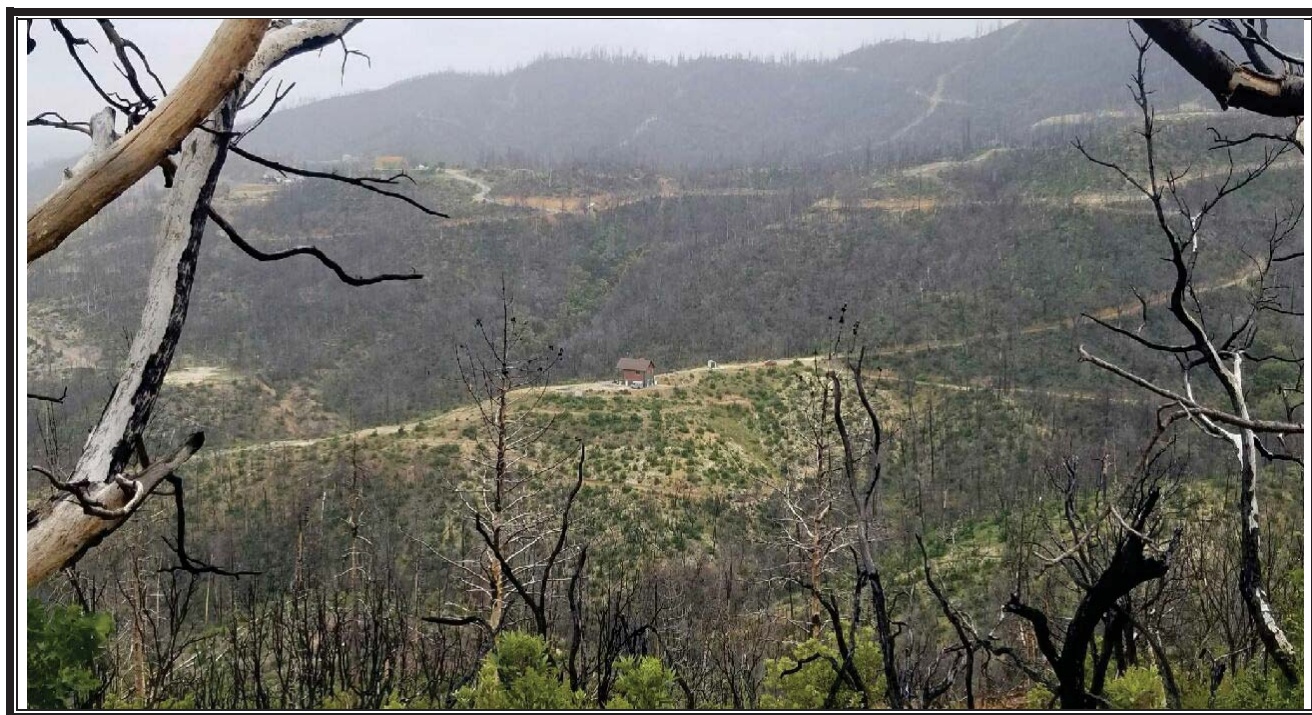


**Initial Study-Mitigated Negative Declaration  
for the proposed  
Post Carr Fire Hazardous Fuels Reduction  
Area South 299 Shasta County, California**



prepared by:

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5300 Aviation Drive  
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for The McConnell Foundation  
Under Grant # 18-FP-SHU-1042

**September 17, 2020**

Contents

MITIGATED NEGATIVE DECLARATION.....1

**Introduction and Regulatory Context.....1**

        Stage of CEQA Document Development .....1

        Introduction.....1

        Regulatory Guidance .....1

        Purpose of the Initial Study.....2

**Project Description and Environmental Setting .....3**

        Project Location .....3

        Background and Need for the Project.....3

        Project Objectives .....4

        Project Start Date .....4

        Project Description.....5

        Environmental Setting of the Project Region .....9

        Description of the Local Environment.....17

        Current Land Use and Previous Impacts .....17

**Conclusion of the Mitigated Negative Declaration .....18**

        Environmental Permits.....18

        Mitigation Measures .....18

        Summary of Findings.....18

Initial Study-Environmental Checklist .....20

**Environmental Factors Potentially Affected .....20**

**Determination.....21**

**Environmental Checklist and Discussion .....22**

        Aesthetics .....22

        Agricultural Resources.....23

        Air Quality .....24

        Biological Resources .....26

        Cultural Resources .....31

        Energy .....34

        Geology and Soils.....34

        Greenhouse Gas Emissions.....37

        Hazards and Hazardous Materials .....39

        Hydrology and Water Quality.....41

        Land Use and Planning .....44

Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

Mineral Resources .....44

Noise .....45

Population and Housing.....46

Public Services.....47

Recreation .....49

Transportation .....49

Tribal Cultural Resources .....50

Utilities and Service Systems.....54

Wildfire .....55

Mandatory Findings of Significance.....57

Appendix A.....59

**Mitigation Monitoring and Reporting Plan .....59**

    Potentially Significant Effects and Mitigation Measures .....59

PREPARERS OF THIS DOCUMENT .....61

EXPERTS CONSULTED .....61

REFERENCES CITED.....63

TABLES

1    CNDDDB Occurrences .....12

2    Green House Gas Calculations .....38

FIGURES

1    Project Location

2    Project Area

3    Slope Classes

4    Topo Map

5    Soils

6    Hydrology

7    CNDDDB Occurrences and USFWS Critical Habitat

8    Sensitive Receptors

9    General Plan Land Use

10   Zoning

11A  Area Surveyed for Rare Plants

11B  Rare Plant Observations

11C  Rare Plant Observations

ATTACHMENTS

A    Botanical Survey Report

# MITIGATED NEGATIVE DECLARATION

## Introduction and Regulatory Context

### STAGE OF CEQA DOCUMENT DEVELOPMENT

- ☐ **Administrative Draft.** This California Environmental Quality Act (CEQA) document is in preparation by California Department of Forestry and Fire Protection (CAL FIRE) staff.
- ☒ **Public Document.** This completed CEQA document has been filed by CAL FIRE at the State Clearinghouse on January 27, 2021, and is being circulated for a 30-day state agency and public review period. The review period ends on February 26, 2021.
- ☐ **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 CAL FIRE's Sacramento Headquarters, Environmental Protection Program.

### INTRODUCTION

This initial study-mitigated negative declaration (IS-MND) describes the environmental impact analysis conducted for the proposed project. This document was prepared for CAL FIRE 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, CAL FIRE, has prepared, reviewed, and analyzed the IS-MND and declares that the statements made in this document reflect CAL FIRE's independent judgment as lead agency pursuant to CEQA. CAL FIRE further finds that the proposed project, which includes revised activities and mitigation measures designed to minimize environmental impacts, will not result in a significant effect on the environment.

### REGULATORY GUIDANCE

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

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

preparation of an environmental impact report. This IS-MND conforms to these requirements and to the content requirements of CEQA Guidelines § 15071.

## **PURPOSE OF THE INITIAL STUDY**

CAL FIRE has primary authority for oversight of the proposed project and is the lead agency under CEQA. The purpose of this IS-MND is to present to the public and reviewing agencies the environmental consequences of implementing the proposed project and to describe the adjustments made to the project to avoid significant effects or reduce them to a less-than-significant level. This disclosure document is being made available to the public and reviewing agencies for review and comment. The IS-MND is being circulated for public and state agency review and comment for a review period of 30 days as indicated on the ***Notice of Intent to Adopt a Mitigated Negative Declaration*** (NOI). The 30-day public review period for this project begins on January 27, 2021, period ends on February 26, 2021.

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

- Publication in a newspaper of general circulation in the area affected by the proposed project,
- Posting the NOI on and off site at J's Market 15438 CA-299 Shasta, CA 96087 in the area where the project is to be located, or
- Direct mailing to the owners and occupants of property contiguous to the project.

CAL FIRE will post the NOI on and off site at:

- J's Market 15438 CA-299 Shasta, CA 96087,
- USPS Shasta Post Office, 15430 State Highway 299 W, Shasta, CA 96087,
- CAL FIRE Shasta-Trinity Unit Headquarters, 875 Cypress Ave., Redding, CA. 96001
- Near the area where the project is located.

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 NOI) for CAL FIRE's consideration. Written comments may also be submitted via email (using the email address that appears below), but comments sent via email must also be received on or prior to the close of the 30-day public comment period. Comments should be addressed to:

Ben Rowe  
Shasta-Trinity Unit Forester  
RPF No.  
CAL FIRE  
875 Cypress Ave.  
Redding, CA 96002  
Phone: (530) 225-2432  
Email: [SacramentoPublicComment@fire.ca.gov](mailto:SacramentoPublicComment@fire.ca.gov)



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

## ***Project Description and Environmental Setting***

### **PROJECT LOCATION**

The proposed project area is located in Shasta County and is shown on Figure 1. The project is located within the footprint of the 2018 Carr Fire as shown on Figure 2. The project area consists of approximately 2,181 acres located south of California State Route 299 West (299W), west of the Sacramento River and southeast of Whiskeytown Lake. The acreage total of approximately 2,181 includes both the approximated South 299 acreage as well as the Landscape area acreage. These numbers are approximate due to landowner agreements, terrain constraints, buffers and archaeological sites being taken into account.

The legal location of the project includes:

T.31N R5W. S. 4,5,6 & 8 MDBM

T.32N R5W. S. 31 & 32 MDBM

T.32N R5W. Unsectioned portion of San Buenaventura Land Grant

T.32N R6W. S. 25 & 36 MDBM

### **BACKGROUND AND NEED FOR THE PROJECT**

The project area centers around the community of Old Shasta a, historic mining town, where considerable mining activity and disturbance altered the area vegetation and geography. Historical land disturbances in the area included logging, water infrastructure projects, and mining. This stripped the land of vegetation and altered hydrological structures and soil characteristics. One of the greatest disturbances was Iron Mountain Mine, which denuded the land of vegetation on over 100 square miles in west Redding. Inadequate remedial efforts enabled the area to consist of mostly 50-year and older brush fields that contained sufficient dead fuel and fine fuel to sustain large and damaging fires capable of spreading at rapid rates. A large wildfire in 1922 consumed a previously forested area north of Whiskeytown Lake, and it reburned in 2008 in the Motion Fire followed by the Carr Fire in 2018.

The Carr Fire burned into the Wildland-Urban Interface (WUI) in an area intermixed with wildlands and community development. The remaining fuels standing after the fire represent a variety of hazards including, but not limited to, fuel loading toward future fire, species type changes, and limitations to reforestation. All areas of the fire are subject to soil destabilization and erosion in ecologically important watersheds. Vegetation that was a minor component of the ecosystem may become the dominant species post-fire due to resprouting. The species that are most fire adapted tend to aggressively resprout post-fire, thriving in areas of frequent burn and growing in conditions conducive to supporting future burns. Recent observations suggest that a portion of the high-severity burn areas within these fires may not reestablish as forests, but rather will transition to shrub systems. Fire frequency has been found to increase in these areas as fuel conditions are created that allow for repeated high-severity fire in short succession, hindering the regrowth of forest and maintaining shrub dominance.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

Research following the 1992 Fountain Fire (a fire that burned through similar ecotypes in Shasta County as the Carr Fire) found that the active management approach of herbicide shrub treatment and reforestation improved tree densities, species richness and diversity within 8 years following the fire. Without this management effort, the land would have turned to shrub cover for many years, as many of the neighboring lands that were not restored did, resulting in reduced fire resiliency, fewer trees and less carbon sequestration.

Governor Brown requested Presidential emergency declaration for direct federal assistance for the Carr Fire on July 26, 2018 and President Trump approved the declaration on July 28, 2018. As a result of the declaration Cal Recycle, FEMA, Cal OES, local agencies and utilities responded to the emergency and state and federal funding was provided for debris removal, replacement of public infrastructure, and other public assistance projects. The emergency response work focused on the preservation and protection of public property and right-of-way. The “emergency response” work to keep publicly owned or publicly operated property and ROW in a safe and usable condition has already been accomplished by local, federal or state agencies and utilities. This work included the removal and disposal of hazard trees that pose and imminent threat of falling on public roadways or other public improved property. The scope of this CAL FIRE grant is limited to hazardous vegetation removal and restoration on private property to reduce loss of life and personal injury and protect habitable structures on private property. The scope of the CAL FIRE grant will ensure there is no duplication of work between emergency response and hazardous fuel reduction.

## PROJECT OBJECTIVES

The specific objectives of the project include:

1. Fuel reduction/removal of vegetation (trees and brush) and suppression of resprouting vegetation on approximately 1,225 acres (depending upon landowner agreements) of private property within the WUI, including modifications of vegetation where habitable structures/private property are highly concentrated to reduce loss of life and personal injury and protect private property. This includes providing space around habitable structures and tactical location to deploy fire-suppression efforts in event of future wildfire.
2. Creation of a ridgeline landscape fuel treatment along the ridge from Highway 299 West east of Lower Springs Road to Swasey Drive, between Mary Lake Subdivision and Lower Springs Road. This area is approximately 956 acres of treatable area due to steep terrain, archaeology sites and buffers.
  - a) Vegetation clearance in critical location to reduce wildfire intensity and rate of spread.
  - b) Maintenance of fuels in strategic locations as identified in CAL FIRE Unit Fire Plan and compatible with the community Wildfire Protection Plan, Hazard Mitigation Plan and 2018 Strategic Fire Plan for California.

The goals identified for the project include:

- Goal 1:** Reduce wildfire occurrence, rate of spread and severity within the project site by implementing fuel reduction treatments. Such treatments seek to return the ecosystem to a condition that will limit the over accumulation of surface fuels and woody biomass.
- Goal 2:** Create defensible space around habitable structures on private property in strategic locations where there is high population concentration to provide tactical resource for fire

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

suppression to avoid loss of life and personal injury and protect habitable structures.

## **PROJECT START DATE**

The project is urgent due to the number of standing dead trees in the project area. Where possible, The McConnell Foundation will seek to expedite the timeline by working with CAL FIRE in order to commence work early and eliminate existing hazards. The McConnell Foundation, at its own financial cost and risk, has proceeded with planning and development activities in the project area such as CEQA-related studies (Biology, Botany and Archaeology). Project work is expected to last through 2022. Project activities will occur from March 1 through fall and early winter, weather permitting. Work will be conducted from 7:00 a.m. to 7:00 p.m. on Monday through Friday and from 8:00 a.m. to 5:00 p.m. on weekend days, up to seven days a week to meet scheduling constraints.

## **PROJECT DESCRIPTION**

The McConnell Foundation (Foundation) proposes a Fuel Reduction Project with two primary activities in western Shasta County, in the footprint of the 2018 Carr Fire between Whiskeytown Lake and Redding. (1) The first activity entails approximately 1,225 acres of hazard fuel clearing in the Wildland Urban Interface (WUI) on private property. (2) The project will also establish a fuel treatment area along the ridge between Mary Lake and Lower Springs from Highway 299 West to Swasey Drive in Shasta. This fuel treatment will provide significant barrier in the WUI where the City of Redding borders the community of Shasta. The treatment area is approximately 956 acres in this area. When combining the acreage from both these areas it gives a total area of 2181 acres.

The Carr Fire began on July 23, 2018, in Whiskeytown National Recreation Area in Shasta County. The fire burned 229,651 acres across Shasta and Trinity counties, ranking it the 7<sup>th</sup> largest wildfire in recorded history of California. The fire grew from 6,773 acres on July 25<sup>th</sup> to 83,300 acres of July 28<sup>th</sup>; the fire jumped the Sacramento River and a fire tornado was generated reaching 39,000 feet and generating winds of 145 mph. Governor Brown proclaimed California's state of emergency on July 26, 2018, and President Trump approved an Emergency Declaration on August 4, 2018. During the incident, 38,000 residents were evacuated. The fire resulted in the destruction of approximately 1,600 structures, including 1,079 residential structures and 22 commercial structures, and caused 8 deaths.

At this time, Shasta County was also experiencing impacts from the Delta Fire which burned 63,311 acres and destroyed 20 structures, as well as the Hirz Fire which burned 46,150 acres. The perimeters of the three fires ultimately intersected, for a combined 2018 burn area of 339,112 acres. Local, state and federal agencies and organizations rapidly responded to the disaster, but the magnitude of the 2018 burns quickly consumed much of the traditional capacity at the local level on public owned lands. The fuel reduction projects on small, private properties in the WUI necessitate a broader response by capable entities within the community.

The geographic scope of the project was determined by prioritizing the areas where fire prevention activities would serve to have the greatest impact on reducing wildfire severity to avoid loss of life and personal injury and protect habitable structures on private property. The most populated area within the Carr Fire perimeter are the community of Old Shasta and sections of Redding. Therefore, the WUI between Whiskeytown National Recreation Area and the city of Redding are two of the areas that have been determined to be some of the highest-priority post-Carr Fire.

Within these geographical boundaries and communities, an estimated 3,264 habitable structures are within the influence area of the project, of which 918 previously habitable structures were lost in the



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

incident. Shasta County believes that the community will be largely rebuilt in the areas of Shasta and Redding due to the fact that infrastructure is already in place, the parcels are fully entitled, and the impact/ school fees for the residential construction have been paid and will not be reassessed for rebuilding. These factors will incentivize rebuilding in these areas. The county intends to permit residential building on parcels in which homes were destroyed.

The value of the fuel treatments, both in terms of reduced fire behavior/intensity and in terms of impacts (i.e. promoting re-sprouting of desirable tree species through herbicide and mechanical treatment of competing shrub and invasive species) will produce long-term benefits. These benefits include reductions in vertical and horizontal continuity of fuels and removing competition from many small, closely-spaced, fire-vulnerable species into a smaller number of resilient larger trees, thereby improving fire resiliency and carbon stocks. The longevity of these measures is improved by increasing the height of live crowns, decreasing crown density and allowing overstory trees to dominate a greater proportion of sites, thereby shading out and controlling understory fuels.

Through hazardous fuels reduction this project will lessen the probability of subsequent moderate-to high-severity reburns. Reducing the probability of reburns will reduce loss of life and personal injury and protect private property. Reducing reburns will protect ecosystem services such as water quality, flood control, green infrastructure, wildlife habitat, soil structure, and carbon sequestration.

Wildfire risk to habitable structures in the WUI depends heavily on fire severity, rate of spread, and defensible space around property. The projects proposed in this application address each of these risk factors directly.

The Carr Fire was started by vehicle related means, and vehicle-started fires are the second leading cause of fire starts in the Shasta-Trinity Unit. Hazard fuel reduction efforts decrease the risk of human-caused fire starts by decreasing the volume of hazard fuels in close proximity to population and ROW areas.

Finally, the removal of dead trees and vegetation creates defensible space around habitable structures, both those still standing post-Carr Fire and those that will be rebuilt. This will slow the spread of fire, either from direct flame contact or radiant heat, and provide firefighters with a safe area from which to defend a threatened home. All work proposed is on private property.

## **Vegetation Removal**

Within the treatment areas, hazard vegetation will be removed. Generally, living trees will be spaced to a distance of greater than 30 feet. Sprouting vegetation will be removed within the treatment areas, as will other non-desirable brush and timber species. Grasses will be retained as possible for erosion control. Hazard fuel reduction will improve aesthetics of the burn areas. Decay of burned vegetation could take years to deteriorate without the help of this project.

### **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 (Non-commercial)

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- 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.

**Material Disposal**

Strategic use of biomass that is removed from the site can divert material from decay and open-pile burning to produce greenhouse gas reduction benefits. The project will use biomass facilities as a first-priority option for the disposal of woody materials generated by project activities. Giving consideration to operational and environmental constraints, delivery of biomass material will be maximized. Biomass will be delivered to the nearest facility where economically and contractually feasible in order to reduce transportation-related emissions and reduce overall project cost.

Staging areas used for log storage and grinding will be previously disturbed areas within the project area. Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non-sensitive land cover types. All temporarily disturbed areas, such as staging areas, will be returned to pre-project or ecologically improved conditions as required by responsible agencies.

Some vegetation removed not taken offsite as chips will be disposed of onsite. Onsite disposal will include the following:

- Mastication residue left within the treatment boundary to a depth of less than 9 inches with a target depth of from 4 inches to 9 inches with ground contact for rapid decay.
- Lopping to a length of less than 2 feet and a depth of less than 9 inches with ground contact for rapid decay and scattered within treatment area.
- Chipping, with the chips blown onto the ground as mulch, not to exceed 9 inches in depth.
- Cutting larger woody material into lengths for firewood for collection by property owners.
- Piling by hand and subsequent pile burning during wet periods of the year. Pile burning will be used only in combination with manual activities in sensitive or constrained areas.

**Vegetative Treatment**

Undesirable vegetation will be treated to prevent future regrowth following removal activities. This

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

treatment will be with the use of herbicides. A California Licensed Pest Control Advisor (PCA) will prepare a recommendation for the project. All herbicide applications for this project will be conducted using hand-backpack equipment. Only the following herbicides will be used onsite (unless otherwise specified by a PCA):

- Glyphosate (Rodeo/ Roundup)
- Triclopyr (Garlon 4/Vastlan)
- Imazapyr (Arsenal/Chopper)
- Aminopyralid (Milestone)

The use of cut stump treatment is allowed, but is discouraged around residential properties where non-target vegetation may be affected through root-to-root contact.

All work will be conducted by Licensed Pest Applicators. Due to the nature of the project, licensed applicators must have either a *right-of-way* or *landscape certification* (i.e. forestry alone is insufficient).

**Glyphosate**

Glyphosate, known by the common name of Roundup or Rodeo, is the most commonly used broad-spectrum, non-selective systemic herbicide in the United States. It is categorized as a phosphonomethyl amino acid. Some varieties are also used to control aquatic plants. It kills both broadleaf plants and grasses and works by preventing plants from making certain proteins that they need for plant growth. It is absorbed through the leaves and is translocated throughout the plant. Glyphosate concentrates in the meristem tissue where it stunts growth, malforms and discolors leaves, and causes death. It has very low toxicity to birds and mammals. It is moderately toxic to fish. The typical half-life of glyphosate in soil is 47 days. It is relatively unaffected by light. Surfactants can help improve the efficacy of glyphosate. Colorants and dyes that are agriculturally approved may be added to this product.

**Triclopyr**

Triclopyr, known by the common names of Garlon 4 and Vastlan, is one of the most commonly used selective systemic herbicides. It is used to control woody and herbaceous broadleaf plants with little to no impact on grasses. It works by mimicking the plant growth hormone auxin and causes uncontrolled and disorganized plant growth and allows the cell walls to separate causing vascular tissue destruction and death. Triclopyr is slightly toxic to fish, birds, and mammals. The typical half-life of Triclopyr is 30 days. It degrades readily in the sunlight. The Garlon formulation can be highly volatile and must be applied in cool temperatures with no wind. The Vastlan formulation is more stable and may be used at higher temperatures. A surfactant should be added to increase efficacy.

**Imazapyr**

Imazapyr, known by the common names of Arsenal and Chopper, is a non-selective herbicide which can control grasses, broadleaves, vines, brambles, shrubs, trees, and riparian emergent species. It is categorized in the herbicide family as Imidazolinone and works by inhibiting plant growth by preventing synthesis of branched-chain amino acids. It translocates in the xylem and phloem to meristematic tissues where it inhibits the enzyme that is required for plant growth. Imazapyr has a low toxicity to mammals, birds, fish, or invertebrates but can cause damage if gotten in the eye. The typical half-life of Imazapyr is one to five months. It rapidly degrades in sunlight. Imazapyr is not readily volatile; however, in increased temperature, the

potential for volatility increases. A surfactant should be added to increase efficacy.

### **Aminopyralid**

Aminopyralid, also known as Milestone, is a broad-spectrum herbicide used to control noxious, poisonous, and invasive broadleaf weeds – especially thistle and clovers. It is intended for rangeland pastures and non-cropland areas. It is categorized as a pyridine carboxylic acid and provides residual weed control. It works by affecting the growth process by causing uneven cell division when it mimics the plant growth hormone auxin. It disfigures and cracks stems and leaves, killing the plant. Aminopyralid is virtually non-toxic to birds, fish, mammals, and aquatic invertebrates but can cause eye damage if exposure occurs. There are no grazing restrictions with this herbicide. The average half-life of Aminopyralid in soil is 40 days. It is highly water soluble and the half-life in water is 15 hours. It is not significantly degraded by sunlight. A surfactant should be added to increase efficacy. Aminopyralid is non-volatile and is considered a *reduced risk* herbicide by the EPA.

### **Surfactants**

Surfactants are added to herbicides to improve performance and reduce application problems. Surfactants are surface-active agents and they aid by increasing the spreading and wetting properties of herbicide liquids. They improve retention and penetration and generally work by reducing surface tensions and increasing the amount of herbicide that reaches the target site. Nonionic surfactants work well with glyphosate, while petroleum oil-based surfactants inhibit glyphosate performance. Surfactants that are oil based are more effective for annual grasses or weeds with waxy cuticles. It is important to select the proper surfactant for the proper herbicide. All surfactants are good dispersing agents and have low toxicity to plants and animals.

## **ENVIRONMENTAL SETTING OF THE PROJECT REGION**

Vegetation following the Carr Fire consists largely of resprouting individuals and standing dead trees, although pockets where no vegetation is returning and areas that were not burned do exist within the treatment area.

Prior to the fire, the area was dominated by Mixed Chaparral and Blue Oak-Grey Pine communities. The vegetation in the mixed chaparral types consisted of structurally homogenous bushland dominated by species with thick stiff heavy leaves. In many cases the stands were dense and impenetrable with heights from 4 to 14 feet. Primary species included scrub oak, ceanothus, manzanita, chamise, California buckeye, toyon, and poison oak. Many of these species are sprouting species and the residual stand characteristics reflect the resprouting nature of the original shrub land types.

The Blue Oak-Grey Pine vegetation type is generally more diverse in structure with a mix of blue oak, scrub oak, grey pine, and brush species. Blue oak and grey pine typically comprise the overstory with an understory of ceanothus, manzanita, yerba santa, and red bud. As with the Mixed Chaparral community, many of the understory species sprout. In addition, seedlings released from cones by fire may result in dense post-fire communities of knobcone and grey pine seedlings.

### **Slope**

Over 75 percent of the area to be treated in the project is less than 35 percent slope; 25 percent of the area to be treated is located on slopes from 35 to 65 percent. Areas of greater than 65 percent slope

account for less than a 10<sup>th</sup> of a percent. Project slope class is shown on Figure 3.

## **Topography**

A USGS topographic map of the area is included as Figure 4. The active project area for south 299W encompasses 2,181 acres. The terrain is described as moderate to steep terrain with elevations ranging from 500 feet to 3500 feet above sea level.

## **Soils**

Soils in the project area have been impacted by recent fires and historical mining activities. Soils are shown on Figure 5. Soils in the project area are typically shallow to moderately deep, developed on colluvium and residuum derived from weathered bedrock of shale, greenstone, granite and schist.

In the project area, Kanaka, Auburn, Chaix-Diamond, and Goulding series dominate the treatment area. The Kanaka series is a sandy loam from weathered granite and metavolcanic rocks. The Auburn series is moderately deep silt loams in nonmarine terraces. The Chaix-Diamond series are shallow soils comprised of sandy loam to coarse sand loams from weathered granites. The Goulding series is shallow gravelly sandy loams in metavolcanics.

## **Hydrology**

There are no perennial streams (Class I) in the project area. Middle Creek and Salt Creek are intermittent streams within the project area. Hydrology within the treatment areas is shown on Figure 6.

Buffers of 50 feet will be maintained for all intermittent and ephemeral (Class 2 and 3) watercourses.

## **Climate**

Shasta County climate varies considerably by elevations throughout the county. Summers are hot and dry and winters are cool with moderate to heavy rainfall. The average annual precipitation ranges from 39 inches near Redding to approximately 63 inches at Whiskeytown Lake. Eighty percent of the rainfall accumulates in a six-month period between November and April.

## **“Timberland”**

CAL FIRE has determined that no areas of “Timberland” as defined by Public Resources Code (PRC) 4526 are located in the project area.

## **Special-Status Species**

The majority of the project area burned in the Carr Fire in 2018. California Natural Diversity Database (CNDDDB) occurrences noted prior to the fire are shown on Figure 7. Rather than use the standard CNDDDB 1-mile and 5-mile project radii, due to the large project area, full CNDDDB quadrangles were reviewed and included. Special-status species lists for the project area are included in Table 1. The potentially occurring special-status species are dominated by bats (pallid, western red, silver-haired, Townsend’s big-eared, long-eared myotis, and Yuma myotis) and amphibians (yellow-legged frog and Shasta salamander). Site-specific surveys for plants, amphibians, mammals, and birds will be conducted prior to initiation of field work.



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

California bat species that are known to primarily roost in tree bark or hollows include the pallid bat, silver-haired bat, long-eared myotis, and Yuma myotis. These bats have the potential to occur in the project area. Research on forest-dwelling bats in western North America documents the importance of intact old growth areas or 'legacy trees' as roosting habitat for many species. These species have been observed along Clear Creek, approximately 2.75 miles away from the project area. Although bat roosting habitat is present within the general area, the majority of the habitat was impacted by fire.

Any large, old-growth mature trees that survived the fire will be retained. A biologist will mark the old growth trees and trees with crevices that will be retained. This will protect the available roosting habitat. Direct impacts to roosting bats will be minimized by scheduling disruptive activities, such as tree trimming or removal, for daytime hours and outside of the winter and spring maternity seasons (February 1<sup>st</sup>- September 30<sup>th</sup>) to avoid impacts to hibernating bats and nonvolant (flightless) young. Townsend's big-eared bats have been observed within the project area in West Redding; this species typically roost in mines, caves, or buildings. The project will have no impact on Townsend's big-eared bat roosting habitat.

The purpose of the project is to retain conifer-hardwood habitat and prevent post-fire succession to a shrub-dominant landscape. The project will result in the removal of hazard vegetation within the project area. Trees that have potential to survive will be preserved as much as possible. The project will ultimately result in a healthier forest habitat with a greater diversity of available roosting structures for tree-roosting bats.

Water sources frequently concentrate insects and, therefore, insectivorous bats (Brown 1991). High-quality foraging habitat for Townsend's big-eared bats, silver-haired bats, long-eared myotis, and Yuma myotis exists along the various streams in the general area; however, the project is not anticipated to impact foraging habitat for bats because a 50-foot buffer will be retained around ephemeral streams. Additionally, tree removal will occur in an insignificant portion of the foraging range of an individual bat, which has been documented as being larger than 1 square kilometer for the potentially occurring bat species. Foraging habitat will remain in riparian corridors throughout the surrounding area.

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

Table 1 CNDDDB OCCURRENCES							Potential Impacts to Habitat in 299S Project Area
Common Name	Taxa	Scientific Name	Federal List	Calif List/ CNPS CRPR	Habitat Description		
Alkali Seep	P	<i>Alkali Seep</i>	None	S2.1	Meadow and seep		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Antioch Dunes Anthicid Beetle	I	<i>Anthicus antiochensis</i>	None	None	Interior sand dunes and sand bars		None. No habitat occurs in project area.
Bald Eagle	B	<i>Haliaeetus leucocephalus</i>	Delisted	Endangered	Riparian corridors with tall dense canopy adjacent to perennial lakes and rivers		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Blushing Wild Buckwheat	P	<i>Eriogonum urinum</i> var. <i>erubescens</i>	None	1B.3	Trinity, Siskiyou, and Shasta Counties. Rocky slopes.		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
California Wolverine	M	<i>Gulo gulo</i>	Proposed Threatened	Threatened	Remote coniferous forest with snags, downed logs, large hollow trees, talus		None. No habitat occurs in project area.
Canyon Creek Stonecrop	P	<i>Sedum obtusatum</i> sp. <i>paradisum</i>	None	1B.3	Chaparral, Subalpine Forest, Yellow Pine Forest; rock outcrops		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Chinook Salmon – Central Valley Spring-Run ESU	F	<i>Oncorhynchus tshawytscha</i> pop. 6	Threatened	Threatened	Anadromous life history; known to occur in Sacramento River		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Chinook Salmon – Sacramento River Winter-Run ESU	F	<i>Oncorhynchus tshawytscha</i> pop. 7	Endangered	Endangered			
Dubious Pea	P	<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	None	3	Open areas and understory of chaparral, foothill woodland		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
English Peak Greenbrier	P	<i>Smilax jamesii</i>	None	4.2	Riparian, streambanks, lake-margins in yellow pine, mixed evergreen forests		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Fisher - West Coast DPS	M	<i>Pekania pennanti</i>	None	Threatened	Old growth coniferous forest		None. No habitat occurs in project area.
Foothill Yellow-Legged Frog	A	<i>Rana boylei</i>	None	Candidate Threatened	Streams and rivers with rocky substrate and isolated pools		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Fringed Myotis	M	<i>Myotis thysanodes</i>	None	CDFW SSC	Roosts in caves, mines, rock crevices, buildings		None. No habitat occurs in project area.

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

Table 1 CNDDDB OCCURRENCES						
Common Name	Taxa	Scientific Name	Federal List	Calif List/ CNPS CRPR	Habitat Description	Potential Impacts to Habitat in 299S Project Area
Great Egret	B	<i>Ardea alba</i>	None	None	Vegetation near freshwater wetlands, streams, and lakes	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Great Valley Cottonwood Riparian Forest	P	<i>Great Valley Cottonwood Riparian Forest</i>	None	None	Occurs along streams, rivers w/ dependable subsurface water supply, elevations from 0-2400 m.	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Howell's Alkali Grass	P	<i>Puccinellia howellii</i>	None	1B.1	Meadows and seeps, wetland-riparian in Klamath Mountains, Shasta County	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Klamath Mountain Catchfly	I	<i>Silene salmonacea</i>	None	1B.2	Serpentine soils in Trinity County between 760--1050 meters	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Kneecap Lanx	I	<i>Lanx patelloides</i>	None	None	Freshwater streams, rivers, and lakes	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Long-Eared Myotis	M	<i>Myotis evotis</i>	None	CDFW SSC	Roost in trees either in foliage or under bark; feed over water.	Foraging habitat will be avoided via stream avoidance buffers. High quality roost habitat will be avoided. Impacts less than significant.
Maverick Clover	P	<i>Trifolium picrokouskii</i>	None	1B.2	Foothill woodland, vernal pools; flowers May	None. No habitat occurs in project area.
Northern Clarkia	P	<i>Clarkia borealis</i> sp. <i>borealis</i>	None	1B.3	Forest margins/ slopes; Chaparral, Foothill Woodland; 400--800 m.	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Nuttall's Ribbon-Leaved Pondweed	P	<i>Potamogeton epiphydrus</i>	None	2B.2	Aquatic floating; California between 400-1900 meters	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Oregon Shoulderband	I	<i>Helminthoglypta berleini</i>	None	None	Found in talus slopes forage on a variety of herbaceous vegetation, and organic debris	None. No habitat occurs in project area.
Pacific Tailed Frog	A	<i>Ascaphus truei</i>	None	CDFW SSC	cold, clear, permanent rocky streams in wet forests	Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Pallid Bat	M	<i>Antrozous pallidus</i>	None	CDFW SSC	Roosts in the open, hanging from walls and ceilings, often in manmade structures	None. No habitat occurs in project area.

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

Table 1 CNDDDB OCCURRENCES							Potential Impacts to Habitat in 299S Project Area
Common Name	Taxa	Scientific Name	Federal List	Calif List/ CNPS CRPR	Habitat Description		
Sacramento Anthicid Beetle	I	<i>Anthicus sacramento</i>	None	None	None. No habitat occurs in project area.		
Sanford's Arrowhead	P	<i>Sagittaria sanfordii</i>	None	1B.2	Wetland-riparian, ponds, ditches in Central Valley, foothills, and north coast		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Shasta Chaparral	I	<i>Trilobopsis roperi</i>	None	None	Within 100 m. of shaded limestone rockslides or caves with a cover of shrubs or oak.		Habitat will be avoided via avoidance buffers. Impact less than significant.
Shasta Huckleberry	P	<i>Vaccinium shastense</i> ssp. <i>shastense</i>	None	1B.3	Stream banks, crevices, or seeps in conifer forest and chaparral		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Shasta Salamander	A	<i>Hydromantes shastae</i>	None	Threatened	Limestone outcrops and duff in surrounding areas; found deep in fissures within limestone during dry months		None. No habitat occurs onsite.
Silver-Haired Bat	M	<i>Lasiomyotis noctivagus</i>	None	CDFW SSC	Includes valley foothill woodlands below 2750 m. Roost in trees in foliage or under bark; feed over water.		Foraging habitat will be avoided via stream avoidance buffers. High quality roost habitat will be avoided. Impacts less than significant.
Slender Silver Moss	P	<i>Anomobryum julaceum</i>	None	4.2	Rock outcrops, usually on road cuts in broadleafed upland forest, lower montane coniferous forest		None. No habitat occurs in project area.
Steelhead - Central Valley DPS	F	<i>Oncorhynchus mykiss iridens</i> pop. 11	Threatened	None	Anadromous life history; known to occur in Sacramento River and tributaries		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Sulphur Creek Brodiaea	P	<i>Brodiaea matsonii</i>	None	1B.1	Intermittent streambeds in foothill woodlands		Habitat will be avoided via stream avoidance buffers. Impact less than significant.
Townsend's Big-Eared Bat	M	<i>Corynorhinus townsendii</i>	None	CDFW SSC	Roosts in the open, hanging from walls and ceilings, often in manmade structures		None. No habitat occurs in project area.
Tricolored Blackbird	B	<i>Agelaius tricolor</i>	None	Threatened	Dense emergent vegetation near freshwater wetlands, streams, and lakes		None. No habitat occurs in project area.
Western Pearlshell	I	<i>Margaritifera falcata</i>	None	None	Freshwater streams, rivers, and lakes; freshwater wetlands		None. Habitat will be avoided via stream avoidance buffers.

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

**Table 1**  
**CNDDDB OCCURRENCES**

Common Name	Taxa	Scientific Name	Federal List	Calif List/ CNPS CRPR	Habitat Description	Potential Impacts to Habitat in 299S Project Area
Western Pond Turtle	R	<i>Emys marmorata</i>	None	None	Perennial streams and ponds; may deposit eggs in upland locations near aquatic habitat	None. Habitat will be avoided via stream avoidance buffers.
Western Red Bat	M	<i>Lasiurus blossevillii</i>	None	None	Often in orchards; roost in trees either in foliage or under bark; feed over water	Foraging habitat will be avoided via stream avoidance buffers. High quality roost habitat will be avoided. Impacts less than significant.
Yuma Myotis	M	<i>Myotis yumanensis</i>	None	None	Near water, roosts in caves, mines, buildings or crevices	Foraging habitat will be avoided via stream avoidance buffers. No roost habitat in project area. Impacts less than significant.
<b>Taxa Key:</b> A = Amphibian; B = Bird; F = Fish; I = Invertebrate; M = Mammal; P = Plant; R = Reptile <b>CNPS Key:</b> 1B.1 Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California; 1B.2 Plants rare, threatened, or endangered in California; 1B.3 Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California; 2A Plants presumed extirpated in California, but more common elsewhere; 2B.1 Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California; 2B.2 Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California; 2B.3 Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California; 3 Plants candidate threatened but need more information for listing.						



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

While five of the six prominent foothill yellow-legged frog populations in California were added to the California endangered species list as state *threatened* in 2019, populations in Shasta County have retained the status as a Species of Special Concern. The Foothill yellow-legged frog (*Rana boylei*) can be found in a variety of habitats near waterways. Adults frequent streams and rivers with rocky substrate and sunny banks in forests, chaparral, and woodlands. They are sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. Adult frogs congregate at suitable breeding habitat and females select oviposition sites. Breeding sites are generally located in low-gradient edge water, often at point bars or depositional areas near tail ends of pools and runs. Oviposition sites are generally shallow, slow-moving water with a cobble or pebble substrate that is used to anchor each egg mass. Fall/winter refugia are generally characterized by small tributary streams with perennial water where frogs can forage and seek refuge from predators.

Impacts of wildfires on the Foothill yellow-legged frog vary with the duration and severity of the fire. During surveys completed following the Delta Fire and Carr Fire in Shasta County, surviving individuals were found only in streams with unburned trees remaining within the riparian corridor. No frogs were observed in the streams where all vegetation was scorched to the water line. The absence of frogs from streams that experienced relatively high burn severity are possibly attributed to direct mortality from fire, mortality from chemical changes within the aquatic environment, or behavioral responses (i.e. emigration) from streams due to habitat destruction from fire damage.

Shasta salamander (*Hydromantes shastae*) are endemic to the Shasta Lake region of northern California and are primarily associated with limestone fissures and caverns in valley-foothill hardwood-conifer, ponderosa pine, and mixed conifer habitats between 1100 and 2550 feet in elevation. This species has been found in Shasta County in three of four limestone belts: the Kennett Formation, McCloud Limestone, and Hosselkus Limestone, but it is not known from the Pit Formation. It is distributed patchily within its known range and can be locally abundant to very rare. Shasta salamander has been documented in the limestone ridge that bisects Trinity Mountain Road just above the town of French Gulch (not within this project area). As with the yellow-legged frog, wildfire impacts on the species vary with the duration and severity of the fire. Mortality may be attributed to direct mortality from fire, mortality from chemical changes within the aquatic environment, or behavioral responses (i.e. emigration) from natural range due to habitat destruction.

## **Archeology**

This project encompasses parts of Old Shasta which is an old settlement and mining town in Shasta County from the mid-1800s through the late 1800s. This town was once a thriving community during the gold rush. It was also a commercial center for shipping on stagecoaches and mule trains. Some nights over one hundred mule teams would stop in Old Shasta. It was once considered “the” city in northern California. At this time the population of Old Shasta was recorded at 3,500 residents. This town is located approximately six miles west of Redding on Highway 299. It began its downfall in the late 1800s as Shasta lost its county seat to Redding and settlers began settling in Redding. The population of Old Shasta is around 1,700 residents according to the last census report. The town is now a state historic park with a few historic buildings left along the main 299 West corridor. Old Shasta was damaged by the Carr Fire in 2018. This fire destroyed the elementary school, and parts of the brewery and the cemetery were damaged. All parcels in Old Shasta that have responded positively to being involved in this fuel reduction project and have allowed access for the project have been surveyed for prehistoric and historical resources.

Numerous prehistoric and historic sites exist within the project area. A report has been prepared and submitted to CAL FIRE. This report is confidential. Identified cultural sites will be avoided.

## **DESCRIPTION OF THE LOCAL ENVIRONMENT**

This project is taking place in urban and rural areas of vegetation and fuel within the Carr fire burn areas. Prior to the fire, the area was dominated by Mixed Chaparral and Blue Oak-Grey Pine communities. The vegetation in the mixed chaparral types consisted of structurally homogenous bushland dominated by species with thick stiff heavy leaves. In many cases the stands were dense and impenetrable with heights from 4 to 14 feet. Primary species included scrub oak, ceanothus, manzanita, chamise, California buckeye, toyon, and poison oak. There are no perennial streams (Class I) in the project area. Middle Creek and Salt Creek are notable intermittent streams within the project area.

There is one school in the vicinity. There are no other schools, hospitals or airports in the project vicinity. See Figure 8.

## **CURRENT LAND USE AND PREVIOUS IMPACTS**

### **Land Use and Zoning**

Land use and zoning are shown on Figures 9 and 10. Generally, the properties to be treated are zoned as *residential*, *rural residential*, *unclassified*, or *timber*. CAL FIRE has determined no areas of “Timberland” as defined by Public Resources Code (PRC) 4526 are located in the project area.

Most properties are comprised of 5- to 10-acre rural parcels and residential parcels. These properties are also considered WUI areas. This project will help reduce the risks associated with wildfire to habitable structures by providing a significant barrier to the borders of the city of Redding and the community of Old Shasta. Land use and zoning will not affect treatment activities. This project will treat burned areas in order to reduce down and dying fuel sources in order to protect residential communities and national forest land from future fires.

## **Conclusion of the Mitigated Negative Declaration**

### **ENVIRONMENTAL PERMITS**

The proposed project does not require environmental permits.

### **MITIGATION MEASURES**

The following four mitigation measures will be implemented by CAL FIRE to avoid or minimize environmental impacts. Implementation of these mitigation measures will reduce the environmental impacts of the proposed project to a less than significant level.

**Mitigation Measure #1:** A professional archaeologist has surveyed the land and a confidential report has been filed. All archaeological sites requiring protection will be flagged and the area will not be disturbed.

**Mitigation Measure #2:** In accordance with California Health and Safety Code 7050[c], if human remains are discovered at any point the project manager shall immediately halt any work and notify the proper authorities.

**Mitigation Measure #3:** Raptors, migratory birds, yellow-legged frogs, salamanders and special-status plant species will be protected by additional surveys being conducted by a qualified biologist, 2 days prior to any work being performed.

**Mitigation Measure #4:** Work will be stopped if a paleontological resource or unique geologic feature is discovered onsite.

### **SUMMARY OF FINDINGS**

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

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

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

## INITIAL STUDY-ENVIRONMENTAL CHECKLIST

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

**Project Title:** Post Carr Fire Hazardous Fuels Reduction Area South 299W

**Lead Agency Name and Address:** California Department of Forestry and Fire Protection (CAL FIRE), 875 Cypress Ave., Redding, CA 96001

**Contact Person & Phone Number:**

CAL FIRE Project Manager: Ben Rowe Forester III (530) 225-2432

The McConnell Foundation, Grantee: Director of Land Management Alex Carter (530) 226-6249

Document Preparer: VESTRA Resources, Inc., Wendy Johnston and Kirsten Cardenas (530) 223-2585

**Project Location:** Portions of Shasta County within Carr Fire footprint South 299W

**Project Sponsor's Name and Address:** The McConnell Foundation, 800 Shasta View Drive, Redding, CA 96003

**General Plan Designation:** Rural Residential, Habitat Resource 40 or Public

**Zoning:** Rural Residential, Residential, Unclassified, Open Space

**Description of Project:** Removal of hazard vegetation (see page 5)

**Surrounding Land Uses and Setting:** Rural Residential, Open Space, Unclassified

**Other public agencies whose approval may be required:** NA

### ***Environmental Factors Potentially Affected***

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



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project***Determination**

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.
- ☒ I find that although the proposed project COULD have a significant effect on the environment, there WOULD NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project COULD have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

*Matthew Reischman*

Matthew Reischman  
Assistant Deputy Director  
California Department of Forestry and Fire Protection

1/26/2021

Date

## Environmental Checklist and Discussion

### AESTHETICS

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

a) There are no substantial adverse effects on the scenic vista. The project location is in the Carr Fire footprint and addresses the removal of hazard vegetation. The project will improve the visual quality of the project area by removing dead trees and brush. The project will not have an adverse effect on a scenic vista. **No impact.**

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

b) Highway 299 West is not listed as a scenic highway. The project location is in the Carr Fire footprint. Scenic values have been substantially damaged by the fire. The project addresses the removal of hazard vegetation. No work will be completed in the vicinity of a scenic highway. The project will improve the visual quality of the project area by removing dead trees. The project will not have a substantial adverse effect on a scenic vista or scenic resources within a state scenic highway. **No impact.**

c) Except as provided in Public Resources Code § 21099, <u>in non-urbanized areas</u> , would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is <u>in an urbanized area</u> , would the project conflict with applicable zoning and other regulations governing scenic quality?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) The project will not degrade the existing visual character or quality of public views of the site and its surroundings area, nor would it conflict with zoning or any other regulations governing scenic quality. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

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. This site will not create substantial light or glare that would affect day or nighttime views in the area. **No impact.**

**AGRICULTURAL RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) This project will not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use. The project does not include agricultural farmland. No conversion of farmland will occur. **No impact.**

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

b) A Williamson Act Contract is not in effect on properties in the project area. **No impact.**

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

c) The project will not result in rezoning of any parcels and will not convert timberland to non-timberland uses. The project does not conflict with any existing zoning or require rezoning. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

d) The project is located within the Carr Fire footprint. The Carr fire was a stand-replacing fire. The project work of removing hazard vegetation will not result in the loss of forest land or the conversion of forest land to non-forest uses beyond what occurred due to the fire. **No impact.**

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

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

**AIR QUALITY**

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

a) The site is located in the Shasta County Air Pollution Control District. Shasta County is classified as being in non-attainment for PM-10 and ozone. The Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan addresses non-attainment of California Ambient Air Quality Standards for ozone in the Northern Sacramento Valley Planning Area. The project could generate ozone through mobile sources, stationary equipment, or biomass processing and burning. A burn permit will be obtained for any material burning. Ozone generated from onsite equipment and traffic will be short term in nature. The project does not include any permanent stationary structures. The project will not conflict with or obstruct the Air Quality Attainment Plan. A primary source of PM-10 and PM-2.5 is dust from unpaved roads. Best Management Practices (BMPs) are in place to address the generation of particulate matter the project would not conflict with any air quality plan or result in a cumulatively considerable net increase in any criteria pollutant. **Less-than-significant impact.**

Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Dust and emissions from equipment onsite would be minor. Shasta County is classified as being in non-attainment for PM-10 and ozone. The following environmental protection measures will be employed to minimize impacts on air quality:

- All exposed unpaved surfaces shall be watered to limit dust generation. Dust-generating activities will be monitored and appropriate measures implemented for dust control.
- All haul trucks transporting soil, chips, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be avoided. If trackage occurs it must be removed daily.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer specifications.
- A publicly visible sign will be posted with the telephone number and person to contact at the lead agency regarding dust complaints.
- The idling time of diesel-powered construction equipment will be minimized to two minutes.
- All construction equipment, diesel trucks, and generators are required to be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- All equipment used onsite will be California Air Resources Board (CARB) compliant.
- Permits will be obtained for burning and compliance with air quality regulations

The project will be consistent with the conformity provisions of the Federal Clean Air Act. Potential sources of air pollution include exhaust emissions from heavy equipment and vehicles operated onsite, dust generation along the access road and in work areas, and potential slash burning. All equipment and employee vehicles operated onsite will be maintained in good working order to reduce potential impacts to air quality and the environment. Vehicle and equipment idling will be kept to a minimum. The work areas will be wetted to reduce dust emissions as needed. The project will not result in 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. **Less-than-significant impact.**



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

c) BMPs have been adopted for the project to control particulate and air quality impacts. See b) above. The project would not expose these receptors to substantial pollutant concentrations. **Less-than-significant impact.**

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

d) This project will not result in other emissions that would adversely affect a substantial number of people. The project would not produce any objectionable odors. See b). **No impact.**

## BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) The project is located in the Carr Fire Footprint. The Carr Fire was a stand-replacing fire, as such, significant loss of wildlife occurred. The following BMPs have been adopted to ensure no impacts to special-status species occur. These BMPs will be applied when working in areas that may contain special-status species. All areas of the project area have been identified as requiring migratory bird procedures.

- No more than two days prior to the start of ground-disturbing activities, focused surveys for special-status species (plants and animals) will be completed by a CDFW-approved biologist in all suitable upland dispersal habitat areas, if special-status species have been previously identified in the area or have the potential to be found in the area.
- Exclusion fencing will be installed around special-status species habitat prior to any construction, 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.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- Prior to any treatment where special-status species have been detected, a CDFW-qualified biologist will conduct an education program for treatment 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 treatment 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.

**Raptors**

- Surveys for raptors, other special-status birds, and appropriate nesting habitat will be conducted within 100 feet of the treatment area no more than two weeks prior to ground-disturbing activities during the nesting season of February through August. If an active nest is found, a 250-foot buffer will be installed.
- A qualified biologist will conduct weekly monitoring during treatment to evaluate the identified nest for potential disturbances associated with treatment activities.
- Activities within the buffer is prohibited until the qualified biologist determines the nest is no longer active.
- If an active nest is found after treatment begins, 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.

**Migratory Birds**

The measures below would be implemented for work during the nesting season (February 15 through August 31):

- A qualified biologist will conduct surveys for nesting migratory birds in the project area no more than two weeks prior to the start of ground disturbing activities. If surveys indicate the presence of any migratory bird nests where activities would directly result in bird injury or death, a no operations buffer zone of 50 feet will be placed around the nest.
- Buffers will be established around active migratory bird nests where project activities would directly result in bird injury or death. A qualified biologist will delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape.
- 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 surveys and after treatment begins, all activities within a 50-foot radius will be stopped until a qualified biologist has evaluated the nest and erected the appropriate buffer around it.
- If an active nest is found in an area after treatment begins, 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.

### Bats

Bat surveys are not anticipated. California bat species that are known to primarily roost in tree bark or hollows include the pallid bat, silver-haired bat, long-eared myotis, and Yuma myotis. These bats have the potential to occur in the project area. Research on forest-dwelling bats in western North America documents the importance of intact old growth areas or 'legacy trees' as roosting habitat for many species. These species have been observed along Clear Creek, approximately 2.75 miles away from the project area. Although bat-roosting habitat is present within the general area, the majority of the habitat was impacted by fire. Large, old-growth mature trees that survived the fire will be retained. This will protect the available roosting habitat.

### Foothill Yellow-Legged Frog

Impacts of wildfires on the Foothill yellow-legged frog vary with the duration and severity of the fire. During surveys completed following the Delta Fire and Carr Fire in Shasta County, surviving individuals were found only in streams with unburned trees remaining within the riparian corridor. No frogs were observed in the streams where all vegetation was scorched to the water line. The absence of frogs from streams that experienced relatively high burn severity are possibly attributed to direct mortality from fire, mortality from chemical changes within the aquatic environment, or behavioral responses (i.e. emigration) from streams due to habitat destruction from fire damage. Surveys for the Foothill yellow-legged frog will be completed in streams within the project area that have potential remaining habitat for the species. If Foothill Yellow-Legged Frogs are observed in the area, the area will be avoided and monitored during activity.

### Shasta Salamander

Shasta salamander (*Hydromantes shastae*) are endemic to the Shasta Lake region of northern California and are primarily associated with limestone fissures and caverns in valley-foothill hardwood-conifer, ponderosa pine, and mixed conifer habitats between 1100 and 2550 feet in elevation. Surveys for Shasta salamander will be completed in limestone outcrop areas and surrounding slopes within the project area prior to initiation of field work.

CDFW has been contacted regarding this project. A CNDDDB and California Native Plant Society (CNPS) search of USGS 7.5-min quads Whiskeytown and Redding was completed for biological species and botanical species of concern. A copy of this botanical survey is included as Appendix A. Biological and botanical species were refined to exclude species that did not have potential habitat within the project area, and further refined to exclude species that the project would not impact. Field examinations of the resulting biological species during initial surveys resulted in finding locations of avoidance where buffers will be implemented as shown in the botanical survey report. See Figures 7, 11A, 11B, and 11C and Table 1 for areas surveyed and observations of rare plants.

Given the protective BMPs included in the project, the project will have a **less-than-significant with mitigation** 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.

**Mitigation Measure #3:** Raptors, migratory birds, yellow-legged frogs, salamanders and special status plant species will be protected by additional surveys being conducted by a qualified biologist, 2 days prior to any work being performed.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

b) Waterways and riparian areas will be protected by the use of buffers. No work will take place within 50 feet of Class 2 or Class 3 streams. BMPs applicable to the protection of water courses and other wetland features include:

- Maintain a 50-foot buffer of mechanized equipment around any Intermittent/Class 2 or Ephemeral/Class 3 waterbody and other wetland feature unless buffer is broken by an established roadway.
- No equipment fueling within stream buffers.
- Never wash down pavement or surfaces where materials have spilled; use dry cleanup methods whenever possible.
- Protect all storm drain inlets using filter fabric cloth, wattles, or other BMPs to prevent sediments from entering the storm drainage system during construction activities.
- Before a rain event, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- Prior to construction, wetland buffers in the project area will be fenced off using exclusion fencing or flagging.
- Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian woodland/scrub.
- Any hydro-seed mulch used for revegetation must be certified weed-free. 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.
- All off-road construction equipment will be cleaned of potential noxious weed sources (mud, vegetation) before entry into the project area.
- Vehicles and equipment will be parked on pavement, existing roads, or specified staging areas.
- Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non-sensitive land cover types
- All temporarily disturbed areas, such as staging areas, will be returned to pre-project or ecologically improved conditions as required by responsible agencies.
- 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.

Based on implementation of these practices, there will be **no impact** to riparian areas.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) The project will not affect any federally protected wetlands. See b). **No impact.**

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) The project would not 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. The project would result in minimal additional surface disturbance. The project is expected to have no impact to special-status fish or wildlife communities based on the discussion in a) above. **No impact.**

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

e) This project does not conflict with any local policies or ordinances protecting biological resources or tree preservation policy/ordinance. **No impact.**

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

f) No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan exist for the area of the project. **No impact.**

CULTURAL RESOURCES

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

a) The operational area of the project has been surveyed and evaluated for prehistorical and historical and archaeological resources. The results have been presented in a report and submitted to CAL FIRE. The following BMPs have been implemented to avoid impacts to historical and prehistorical sites and to be used if cultural resources are present. Photographs will be provided before and after treatment of avoided site areas.

**Avoidance:** Sites identified for Avoidance include all prehistoric archaeological resources and historic-era resources containing multiple periods of occupation and a diverse range of features and/or artifact types. These sites are considered eligible or potentially eligible for listing on the California Register of Historic Resources (CRHR). Cultural resources that are designated for avoidance shall have no fuel reduction activities performed within the site limits and a 50-foot buffer. Avoidance of cultural resources includes the following BMPs:

- Prior to the commencement of operations, the Project Manager will ensure that the all Special Treatment Zones (STZ) are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- 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 and include a 50-foot buffer around the site boundary where no fuel reduction activities will be performed. STZ flagging that is older than six months will be inspected and refreshed prior to operations.
- No fuel reduction work shall occur within the STZ area.
- No skidding of logs shall occur within the site boundaries or STZ.
- Hazard vegetation to be removed within 100 feet of the STZ shall be directionally felled away from the site.
- No mechanized equipment shall be used within the STZ.
- No piling or burning of slash will occur within STZ.
- No tree planting will occur within STZ.
- A CAL FIRE Certified Archaeological Surveyor or professional archaeologist will periodically inspect sites to ensure that BMPs are effective and STZ have not been breached.

**Special Conditions:** Sites within the Project area may be designated for Special Conditions where fuel reduction activities may be performed within the site limits. For the purpose of this project, Special



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

Condition sites are defined as linear sites (e.g., ditches) or sites characterized by a single feature (e.g., wells or adits) having a surface area less than 300 square feet. In some instances, removal of hazard vegetation is beneficial to site preservation, such as removal of hazard vegetation from ditch berms. Special Conditions of cultural resources includes the following actions:

- Prior to the commencement of operations, the Project Manager will ensure that the all Special Treatment Zones (STZ) are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- 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.
- Fuel reduction work utilizing hand tools (including chainsaws) may occur within the STZ area given the following conditions.
- No skidding of logs shall occur within the STZ.
- Timber shall be directionally felled away from the site.
- No mechanized equipment (chainsaws allowed) shall be used within the STZ.
- No piling or burning of slash will occur within STZ.
- No tree planting will occur within STZ.
- A CAL FIRE Certified Archaeological Surveyor or professional archaeologist will periodically inspect sites to ensure that BMPs are effective and STZ have not been breached.

**No Restrictions:** Sites within the Project area may be designated as No Restrictions. Sites with No Restrictions are recommended as not eligible for the CRHR as described in Section IX. Fuel reduction activities may be performed within the site limits.

- Prior to the commencement of operations, the Project Manager will ensure that the all sites with No Restrictions are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- No STZ flagging is required.
- Fuel reduction work is allowed within the site boundaries.
- Skidding of logs is allowed within the site boundaries.
- Removal of hazard vegetation is allowed within site boundaries.
- Mechanized equipment is allowed within site boundaries.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- Piling or burning of slash is allowed within site boundaries.
- Tree planting is allowed within site boundaries.

**Unanticipated Discovery of Cultural Resources:** If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. CAL FIRE and 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. If prehistoric artifacts are encountered during construction, CAL FIRE will be responsible for contacting tribal governments.

**Encountering Native American Remains:** Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner, CAL FIRE, 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 NAHC must be contacted by the Coroner so that a “Most Likely Descendant” (MLD) can be designated and further recommendations regarding treatment of the remains is provided. The MLD may make recommendations to the landowner or the person responsible for the work for the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods.

Based on the implementation of the BMPs, **less-than-significant impacts with mitigation** to Archaeological resources are anticipated from this project.

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

**b)** See discussion to a) above. These standard measures will ensure the project will not cause a substantial adverse change to the significance of an archaeological resource. **Less-than-significant impact with mitigation.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**c)** See discussion to a) above. The disturbance of human remains by the project is not anticipated. If, during the course of project implementation, human remains are discovered, BMPs will be followed. These measures will ensure the project does not have an impact related to the disturbance of human remains. **Less-than-significant impact with mitigation.** The following mitigation measures will be followed.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

**Mitigation Measure #1:** A professional archaeologist has surveyed the land and a confidential report has been provided to the CAL FIRE Regional Reviewer. All archaeological sites requiring protection will be flagged and the area will not be disturbed.

**Mitigation Measure #2:** In accordance with the California Health and Safety Code 7050[c], if human remains are discovered at any point the project manager shall immediately halt any work and notify the proper authorities.

## ENERGY

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

a) This project will not result in wasteful or inefficient consumption of energy. The project will result in the temporary consumption of energy resources (diesel fuel) for vegetation clearing and hauling activities. Compliance with state, federal, and local regulations (limiting engine idling times, etc.) would 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.**

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

b) See a) above. **No impact.**

## GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project directly or indirectly cause potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) There is no evidence that this project would cause substantial adverse effects, including the risk of loss, injury or death involving any of the following geologic features; see below. No Alquist-Priolo faults are identified in the immediate vicinity of the project. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

b) There is no evidence of any seismic activity at this site. See a). **No impact.**

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

c) There is no evidence of seismic-related ground failure or liquefaction. See b). **No impact.**

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

d) There is no evidence that landslides would be triggered by the project. **No impact.**

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

e) BMPs have been adopted for the project to reduce the potential for erosion impacts. BMPs include:

- No work will be conducted on slopes greater than 65 percent or on slopes greater than 50 percent with high or extreme erosion hazard ratings.
- Highly erosive soils will be identified in the field by the contractor and applicable controls applied per RWQCB guidance (Order R5-2017-0061).
- Contractor to 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. It is likely that operations will be limited during the winter season. This will be determined on a case-by-case basis by the contractor and CAL FIRE project manager.
- Use berms and drainage ditches to divert runoff around exposed areas.
- Use standard erosion control features such as hydro-seeding, wood chips, jute or straw matting;

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

fiber rolls other mulch material to stabilize disturbed soils.

- Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them, if used.
- Protect drainage courses, creeks, or catch basins with fiber rolls, silt fences, sand/gravel bags, and/or temporary drainage swales. Protect drainage courses and creeks with 50 to 75 foot exclusion zone buffers demarked with flagging.
- Once grading is completed, stabilize the disturbed areas using mulch and seed or other method as soon as possible, and drain and manage water with berms and water breaks.
- Conduct routine inspections of erosion control measures especially before and immediately after rainstorms, and repair if necessary.

Implementation of the BMPs will result in a **less-than-significant impact** or increase in erosion from site activities.

f) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

f) BMPs and limitations for operation in areas of highly erosive and mobile soils and landslides are addressed in (e) and in RWQCB Order R5- 2017-0061. **No impact.**

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

g) The NRCS Soil Survey for the project area includes a wide variety of soils. None of those recorded in the area meet the typical characteristic of an expansive soil. Expansive soils tend to hold water and contain high amounts of clay particles. The soil types located at this project site would not create substantial risk to life or property. **No impact.**

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

h) Septic tank installation is not a part of this project. **No impact.**

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

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

i) There are no known paleontological resources onsite or unique geologic features at this site. **Less-than-significant impact with mitigation.** Mitigation Measure #4 will be followed to stop work if a paleontological resource or unique geologic feature is discovered onsite.

**Mitigation Measure #4:** Work will be stopped if a paleontological resource or unique geologic feature is discovered onsite.

## GREENHOUSE GAS EMISSIONS

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

a) All equipment used onsite will meet the CARB requirements for emissions. Idling times will be minimized. The removal of the dead trees and their use for cogeneration power will reduce overall greenhouse gas emissions (GHG) from the project. Cogeneration power is determined to be carbon neutral. The removal of the vegetation for fuel 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 as a result of the proposed project. **Less-than-significant impact.** Calculation sheet and assumptions for GHGs is included in Table 2.

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

b) Onsite equipment and vehicles would generate greenhouse gas emissions. 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.**



## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

Table 2 Green House Gas Calculations							
Project Name	Post Carr Fire Fuels Reduction Project- 299 South				Blue = Variable Inputs		
Project Acres			2181		Black = Equation Produced Data		
Total Project Days			250		Red = Constants		
Exhaust CO2 Emissions							
Total Round Trip Miles			60				
# of Chainsaws			3				
# of Chippers			0				
Diesel Kilograms/Gal			10.15				
Gas Kilograms/Gal			8.91				
Pounds of CO2/Kilogram			2.20462				
One Chipper Gas Gal/day			10				
Crew Bus MPG			8				
Chainsaw Gas Gal/Day/Saw			1.5				
Conversion Factor Pounds to Tons			2000				
Conversion Factor Tons of Biomass to Tons CO2			1.65				
Crew Bus Total Miles			15,000	Chainsaws Total Gal Gas Needed		1125	
Total Gal of Diesel Needed			1,875	Chipper Total Gal Gas Needed		0	
Total Kilograms of Diesel Produced			19,031	Total Kilograms of Gas Produced		10,024	
Diesel Total Pounds of CO2 Produced			41,957	Gas Total Pounds of CO2 Produced		22,099	
Diesel Total Tons CO2			21	Gas Total Tons of CO2 Produced		11	
Smoke or Decay CO2 Emissions							
Est. Biomass Tons Per Acre Removed (Fuel Model)			2				
Biomass Total Tons Removed			4362				
Total Tons of CO2			7197				
Final Outputs							
Total Tons of CO2 for Project			7229				
Sequestration Rate 2 - 6 Tons/Ac/Yr (stocked Sierra mixed conifer)			1				
Total Sequestration Rate/Yr			8004.27				
Years Required for Complete Sequestration			0.9				
<b>Summary of Assumptions</b>							
Total Acres =: 2,181							
Total Treatment Days = 250							
Acres Treated per Day = 8							
2 Crews = 2 crew members, 2 saws, and one truck/crew							
1 Masticator per Day for 248 days							
1 Chipper for 2 Days (total)							
1 Log Truck per Day							
Round Trip = 30 Miles per Day/per Truck							
3 Trucks x 30 Miles per Day = 90 Miles/Day							
90 Miles/Day x 250 Days = 22,500 Round Trip Miles							

## HAZARDS AND HAZARDOUS MATERIALS

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

a) The project will not create a significant hazard to the public or the environment through the routine transport/use/disposal of hazardous materials. The following BMPs were developed to apply to handling of regular hazardous substances as well as the discovery of unknown or undocumented contamination:

- 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.
- Fueling will take place in designated staging areas, outside native vegetation or wetlands.
- 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.
- 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.
- Major vehicle maintenance and washing will be done offsite.
- Spent fluids including motor oil, radiator coolant, and used vehicle batteries will be collected, stored, and recycled as hazardous waste offsite.
- Spilled dry materials will be swept up immediately.
- If hazardous materials are encountered or accidentally released as a result of treatment activities, the following procedures will be implemented:
  - Work shall stop in the vicinity of any discovered contamination or release.
  - The scope and immediacy of the problem shall be identified.
  - Coordination with the responsible agencies shall take place.
  - The necessary investigation and remediation activities shall be conducted to resolve the situation before continuing construction work.
- No smoking will be allowed in work areas.

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

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

b) The project will not create 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 practices in a) above. **No impact.**

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

c) Project operations will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. **No impact.**

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

d) The project area is not located on sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. The project would not result or create significant hazards to the public. **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 or excessive noise for people residing or working in the project area?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

e) There is no airport in the vicinity and would not result in safety hazards. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

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. **No impact.**

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

g) Project activities are temporary and will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. **No impact.**

## HYDROLOGY AND WATER QUALITY

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

a) The project would not violate any water quality standards or waste discharge requirements. BMPs have been adopted for the project to protect water quality. These include:

- Maintain a 50-foot buffer of mechanized equipment around any Intermittent/ Class 2 or Ephemeral/Class 3 waterbody unless buffer is broken by an established roadway.
- No equipment fueling within stream buffers.
- Never wash down pavement or surfaces where materials have spilled; use dry cleanup methods whenever possible.
- Protect all storm drain inlets using filter fabric cloth, wattles, or other BMPs to prevent sediments from entering the storm drainage system during treatment activities.
- Before a rain event, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- Prior to treatment, wetland buffers in the project area will be fenced off using exclusion fencing or flagging.
- Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian woodland/scrub.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- Any hydro-seed mulch used for revegetation must be certified weed-free. 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.
- All off-road equipment will be cleaned of potential noxious weed sources (mud, vegetation) before entry into the project area.
- Vehicles and equipment will be parked on pavement, existing roads, or specified staging areas.
- Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non-sensitive land cover types.
- All temporarily disturbed areas, such as staging areas, will be returned to pre-project or ecologically improved conditions as required by responsible agencies.
- 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.

With these management practices in place there will be a **less-than-significant impact**.

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

b) The project would not deplete groundwater supplies or interfere with groundwater recharge, and there would be no impacts to groundwater. There will be no significant negative direct or indirect effects on water availability from the proposed project. **No impact.**

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

c) The project would not alter the course of any streams or rivers. Project operations will not alter the existing drainage pattern of any site. Buffers are as follow:

- Maintain a 50-foot buffer of mechanized equipment around any Intermittent/Class 2 or Ephemeral/Class 3 waterbody and other wetland feature unless buffer is broken by an established roadway. The project will not result in substantial erosion or siltation on- or offsite due to implementation of management practices above. **Less than significant impact.**

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

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

**d)** This project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. See a), b), and c). **No impact.**

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

**e)** This project will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff. See a), b), c), and d). **No impact.**

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

**f)** This project will not impede or redirect flood flows. See above; **no impact.**

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



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

**g)** No project work will take place within the 100-year floodplain of any creek or river. No structures, housing, or people will be at risk of being affected by flooding or inundation by seiche, tsunami, or mudflows. **No impact.**

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

**h)** The project will not conflict with any water quality control plan or sustainable groundwater management plan and will not impact hydrology or water quality. **No impact.**

## LAND USE AND PLANNING

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

**a)** The project will not divide and established community. **No impact.**

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

**b)** The project will not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. There is no conflict with any land use plan, policy or regulation. **No impact.**

## MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**a)** The project will not result in any loss of availability for a mineral resource. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) This project will not result in any loss of a mineral resource recovery site on a local level or in a general land plan. **No impact.**

## NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) BMPs have been adopted for the project to minimize the effect of noise from the project. The project will not result in any permanent sources of noise. The project impacts on individual sites will be short as hazard vegetation is removed from the parcel and the operations moved onto the next parcel. Noise will be transitory. The following BMPs have been adopted for the project.

- 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.
- Noise-generating construction 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.
- 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.
- Contractor shall be responsible for maintaining equipment in best possible working condition.
- Mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receivers.
- Locate equipment as far as possible from nearby noise-sensitive receptors.
- 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 any adjacent noise-sensitive receptor.

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- 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.
- 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.

Noise levels from the project will not exceed standards established in the local 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) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Heavy equipment such as masticators or grinders have the potential to cause slight groundborne vibration and noise. Landowners will be notified in advance of the intended operations near their property to give them adequate time to move or adjust livestock prior to treatments as to not cause stress, panic or injury to the animals. **Less than significant impact.**

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

c) The project is not within an airport land use plan, or within two miles of a public airport, or within the vicinity of a private airstrip. The project would not expose people residing or working in the project area to excessive noise levels from aircraft. **No impact.**

## POPULATION AND HOUSING

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

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

a) The project would not induce substantial population growth or include the expansion of any roads or infrastructure. The project will not generate commercial activities such that are enough to induce substantial growth in the project area. **No impact.**

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

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

## PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The project is designed to protect public facilities, improve ingress and egress for the public, and assist emergency personnel during a wildfire. Therefore, any impact would be positive. The project would not require any new or physically altered governmental facilities. **No impact.**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) This project would not alter any government facilities and will not cause any significant environmental impacts that would interfere with police protection or performance. See a). **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?

Potentially  
Significant  
Impact☐Less Than  
Significant  
with Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐

No Impact

☒

c) This project would not alter any government facilities and will not cause any significant environmental impacts that would interfere with acceptable service ratios, response times or other performance objectives for schools. See a). **No impact.**

d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?

Potentially  
Significant  
Impact☐Less Than  
Significant  
with Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐

No Impact

☒

d) This project would not alter any government facilities and will not cause any significant environmental impacts that would interfere with performance objectives for parks. See a). **No impact.**

e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities?

Potentially  
Significant  
Impact☐Less Than  
Significant  
with Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐

No Impact

☒

e) This project would not alter any government facilities and will not cause any significant environmental impacts that would interfere with acceptable service ratios, response times or other performance objectives for other public facilities. See a). **No impact.**

## Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

**RECREATION**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The project will have no impact on recreation. No new demand will be generated for the use of the existing area parks. The project does not include recreation facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. **No impact.**

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

b) 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. See a). **No impact.**

**TRANSPORTATION**

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

a) This 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 slight increase in traffic in the specific location of operation. The location is transitory and will move with the project so no one area will be impacted for an extended period. The following BMPs have been adopted for the project to minimize the impacts of the project on traffic in the area.

- When possible, crews will travel outside of peak hour traffic times, thereby minimizing peak traffic time impacts.
- All vehicles related to project, including contractor vehicles and trucks, will use designated Truck Routes where those are available.
- Detour signs shall be used when necessary for vehicles, bicycle and pedestrian ways.
- A Traffic Control Plan will be developed and submitted to Shasta County Public Works (County road) or CalTrans (State Highway) if the project is expected to require road closures.



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3(b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) This project will not conflict or be inconsistent with CEQA guideline 15064.3, subdivision. a). <b>No impact.</b>				See
c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) There will be no change in road design or construction. <b>No impact.</b>				
d) Would the project result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Emergency access will not be impaired by the project. The project is designed to improve emergency ingress and egress. No applicable transportation policies, plans, programs or guidelines will be affected by the project. <b>No impact.</b>				

## TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k)?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) AB 52 was enacted on July 1, 2015, and establishes that “a project with an effect that may cause a

Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (Public Resources Code Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource when feasible (PRC Section 21084.3).

Public Resources Code Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and meets either of the following criteria:

- 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
- 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 these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California cities, counties, and tribes regarding tribal cultural resources. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

There is no evidence of historical resources at the site that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or 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. Pursuant to AB 52, project notifications were mailed to all tribes that have requested notice of projects proposed within the County to invite consultation and avoid potential impacts to tribal cultural resources. No responses were received. **No impact.**

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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the significance of the resource to a California Native American tribe.

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b) The operational area of the project has been surveyed and evaluated for prehistorical and historical and archaeological resources. The results have been presented in a report and submitted to CAL FIRE. The following BMPs have been implemented to avoid impacts to historical and prehistorical sites and to be used if cultural resources are present. Photographs will be provided before and after treatment of avoided site areas.

**Avoidance:** Sites identified for Avoidance include all prehistoric archaeological resources and historic-era resources containing multiple periods of occupation and a diverse range of features and/or artifact types. These sites are considered eligible or potentially eligible for listing on the California Register of Historic Resources (CRHR). Cultural resources that are designated for avoidance shall have no fuel reduction activities performed within the site limits and a 50-foot buffer. Avoidance of cultural resources includes the following BMPs:

- Prior to the commencement of operations, the Project Manager will ensure that the all Special Treatment Zones (STZ) are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- 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 and include a 50-foot buffer around the site boundary where no fuel reduction activities will be performed. STZ flagging that is older than six months will be inspected and refreshed prior to operations.
- No fuel reduction work shall occur within the STZ area.
- No skidding of logs shall occur within the site boundaries or STZ.
- Hazard vegetation to be removed within 100 feet of the STZ shall be directionally felled away from the site.
- No mechanized equipment shall be used within the STZ.
- No piling or burning of slash will occur within STZ.
- No tree planting will occur within STZ.
- A CAL FIRE Certified Archaeological Surveyor or professional archaeologist will periodically inspect sites to ensure that BMPs are effective and STZ have not been breached.

**Special Conditions:** Sites within the Project area may be designated for Special Conditions where fuel reduction activities may be performed within the site limits. For the purpose of this project, Special Condition sites are defined as linear sites (e.g., ditches) or sites characterized by a single feature (e.g., wells or adits) having a surface area less than 300 square feet. In some instances, removal of hazard vegetation is beneficial to site preservation, such as removal of hazard vegetation from ditch berms. Special Conditions of cultural resources includes the following actions:

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

- Prior to the commencement of operations, the Project Manager will ensure that the all Special Treatment Zones (STZ) are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- 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.
- Fuel reduction work utilizing hand tools (including chainsaws) may occur within the STZ area given the following conditions.
- No skidding of logs shall occur within the STZ.
- Timber shall be directionally felled away from the site.
- No mechanized equipment (chainsaws allowed) shall be used within the STZ.
- No piling or burning of slash will occur within STZ.
- No tree planting will occur within STZ.
- A CAL FIRE Certified Archaeological Surveyor or professional archaeologist will periodically inspect sites to ensure that BMPs are effective and STZ have not been breached.

**No Restrictions:** Sites within the Project area may be designated as No Restrictions. Sites with No Restrictions are recommended as not eligible for the CRHR as described in Section IX. Fuel reduction activities may be performed within the site limits.

- Prior to the commencement of operations, the Project Manager will ensure that the all sites with No Restrictions are clearly described and illustrated in plans, and specifications.
- All parties (CAL FIRE, Project Manager, Registered Professional Forester [RPF], or Licensed Timber Operator [LTO]) will review the plans.
- No STZ flagging is required.
- Fuel reduction work is allowed within the site boundaries.
- Skidding of logs is allowed within the site boundaries.
- Removal of hazard vegetation is allowed within site boundaries.
- Mechanized equipment is allowed within site boundaries.
- Piling or burning of slash is allowed within site boundaries.
- Tree planting is allowed within site boundaries.

**Unanticipated Discovery of Cultural Resources:** If previously unidentified cultural resources are

encountered during project implementation, avoid altering the materials and their stratigraphic context. CAL FIRE and 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. If prehistoric artifacts are encountered during construction, CAL FIRE will be responsible for contacting tribal governments.

**Encountering Native American Remains:** Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner, CAL FIRE, 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 NAHC must be contacted by the Coroner so that a “Most Likely Descendant” (MLD) can be designated and further recommendations regarding treatment of the remains is provided. The MLD may make recommendations to the landowner or the person responsible for the work for the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods.

Based on the implementation of the BMPs and these standard measures the project will not cause a substantial adverse change to the significance of an archaeological resource.

**Mitigation Measure #1:** A professional archaeologist has surveyed the land and a confidential report has been provided to the CAL FIRE Regional Reviewer. All archaeologist site requiring protection will be flagged and the area will not be disturbed.

**Mitigation Measure #2:** In accordance with the California Health and Safety Code 7050[c], if human remains are discovered at any point the project manager shall immediately halt any work and notify the proper authorities.

**Less-than-significant with mitigation.**

UTILITIES AND SERVICE SYSTEMS

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

a) The project will not result in the construction of new or relocated water or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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

b) The project is a short-duration project. Water for the project for dust suppression will be provided by a public water system. The project would not require the construction or expansion of any water facilities. **No impact.**

c) Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) There is no wastewater treatment provider or delivery associated with this project. **No impact.**

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) Large quantities of solid waste will not be generated by the project. Small quantities of solid waste generated by the project will be bagged, removed from the site, and transported to the city/county transfer site for disposal. **No impact.**

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

e) The project will comply with all federal state and local statutes and regulations relating to solid waste and disposal. **No impact.**

**WILDFIRE**

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*


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impair an adopted emergency response plan or emergency evacuation plan?

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**a-d)** The project is located on state responsibility areas previously damaged by the Carr Fire. The project area is defined as a high fire hazard severity zone. The project is designed to reduce fire behavior and intensity, protect private property and to provide safer emergency ingress and egress by creating defensible space and fuel breaks. All portions of the project will benefit wildfire safety and preparedness. The project will not substantially impair an adopted emergency response plan or emergency evacuation plan and does not include any additional features that would exacerbate wildfire risks at the site. The project does not require the installation of any infrastructure or expose people or structures to areas of runoff, post-fire slope instability or drainage changes. **No impact.**

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b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Potentially  
Significant  
Impact

☐

Less Than  
Significant  
with Mitigation  
Incorporated

☐

Less Than  
Significant  
Impact

☐

No Impact

☒

**b)** The purpose of the project is to reduce the risk of wildfire. This will be accomplished through reduction of fuel loads and interruption of fuel continuity, which will decrease the likelihood of ignition, increase the probability of success of fire suppression activities, as well as reduce severity if a fire were to burn through the project area. Activities proposed by this project aim to reduce the probability of catastrophic wildfire. No adverse impacts to wildfire are anticipated in connection with this project. See a). **No impact**

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c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Potentially  
Significant  
Impact

☐

Less Than  
Significant  
with Mitigation  
Incorporated

☐

Less Than  
Significant  
Impact

☐

No Impact

☒

**c)** The project will not require any installation or maintenance of associated infrastructures that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. See a) and b). **No impact.**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) The project would 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. See a) and b). **No impact.**

## MANDATORY FINDINGS OF SIGNIFICANCE

a) Would the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) All impacts associated with the project have been fully identified in this document. The project does not have an impact as such to degrade any 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. This project will not have effects on human beings or affect any wildlife species. **Less-than-significant impact.**

b) Would the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) There are currently no known aspects of the property that might result in cumulative impacts to the project site or surrounding areas. The project will not result in any significant impacts. The project

Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project

does not have any cumulatively considerable effects on any past, present or future projects. **No impact.**

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

c) The project will not have any adverse environmental effects on human beings either directly or indirectly. **No impact.**

## APPENDIX A

### ***Mitigation Monitoring and Reporting Plan***

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

### **POTENTIALLY SIGNIFICANT EFFECTS AND MITIGATION MEASURES**

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

**Mitigation Measure #1:** A professional archaeologist has surveyed the land and a confidential report has been filed. All archaeologist sites requiring protection will be flagged and the area will not be disturbed.

**Schedule:**

**Responsible Party:**

**Verification of Compliance:**

Monitoring Party: CAL FIRE

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

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

**Mitigation Measure #2:** In accordance with the California Health and Safety Code 7050[c], if human remains are discovered at any point the project manager shall immediately halt any work and notify the proper authorities.

**Schedule:**

**Responsible Party:**

**Verification of Compliance:**

Monitoring Party: CAL FIRE

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

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

**Mitigation Measure #3:** Raptors, migratory birds, yellow-legged frogs, salamanders and special status plant species will be protected by additional surveys being conducted by a qualified biologist, 2 days prior to any work being performed.

**Schedule:**

**Responsible Party:**

**Verification of Compliance:**

*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

Monitoring Party: CAL FIRE

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

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

**Mitigation Measure #4:** Should any significant paleontological resource or unique geologic feature be discovered onsite, work will be stopped and proper authorities will be contacted.

**Schedule:**

**Responsible Party:**

**Verification of Compliance:**

Monitoring Party: CAL FIRE

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

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

A copy of the completed MMRP will be forwarded to: CAL FIRE Environmental Protection Program, P.O. Box 944246, Sacramento, CA 94244.

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This document was prepared by VESTRA Resources, Inc., for The McConnell Foundation with input and support from CAL FIRE.

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*Initial Study-Mitigated Negative Declaration for the Proposed Post Carr Fire Hazardous Fuels Reduction Project*

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Attachment A  
**Botanical Survey Report**

# **BOTANICAL SURVEY REPORT SOUTH OF HIGHWAY 299W PROJECT AREA CAL FIRE HAZARDOUS FUELS REDUCTION GRANT**

*Prepared for*

**The McConnell Foundation**

*Prepared by*

*Prepared by*



**VESTRA Resources Inc.**  
5300 Aviation Drive  
Redding, California 96002

**JULY 2020**

**BOTANICAL SURVEY REPORT  
SOUTH OF HIGHWAY 299W PROJECT AREA  
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**72002**

**JULY 2020**



TABLE OF CONTENTS

SECTION

PROJECT INFORMATION ..... 1

ENVIRONMENTAL SETTING ..... 1

    Vegetation Communities ..... 1

    Soils ..... 2

    Hydrology ..... 2

SURVEY METHODOLOGY ..... 2

    Pre-Survey Review ..... 2

    Field Survey Methods ..... 3

RESULTS ..... 4

DISCUSSION ..... 5

TABLES

1      Target Species List ..... 3

FIGURES

- 1      Project Area
- 2      Detailed Project Area
- 3      CHWR Types
- 4      CNDDDB Occurrences
- 5      Area Surveyed
- 6A    Rare Plant Observations
- 6B    Rare Plant Observations

APPENDICES

- A      California Rare Plant Ranking Query Results
- B      Project Area (South of 299W) Species List

## PROJECT INFORMATION

A California Climate Investment Grant was awarded to The McConnell Foundation in fall of 2019 which covers hazardous fuel reduction and removal of dead trees along specific roadways in the Carr Fire footprint. This project includes treatments along roadways in portions of the Carr Fire area south of Highway 299W. The purpose of the botanical surveys described herein are to determine the presence of any special-status or sensitive plants, soils, or sensitive natural communities that have the potential to be impacted by project activities. The general site location is shown on Figure 1. Project (surveyed) area is shown on Figure 2.

The specific objectives of the project include removal of dead and dying trees and resprouting brush within proximity to residential roadways identified by CalFire within the Carr Fire burn scar. The project area is located south of Highway 299W and west of the City of Redding. Project activities will include fuel reduction and hazard tree removal on approximately 2,580 acres along roads, ingress/egress points, and infrastructure to provide for safer ingress and egress of evacuating residents and responding emergency personnel in the future.

Fuel reduction will be addressed by the removal of dead and dying trees and resprouting vegetation within 200 to 400 feet of serviceable roadways or public infrastructure. The project will also include the removal of dead and dying trees within 200 feet of permanent structures that pose a structural threat to the residences. Finally, the project includes the creation of a landscape vegetation treatment on a north-south ridgeline in the fire area.

## ENVIRONMENTAL SETTING

### Vegetation Communities

Vegetation following the Carr Fire consists largely of resprouting individuals and standing dead trees, although pockets where no vegetation is returning and areas that were not burned do exist within the treatment area. The burn severity varies throughout the project area. In areas with greater burn severity, resulting alterations to the soil composition has dramatically altered the vegetative community. For example, areas that historically were covered by dense tree canopy were observed as shrubland, annual grassland, or even barren habitats during the site surveys. Prior to the fire, the area was dominated by Mixed Chaparral and Blue Oak-Foothill Pine communities according to the California Wildlife Habitat Relationship (CWHR) database (see Figure 3).

#### Mixed Chaparral

The vegetation in the mixed chaparral types consisted of structurally homogenous shrubland dominated by species with thick stiff heavy leaves. In many cases the stands were dense and impenetrable with heights from 4 to 14 feet. The dominant species present in the mixed chaparral habitat is interior live oak (*Quercus wislizeni*), Ceanothus species, manzanita (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculatum*), California buckeye (*Aesculus californica*), toyon (*Heteromeles arbutifolia*), and poison oak (*Toxicodendron diversilobum*). Many of these species are sprouting species and the residual stand characteristics reflect the resprouting nature of the original shrub land types.

### **Blue Oak- Foothill Pine**

The Blue Oak-Foothill Pine habitat is generally more diverse in structure with an upper canopy consisting of blue oak (*Quercus douglassii*), interior live oak (*Quercus wislizeni*), and foothill pine (*Pinus sabiniana*), and shrub dominant mid-canopy including Ceanothus species, manzanita (*Arctostaphylos* spp.), yerba santa (*Eriodictyon californicum*), and western redbud (*Cercis occidentalis*). As with the mixed chaparral community, many of the understory species sprout following disturbance.

### **Urban**

The project area encompasses areas within proximity to residential buildings. A portion of the project area was observed to be maintained urban habitat, including irrigated lawn areas with shade tree canopy. Shade trees and lawns are typical of residential areas and reminiscent of natural savannas. Structural variation in the shade tree/lawn type varies based on the number of species that are incorporated in the landscape. Lawns are structurally the most uniform vegetative units of the California urban habitat. A variety of grass species are employed, which are maintained at a uniform height and continuous ground cover. Shrub cover is more limited in distribution than the other structural types. Hedges represent a variation of the urban shrub cover type. Species, planting design, and maintenance control the structural characteristics of this habitat type.

### **“Timberland”**

CalFire has determined no areas of “Timberland” as defined by Public Resources Code (PRC) 4526 are located in the project area.

### **Soils**

In the project area Kanaka, Auburn, Chaix-Diamond, and Goulding series dominate the treatment area. All of these soil types have an erosion hazard rating of *severe*. This is offset somewhat by the lesser slope impacts.

### **Hydrology**

There are no perennial streams (Class I) in the project area. Middle Creek and Salt Creek are notable intermittent streams within the project area. Buffers will be applied to all watercourses with a 75-foot buffer maintained on all perennial (Class 1) streams. Buffers of 50 feet will be maintained for all intermittent and ephemeral (Class 2 and 3) watercourses. Therefore, these buffer areas and the potentially occurring species within riparian-wetland areas were not included in the scope of the survey.

## **SURVEY METHODOLOGY**

### **Pre-Survey Review**

Pre-survey review was completed to determine the potentially occurring sensitive plant species, vegetation communities (S1 rank), and soils. Resources reviewed included California Department of Fish and Wildlife Natural Diversity Database (CNDDB), California Wildlife and

Habitat Relationships database (CWHR), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, California Rare Plant Ranks (CRPRs) ranked under CRPR categories 1 and 2, the Consortium of California Herbaria website, U.S. Fish and Wildlife Service (USFWS) Sacramento Office and Information Planning and Conservation (IPaC) website, and UC Berkeley's CalFlora database. The CNDDDB map is shown on Figure 4. The CRPR Results are included as Appendix A. Additional resources included the BLM Redding Field Office's Special-Status Plants List.

The pre-survey review found no sensitive vegetation communities in the survey area. Therefore, no sensitive plant communities were considered during the survey and are not discussed further in this report.

The review found potentially occurring rare plants in the survey area. A target plant species list was developed for the field survey by comparing the documented species occurrences in the general area with the chaparral and blue oak-foothill pine habitat types identified within the project area. The project intends to avoid disturbance to wetland and riparian habitat; therefore, species that occur within these habitats were not included in the target species list. BLM was consulted for approval of the survey protocol prior to completing the field survey. The final target species list is included in Table 1.

Table 1 TARGET SPECIES LIST		
Common Name	Scientific Name	Conservation Status
Dubious Pea	<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	CRPR: 3 State Rank: S1, S2 BLM: None
Northern Clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	CRPR: 1B.3 State Rank: S3 BLM: Sensitive
Shasta Clarkia	<i>Clarkia borealis</i> subsp. <i>arida</i>	CRPR: 1B.1 State Rank: S2 BLM: Sensitive
Blushing Wild Buckwheat	<i>Eriogonum ursinum</i> var. <i>erubescens</i>	CRPR: 1B.3 State Rank: S3 BLM: Sensitive
Pink Creamsacs	<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	CRPR: 1B.2 State Rank: S2
Dwarf Checkerbloom	<i>Sidalcea celata</i>	CRPR: 3 State Rank: S2, S3
Canyon Creek Stonecrop	<i>Sedum paradisum</i>	CRPR: 1B.3 State Rank: S3 BLM: Sensitive
Maverick Clover	<i>Trifolium piorkowskii</i>	CRPR: 1B.2 State Rank: none BLM: None

## Field Survey Methods

The botanical survey of the project area was conducted in accordance with the California Department of Fish and Wildlife (CDFW) in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). Field visits were initiated on April 22, 2020, and completed on June 5, 2020. This time period corresponds with the active period for all target species.

Botanical surveys were conducted by Anna Prang (Regulatory Biologist), Alexandra Bandeian (Regulatory Botanist), and Meredith Feamster (Regulatory Botanist) by walking parallel transects across the entire project area. Transects were spaced between 10 and 35 feet apart. Transect spacing varied based on slope and vegetation density to ensure full visual coverage of the survey area. Field documentation included a list of all plants encountered and the locations of any target sensitive plant species. All plants observed onsite were identified to the level necessary to determine conservation status.

During surveys both Avenza Maps and a handheld Trimble GeoExplorer 6000 series global positioning system (GPS) capable of sub-meter accuracy were on hand to record the locations of any rare plant populations. Occurrence information such as species encountered, population size, threats, and percent cover were recorded in the event of positive identification of a sensitive plant species.

## RESULTS

A list of all plants observed during the surveys is included as Appendix B. Two special-status plant species were found within the survey area during the surveys: Northern clarkia (*Clarkia borealis* ssp. *borealis*) and dubious pea (*Lathyrus sulphureus* var. *argillaceus*). Neither species is state or federally listed; however, both are listed by the California Rare Plant Rank (CRPR) system, meaning that the species is required to be considered under environmental review. Northern clarkia is considered to be rare, threatened, or endangered in California (CRPR 1B.3) and dubious pea is considered to need more information for review (CRPR 3).

Occurrences of dubious pea were observed in multiple locations throughout the project area. General occurrence areas are shown on Figure 5. Specific geographic locations of occurrences can be found on Figures 6A and 6B. The characteristic of the habitat where this species was observed was variable. Generally, dubious pea was found along on slopes ranging between 5 percent and 45 percent. Most observations were in grassy openings and along the margins of dense shrubby regrowth; the dubious pea was often observed growing atop the shrubs. Associated species include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), field bind weed (*Convolvulus arvensis*), and morning glory (*Castylegia occidentalis*). Annual grasses and forbs were present nearby, but only species that are not tall enough to inhibit or “drown out” the dubious pea were observed.

On May 8, 2020, VESTRA staff consulted with CDFW Senior Environmental Scientist Richard Lis to review literature and pressed specimens to determine key identifying characteristics of dubious pea compared to the closely related sulphur pea (*Lathyrus sulphureus* var. *sulphureus*).

Based on the guidance provided by CDFW, dubious pea was identifiable to sub-species level by the presence of puberulent herbage throughout plant.

One occurrence of northern clarkia was observed within the project area. The occurrence is located at the following GPS Coordinates: (40.563917, -122.456707). Approximately 200 individuals were observed within a 60-square-foot area on a southwest-facing slope at an elevation of 1200 feet and grade of approximately 25 percent. The occurrence is immediately adjacent to publicly accessible Westside Trails, a system of hiking trails. At the time of observation on June 1, 2020, 25 percent of individuals were vegetative and 75 percent were in the flowering stage. Associated species include diamond clarkia (*Clarkia rhomboidea*), blue field gilia (*Gilia capitata*), yarrow (*Achillea millefolium*), and California poppy (*Eschscholzia californica*). Positive identification of northern clarkia was made based on the following characteristics listed in the Jepson Manual Second Edition: axis of inflorescence in bud recurved at tip and straight 4 or more nodes distal to open flower; buds pendant; petals clawed, 2-lobed, and generally greater than 12 mm; stigma exerted beyond anthers.

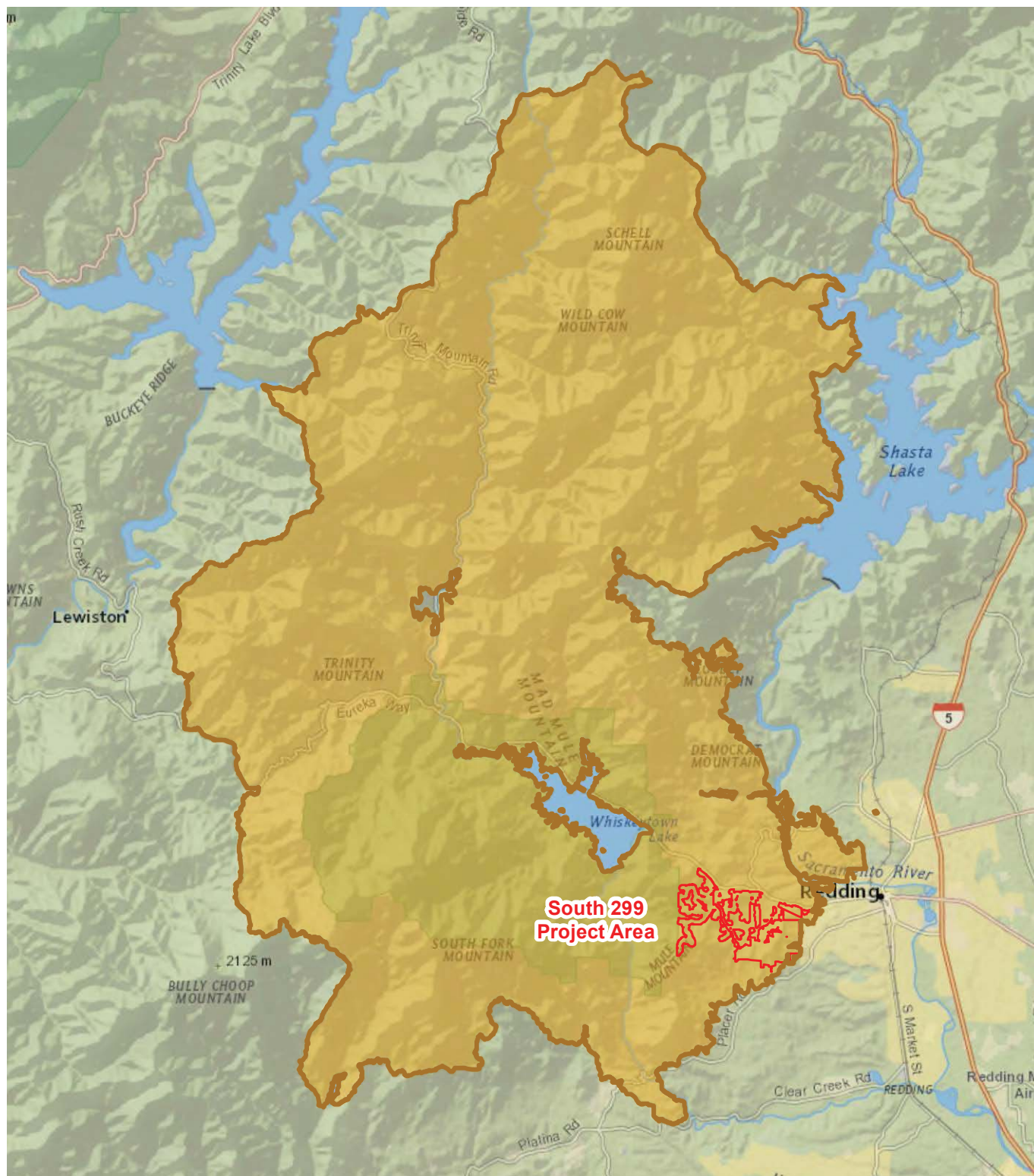
## DISCUSSION

Dubious pea (*Lathyrus sulphureus* var. *argillaceous*) is not a taxon recognized by the Jepson Manual Second Edition, which only recognizes sulphur pea (*Lathyrus sulphureus*). According to the CRPR, *Lathyrus sulphureus* var. *argillaceous* is listed as “3 – Plants About Which More Information is Needed.” Many of the plants constituting California Rare Plant Rank 3 meet the definitions of the California Endangered Species Act of the California Department of Fish and Game Code, and impacts to these species or their habitat should be analyzed during preparation of environmental documents relating to CEQA as they meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) and/or §15380.

Avoidance areas should be established around the rare plants observed onsite prior to ground-disturbing activities. Avoidance areas will include a 50-foot buffer in order to prevent disturbance to these individual plants which will conserve the populations of these species within the project area.







Project Area

Carr Fire Boundary

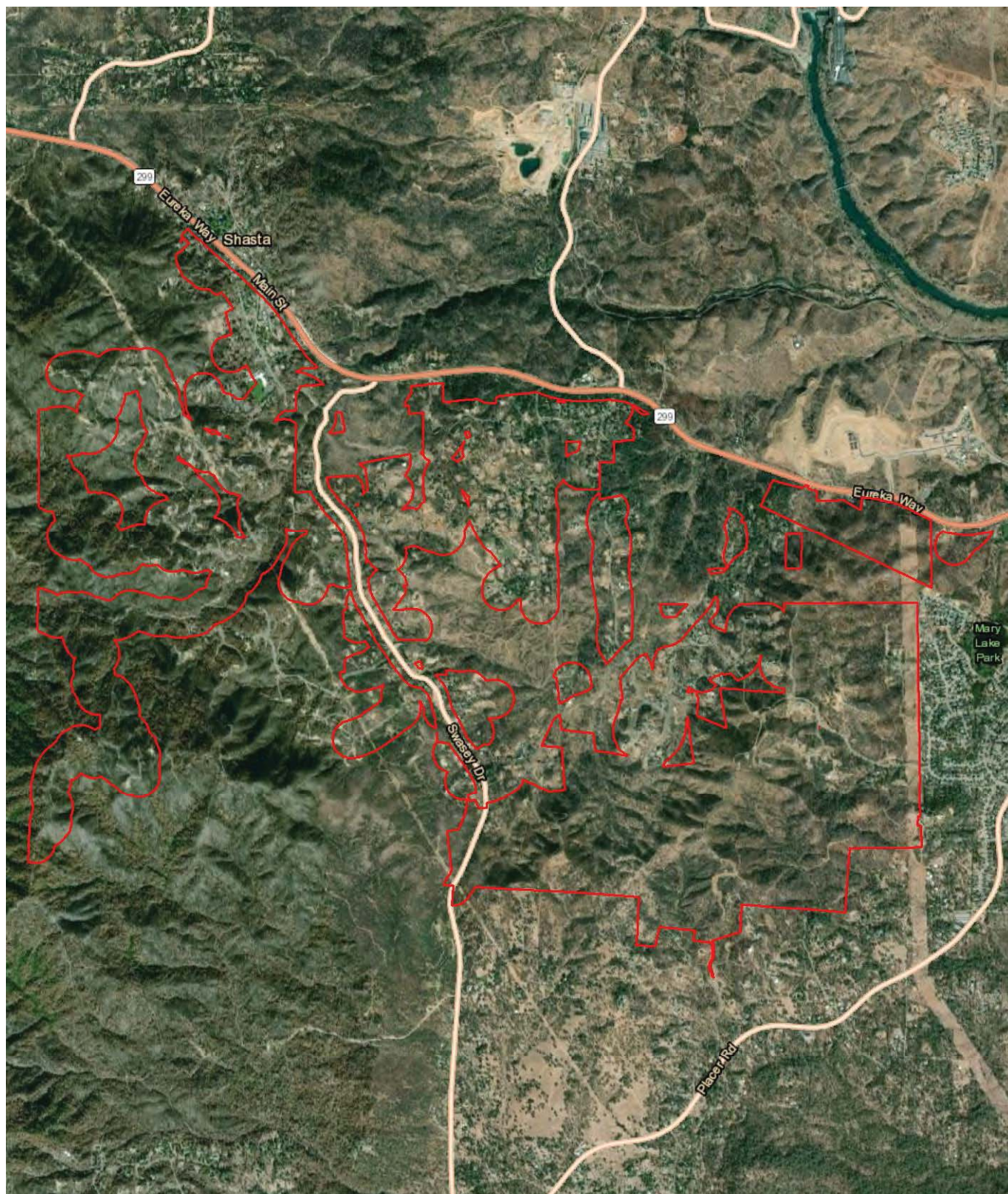


0 1.25 2.5 5 Miles



FIGURE 1  
PROJECT AREA  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA





 Project Area



SOURCE: MAXAR 2018 AERIAL PHOTOGRAPH



FIGURE 2  
DETAILED PROJECT AREA  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA



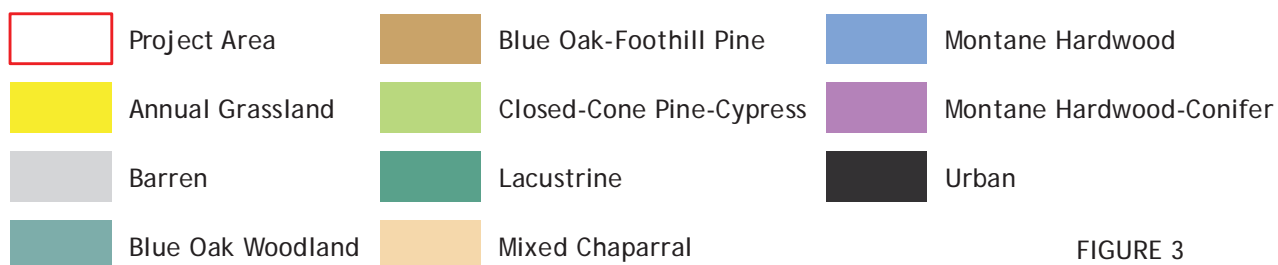
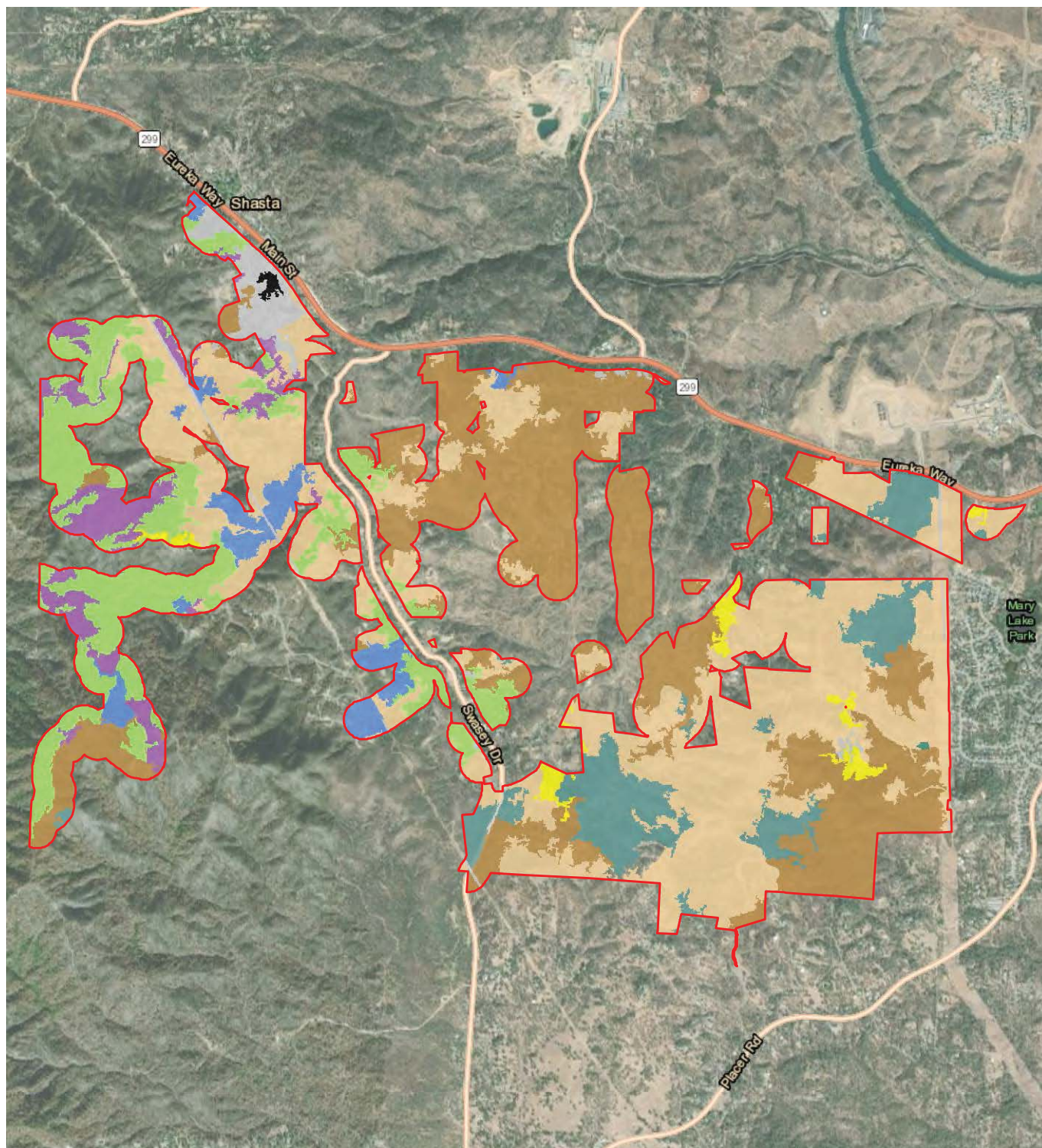
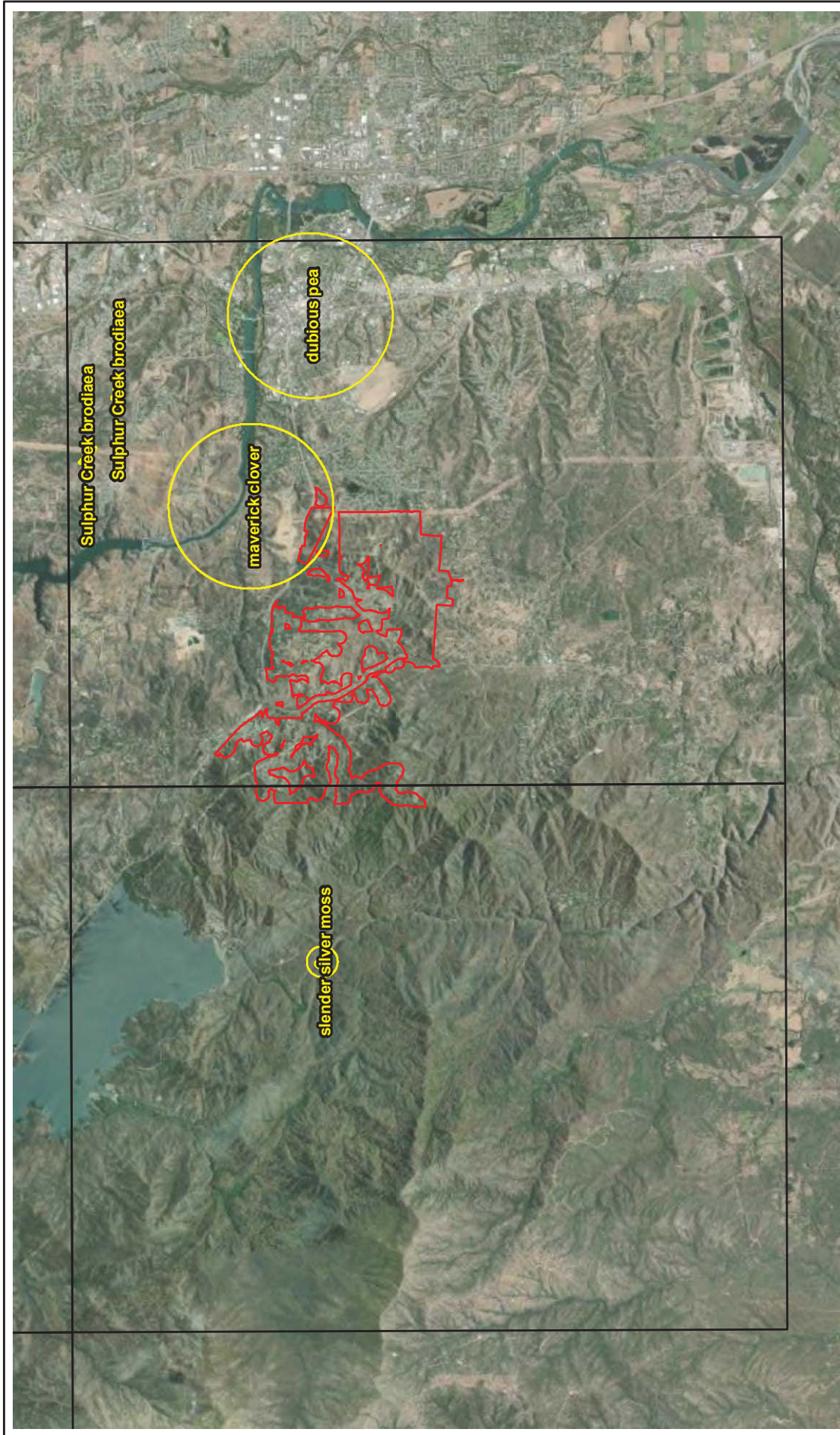


FIGURE 3  
CHWR TYPES  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA

SOURCE: USFS 2018; MAXAR 2018 AERIAL PHOTOGRAPH





CNDDDB Occurrence

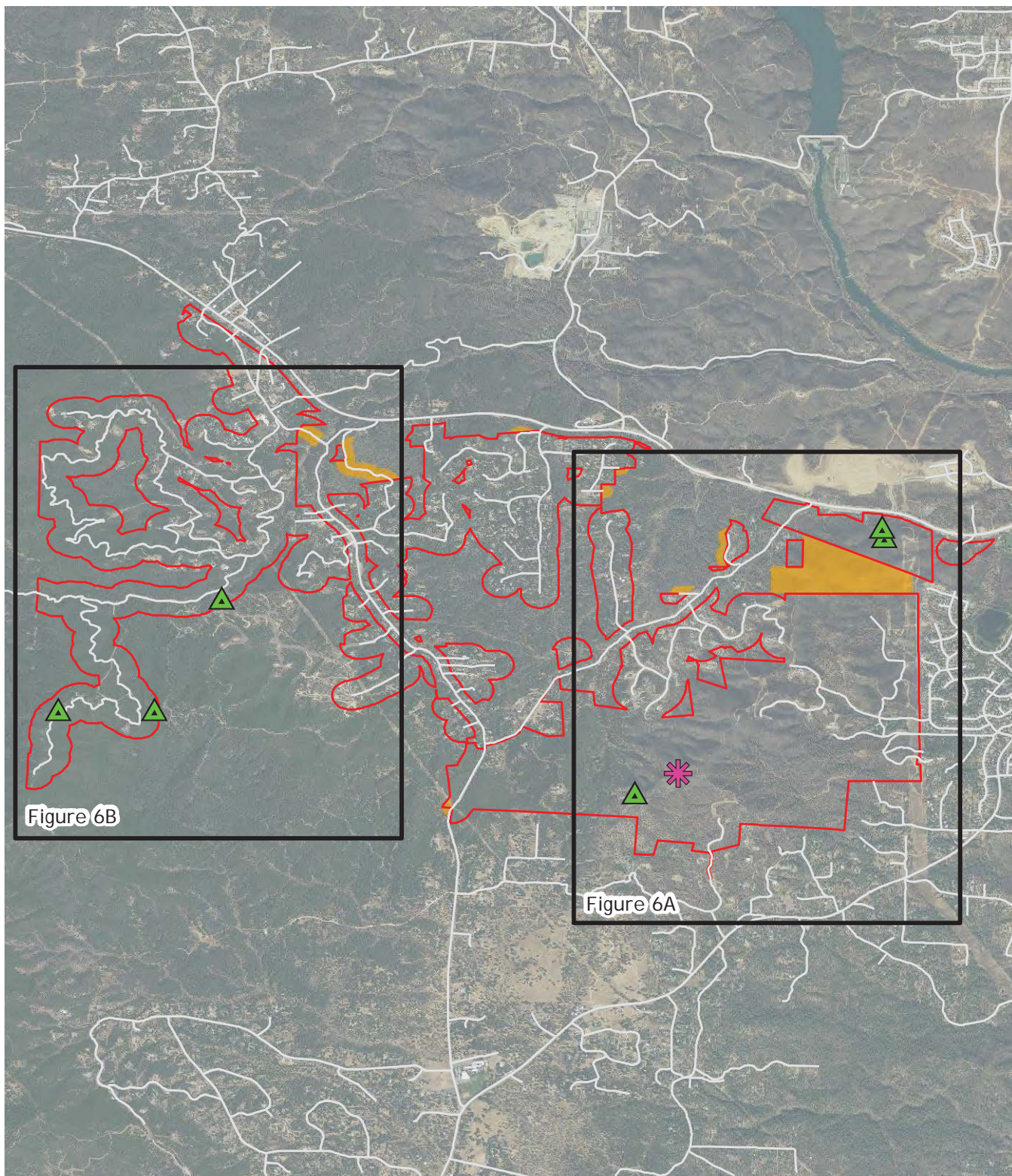
Project Area



FIGURE 4  
CNDDDB OCCURRENCES  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA

SOURCE: CDFW CNDDDB NOVEMBER 2019; USFWS 2019; NMFS 2019





*Clarkia borealis ssp. borealis*



*Lathyrus sulphureus var. argillaceus*



Project Area

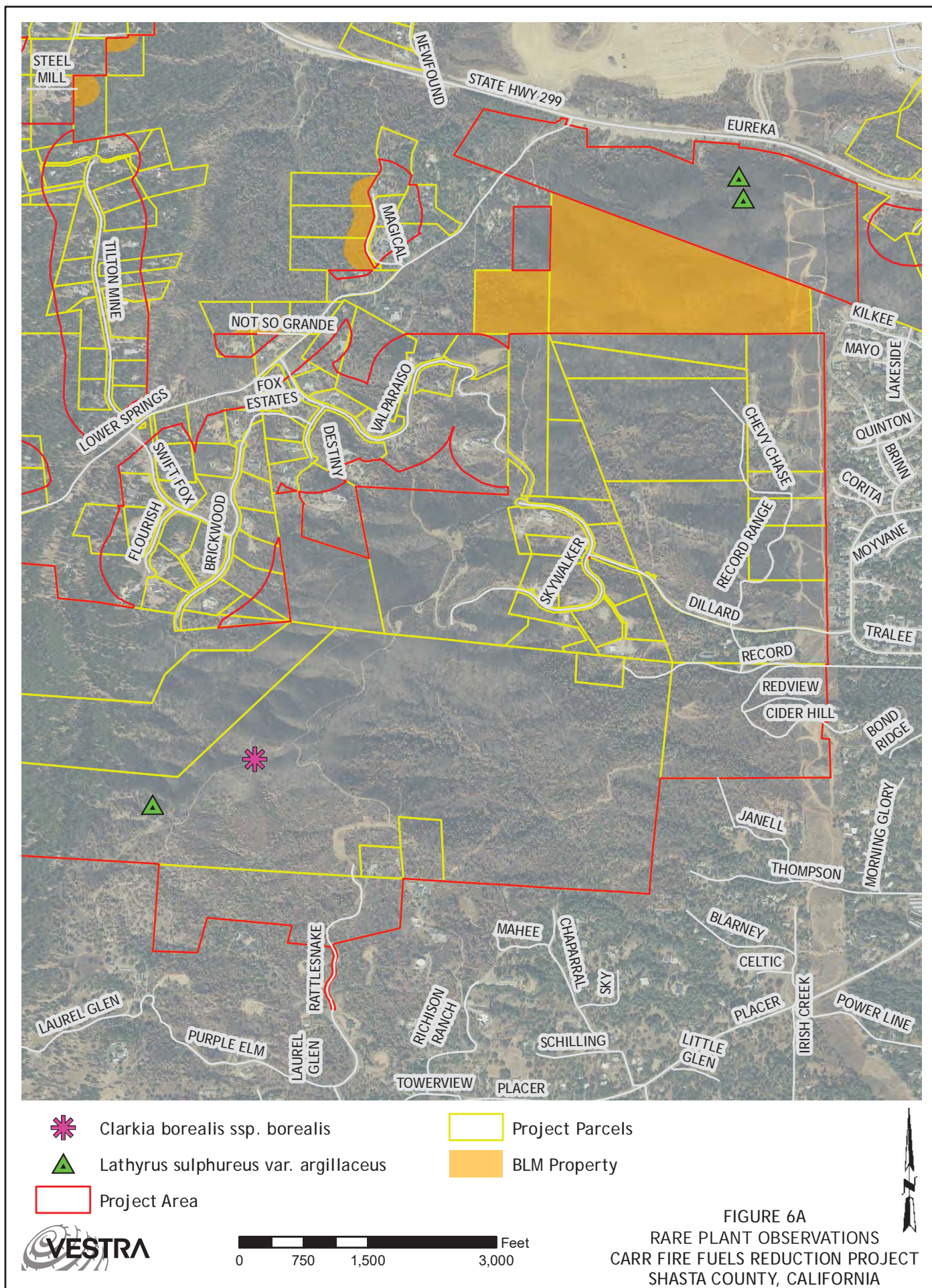


BLM Property

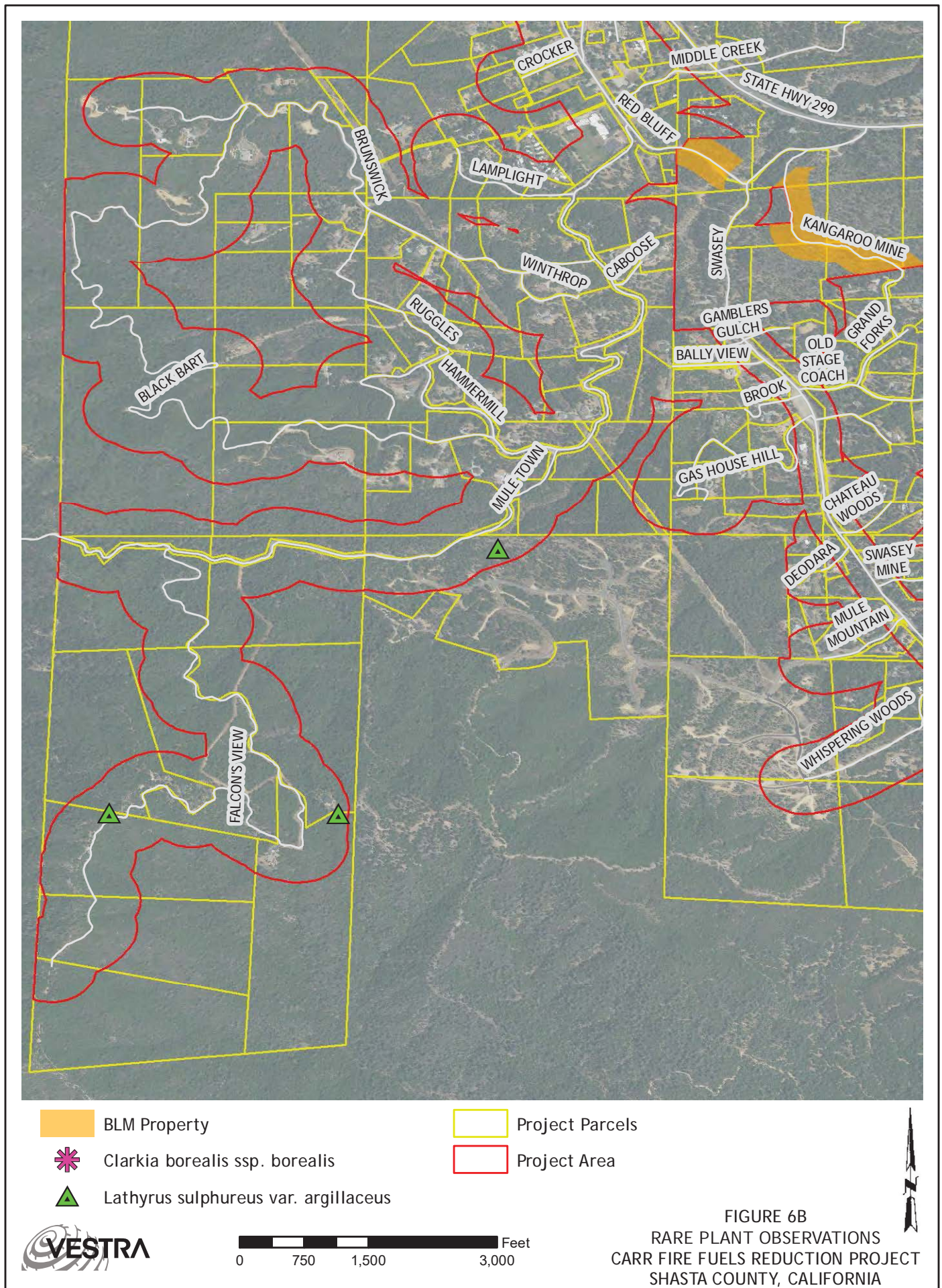


FIGURE 5  
AREA SURVEYED  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA















## Inventory of Rare and Endangered Plants

\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

10 matches found. [Click on scientific name for details](#)

### Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3], FESA is one of [Endangered, Threatened, Candidate, Not Listed], CESA is one of [Endangered, Threatened, Rare, Not Listed], Found in Shasta County, Found in Quads 4012265, 4012264, 4012263, 4012255, 4012254, 4012253, 4012245, 4012244 and 4012243; Community is one of [Chaparral, Cismontane woodland, Lower montane coniferous forest]

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Brodiaea matsonii</a>	Sulphur Creek brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	1B.1	S1	G1
<a href="#">Castilleja rubicundula</a> var. <a href="#">rubicundula</a>	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
<a href="#">Clarkia borealis</a> ssp. <a href="#">borealis</a>	northern clarkia	Onagraceae	annual herb	Jun-Sep	1B.3	S3	G3T3
<a href="#">Cryptantha crinita</a>	silky cryptantha	Boraginaceae	annual herb	Apr-May	1B.2	S2	G2
<a href="#">Juncus leiospermus</a> var. <a href="#">leiospermus</a>	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
<a href="#">Lathyrus sulphureus</a> var. <a href="#">argillaceus</a>	dubious pea	Fabaceae	perennial herb	Apr-May	3	S1S2	G5T1T2Q
<a href="#">Neviusia cliftonii</a>	Shasta snow-wreath	Rosaceae	perennial deciduous shrub	Apr-Jun	1B.2	S2	G2
<a href="#">Sedum obtusatum</a> ssp. <a href="#">paradisum</a>	Canyon Creek stonecrop	Crassulaceae	perennial herb	May-Jun	1B.3	S3	G4G5T3
<a href="#">Sidalcea celata</a>	Redding checkerbloom	Malvaceae	perennial herb	Apr-Aug	3	S2S3	G2G3
<a href="#">Vaccinium shastense</a> ssp. <a href="#">shastense</a>	Shasta huckleberry	Ericaceae	perennial deciduous shrub	Dec-May(Jun-Sep)	1B.3	S3	G4T3

### Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 09 July 2020].

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#### Questions and Comments

[rareplants@cnps.org](mailto:rareplants@cnps.org)



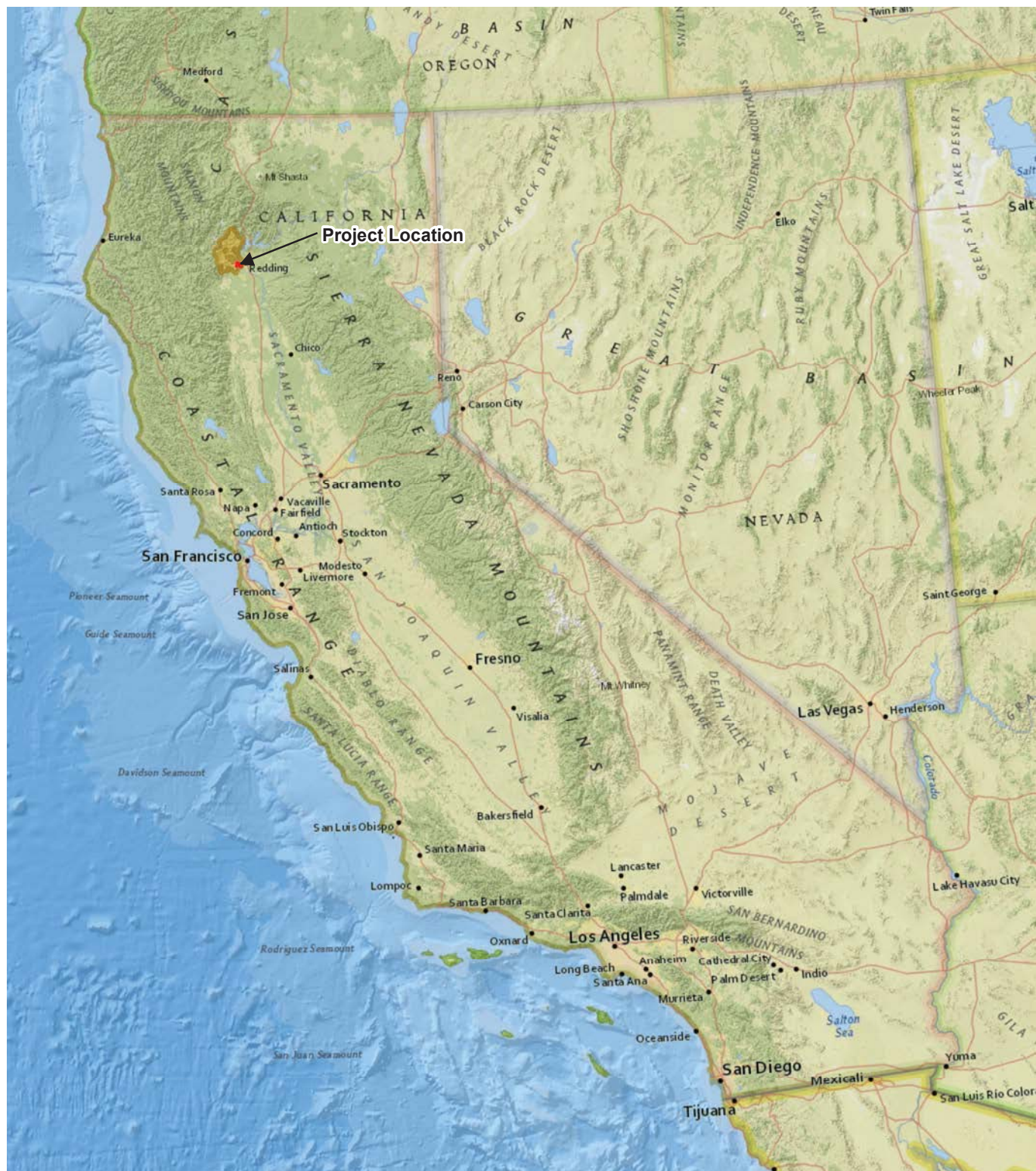
Appendix B CAL FIRE/ MCCONNELL 299 SOUTH PLANT SPECIES LIST		
Common Name	Scientific Name	Conservation Status
<b>Trees</b>		
Black Oak	<i>Quercus kelloggii</i>	-
Blue Oak	<i>Quercus douglasii</i>	-
Live oak	<i>Quercus chrysolepis</i>	-
Gray Pine	<i>Pinus sabiniana</i>	-
Knobcone pine	<i>Pinus attenuata</i>	-
Tanoak	<i>Lithocarpus densiflorus</i>	-
<b>Shrubs</b>		
Toyon	<i>Heteromeles arbutifolia</i>	-
Poison oak	<i>Toxicodendron diversilobum</i>	-
Redbud	<i>Cercis occidentalis</i>	-
Blueblossom ceanothus	<i>Ceanothus thrysiflorus</i>	-
Dogwood	<i>Cornus</i>	-
Scotch Broom	<i>Cytisus scoparius</i>	-
French Broom	<i>Genista monspessulana</i>	-
Mountain Balm (yerba santa)	<i>Erodium californicum</i>	-
Black berry	<i>Rubus ursinus</i> or <i>Rubus discolor</i>	-
Black locust	<i>Robinia pseudoacacia</i>	-
Tree-of-heaven	<i>Ailanthus altissima</i>	-
Cottonwood	<i>Populus fremontii</i>	-
Spice bush	<i>Calycanthus occidentalis</i>	-
Buckeye	<i>Aesculus californica</i>	-
Manzanita	<i>Arctostaphylos</i>	-
Poke weed	<i>Phytolacca americana</i>	-
Purple nightshade	<i>Solanum parishii</i>	-
Bottle brush	<i>Callistemon</i>	-
Buck brush	<i>Ceanothus cuneatus</i>	-
Cascara	<i>Rhamnus purshiana</i>	-
Deer Brush	<i>Ceanothus intergerimus</i>	-
Service berry	<i>Amelanchier alnifolia</i>	-
Snow drop bush	<i>Styrax redivivus</i>	-
<b>Subshrubs/Herbaceous</b>		
Morning glory	<i>Calystegia occidentalis</i>	-
Bind weed	<i>Convolvulus arvensis</i>	-
Watson's wild cucumber	<i>Marah watonii</i>	-
Chaparral honeysuckle	<i>Lonicera interrupta</i>	-
English Ivy	<i>Hedera helix</i>	-
Wild Grape	<i>Vitis californica</i>	-
Goldon bamboo	<i>Phyllostachys aurea</i>	-
Mountain holly fern	<i>Polystichum scopulinum</i>	-
Western brackenfern	<i>Pteridium aquilinum</i>	-
Gold back fern	<i>Pentagramma triangularis</i>	-
Brittle fern	<i>Cystopteris fragilis</i>	-
Kuciruce fern	<i>Polypodium californicum</i>	-

Bird's foot fern	<i>Pellaea mucronata var. californica</i>	-
Blue star tulip	<i>Calochortus coeruleus</i>	-
Mariposa	<i>Calochortus superbis</i>	-
Heartweg's odontostomum	<i>Odontostomum hartwegii</i>	-
Soaproot	<i>Chlorogalum pomeridianum</i>	-
White hyacinth	<i>Triteleia hyacinthina</i>	-
Taper tipped onion	<i>Allium acuminatum</i>	-
Narrow leaved onion	<i>Allium amplexans</i>	-
Blue dicks	<i>Dichelostemma capitatum</i>	-
Round toothed ookow	<i>Dichelostemma multiflorum</i>	-
Firecracker flower	<i>Dichelostemma ida-maia</i>	-
Blue-eyed grass	<i>Sisyrinchium bellum</i>	-
False gilia	<i>Allophyllum divaricatum</i>	-
Spreading dogbane	<i>Apocynum androsaemifolium</i>	-
Chickweed	<i>Cerastium fontanum</i>	-
Fire weed	<i>Chamerion angustifolium</i>	-
Tiny trumpets	<i>Collomia linearis</i>	-
Whitestem fraseria	<i>Frasera albicaulis</i>	-
Blue headed gilia	<i>Gilia capitata</i>	-
Dodder	<i>Cuscuta salina</i>	-
Hiaria	<i>Herniaria hirsuta</i>	-
Gold wire	<i>Hypericum concinnum</i>	-
Klamath weed	<i>Hypericum perforatum</i>	-
Miner's lettuce	<i>Montia perfoliata</i>	-
Windmill pink	<i>Petrorhagia dubia</i>	-
Cinquefoil	<i>Potentilla flabellifolia</i>	-
Garden burnet	<i>Poterium sanguisorba</i>	-
Buttercup	<i>Ranunculus occidentalis</i>	-
Sheep sorrel	<i>Rumex acetosella</i>	-
Curly dock weed	<i>Rumex crispus</i>	-
Common catchfly	<i>Silene gallica</i>	-
California indian pink	<i>Silene laciniata ssp. Californica</i>	-
Sand spurry	<i>Spergularia rubra</i>	-
Shining chickweed	<i>Stellaria nitens</i>	-
Bur chervil	<i>Anthriscus caucalis</i>	-
Poison hemlock	<i>Conium maculatum</i>	-
Purple sanicle	<i>Sanicula bipinnatifida</i>	-
Pacific sanicle	<i>Sanicula crassicaulis</i>	-
Celery weed	<i>Lomatium californicum</i>	-
Fern leaved lomatium	<i>Lomatium dissectum</i>	-
Fiddle neck	<i>Amsinckia intermedia</i>	-
Popcorn flower	<i>Plagiobothrys nothofulvus</i>	-
Phacelia	<i>Phacelia</i>	-
Common cryptantha	<i>Cryptantha intermedia</i>	-
Houndstongue	<i>Cynoglossum grande</i>	-
Nemophila	<i>Nemophila heterophylla</i>	-
Five spot	<i>Nemophila maculata</i>	-

Baby blue eyes	<i>Nemophila menziesii</i>	-
Meadow nemophila	<i>Nemophila pedunculata</i>	-
Red ribbons	<i>Clarkia concinna</i>	-
Graceful clarkia	<i>Clarkia gracilis</i>	-
Toungue clarkia	<i>Clarkia rhomboidea</i>	-
Winecup clarkia	<i>Clarkia purpurea</i>	-
Farewell to spring	<i>Clarkia amoena</i>	-
Northern clarkia	<i>Clarkia borealis borealis</i>	CRPR 1B.3; State: S3; BLM_S
Bolander's bedstraw	<i>Galium bolanderi</i>	-
Tiny bedstraw	<i>Galium murale</i>	-
Wall bedstraw	<i>Galium parisiense</i>	-
Lowland cudweed	<i>Gnaphalium palustre</i>	-
Cudweed	<i>Pseudognaphalium beneoleus</i>	-
Narrowleaf skullcap	<i>Scutellaria angustifolia</i>	-
Pallid owl-clover	<i>Orthocarpus linearilobus</i>	-
Woolly mullein	<i>Verbascum thapsus</i>	-
Hedge nettle	<i>Stachys ajugoides</i>	-
Western verbena	<i>Verbena lasiostachys</i>	-
Nuttall's larkspur	<i>Delphinium nuttallianum</i>	-
Bush Beardtongue	<i>Keckiella lemmonii</i>	-
Poke weed	<i>Phytolacca americana</i>	-
Yarrow	<i>Achillea millefolium</i>	-
Blow wives	<i>Achyrrachaena mollis</i>	-
Peaely everlasting	<i>Anaphalis margaritacea</i>	-
Woodland madia	<i>Anisocarpus madioides</i>	-
Silvery everlasting	<i>Antennaria argentea</i>	-
California mugwort	<i>Artemisia douglasiana</i>	-
Yellow star thistle	<i>Centaurea solstitialis</i>	-
Prickly lettuce	<i>Lactuca serriola</i>	-
Pineapple weed	<i>Matricaria discoidea</i>	-
Common groundsel	<i>Senecio vulgaris</i>	-
Common dandelion	<i>Taraxacum officinale</i>	-
Woolly mule's ear	<i>Wyethia mollis</i>	-
Western thistle	<i>Cirsium occidentale</i>	-
Bullthistle	<i>Cirsium vulgare</i>	-
Gumweed	<i>Grindelia camporum</i>	-
Common mustard	<i>Brassica rapa</i>	-
Shepherd's purse	<i>Capsella bursa-pastoris</i>	-
Common pepper grass	<i>Lepidium densiflorum</i>	-
Pepper grass	<i>Lepidium strictum</i>	-
Wild radish	<i>Raphanus sativus</i>	-
Watercress	<i>Nasturium officinale</i>	-
Western bittercress	<i>Cardamine oligosperma</i>	-
Black mustard	<i>Brassica nigra</i>	-
Jewel flower	<i>Streptanthus tortuosus</i>	-
<b>Grasses</b>		
Rattle-snake grass	<i>Briža maxima</i>	-

Little quaking grass	<i>Briza minor</i>	-
California brome	<i>Bromus carinatus</i>	-
Rescue grass	<i>Bromus catharticus</i>	-
Ripgut brome	<i>Bromus diandrus</i>	-
Soft chess	<i>Bromus hordeaceus</i>	-
Foxtail chess	<i>Bromus madritensis</i>	-
Common brome	<i>Bromus vulgaris</i>	-
Dogtail grass	<i>Cynosurus echinatus</i>	-
Orchardgrass	<i>Dactylis glomerata</i>	-
Tufted hair grass	<i>Deschampsia cespitosa</i>	-
Foxtail	<i>Hordeum murinum</i>	-
Canary grass	<i>Phalaris</i>	-
Dallis grass	<i>Paspalum dilatatum</i>	-
Wildoats	<i>Avena fatua</i>	-
Annual blue grass	<i>Poa annua</i>	-
Bulbous blue grass	<i>Poa bulbosa</i>	-
Rabbitfoot grass	<i>Polypogon monspeliensis</i>	-
Timothy	<i>Phleum pratense</i>	-
Dallis grass	<i>Paspalum dilatatum</i>	-
Spanish lotus	<i>Acmispon americanus var. americanus</i>	-
Short podded lotus	<i>Acmispon brachycarpus</i>	-
Hill lotus	<i>Acmispon parviflorus</i>	-
Pinnate lotus	<i>Hosackia pinnata</i>	-
Sweet pea	<i>Lathyrus latifolius</i>	-
Sulphur pea	<i>Lathyrus sulphureus</i>	-
Dubious Pea	<i>Lathyrus sulphureus argillaceus</i>	CRPR: 3; State: S1, S2
Silver bush lupine	<i>Lupinus albus</i>	-
Indian clover	<i>Trifolium albopurpureum</i>	-
Bladder clover	<i>Trifolium depauperatum</i>	-
Rose clover	<i>Trifolium hirtum</i>	-
Crimson clover	<i>Trifolium incarnatum</i>	-
Tomcat clover	<i>Trifolium willdenovii</i>	-
Cow clover	<i>Trifolium wormskioldii</i>	-
Hairy vetch	<i>Vicia villosa</i>	-
Sierra Milkwort	<i>Polygala cornuta</i>	-
Grand lotus	<i>Acmispon grandiflorus</i>	-





- Project Location
- Carr Fire Boundary

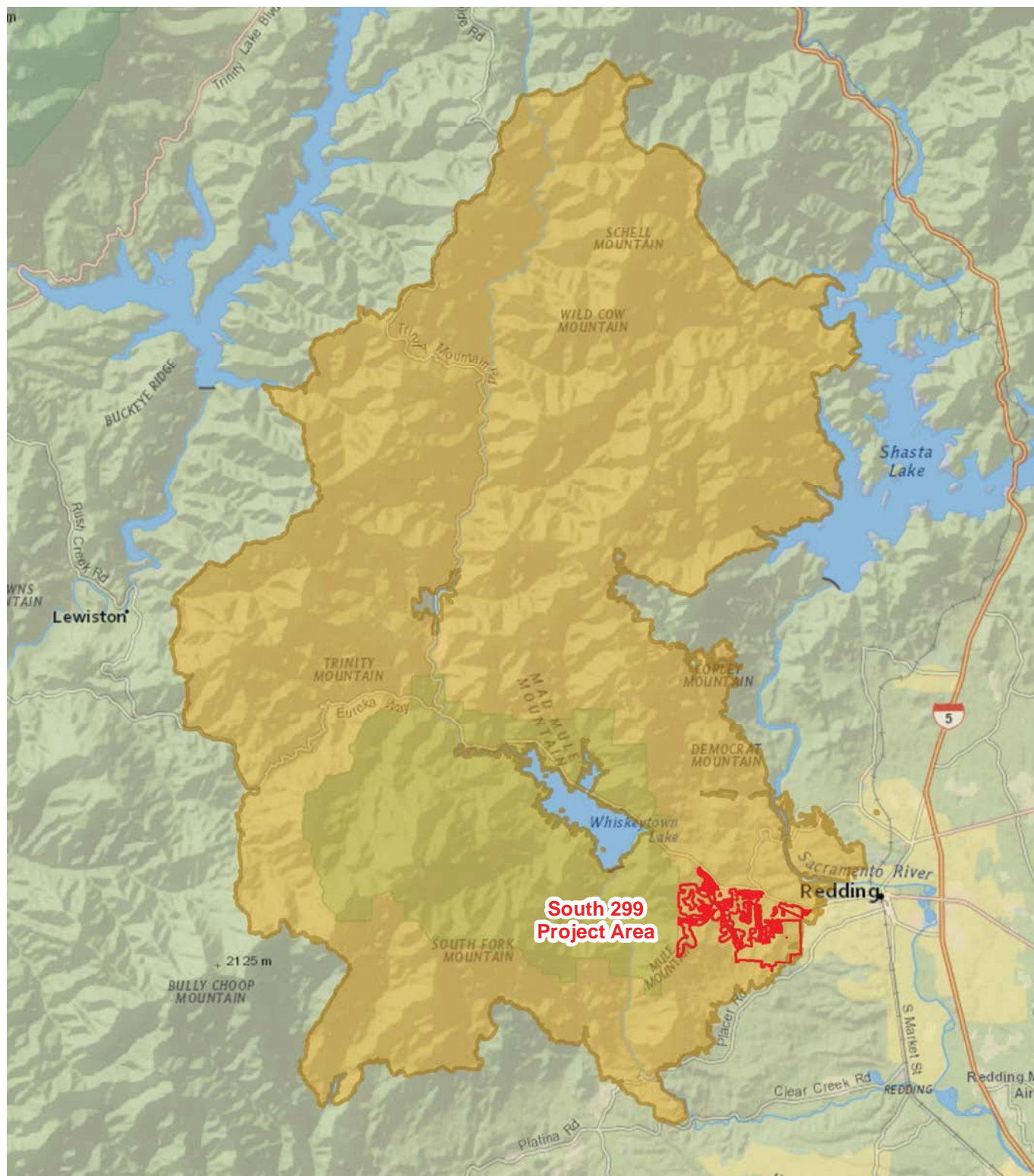


0 25 50 100 Miles



FIGURE 1  
PROJECT LOCATION  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA





Project Area

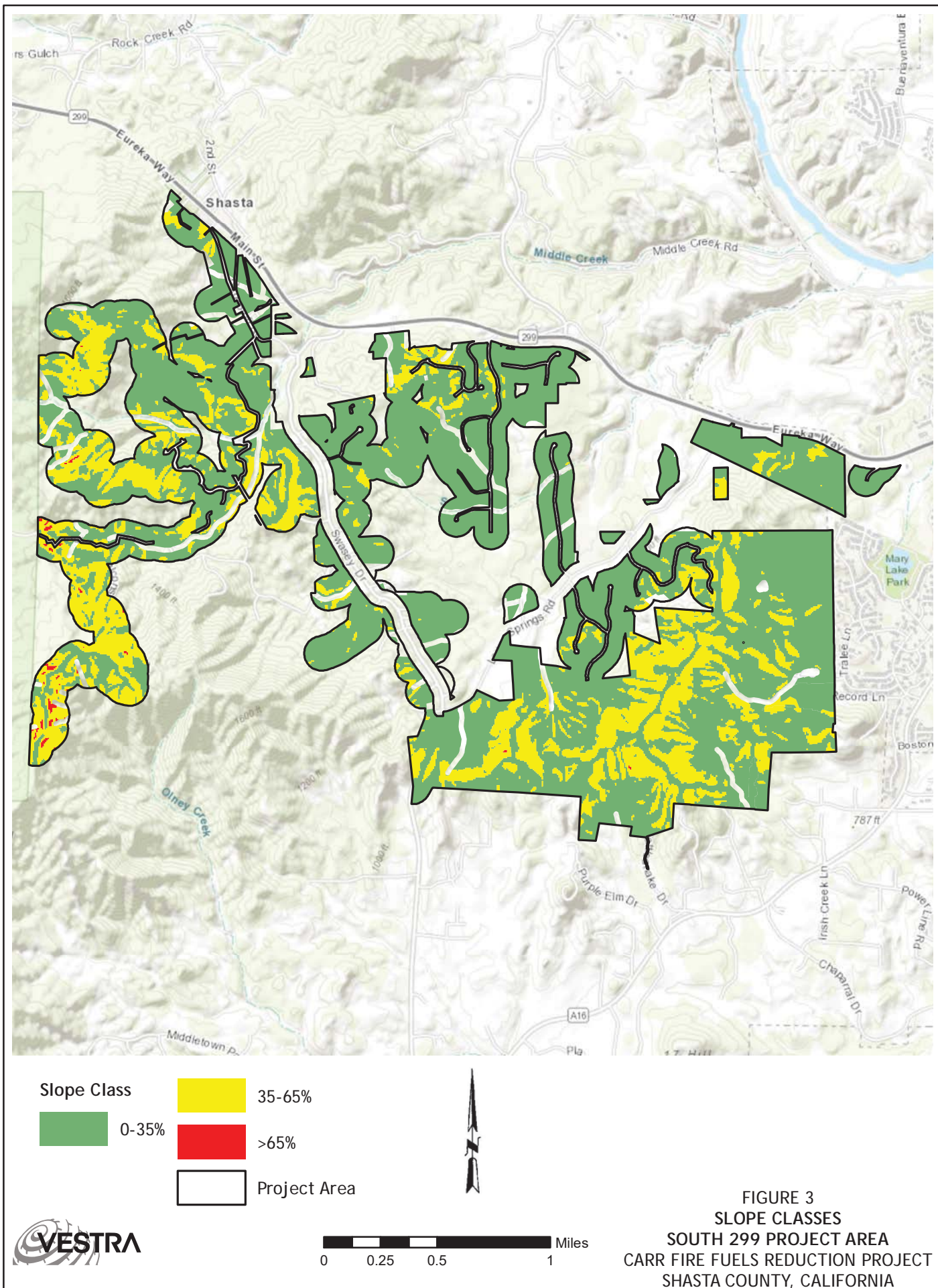
Carr Fire Boundary



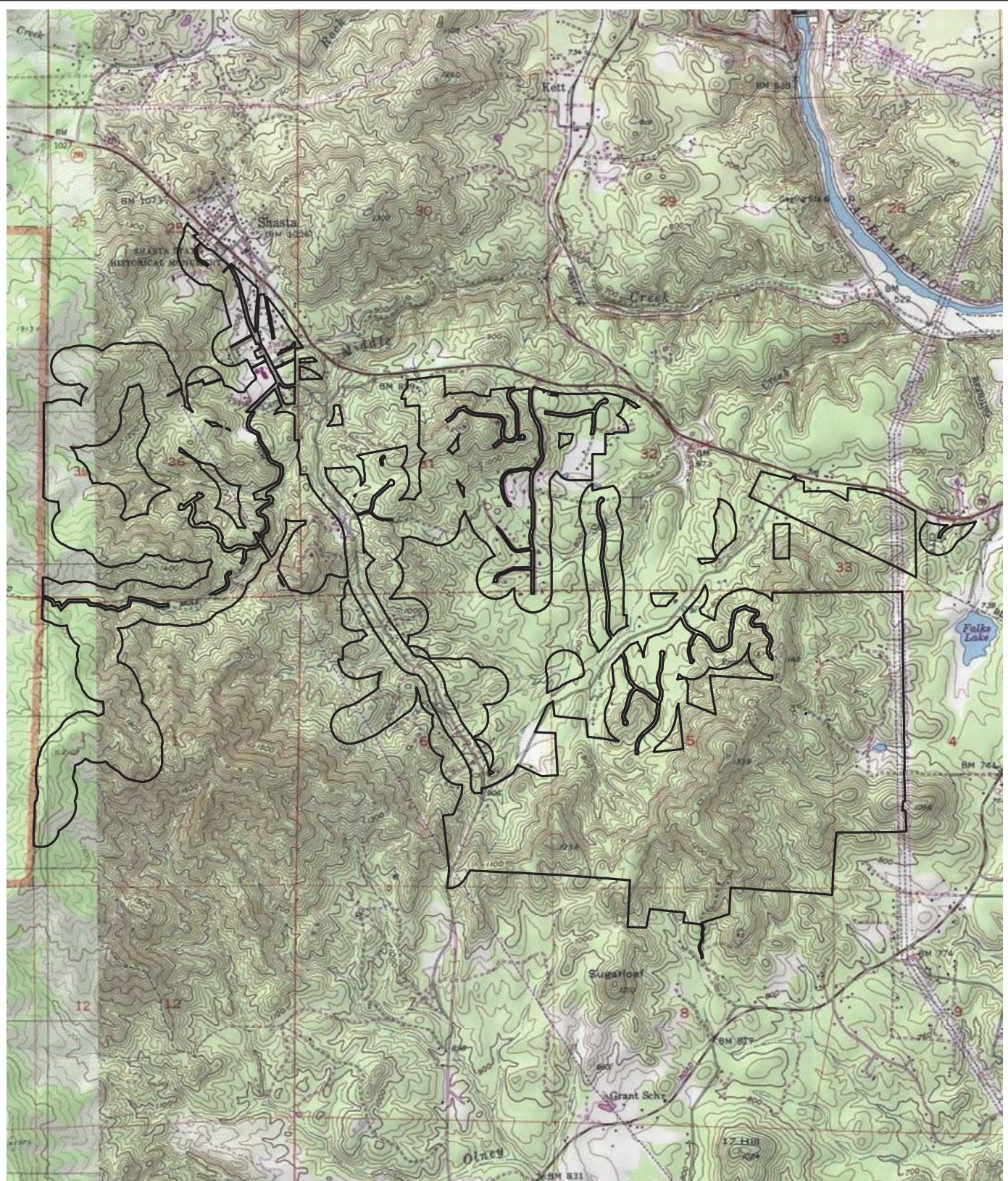
0 1.25 2.5 5 Miles



FIGURE 2  
PROJECT AREA  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA







 Project Area

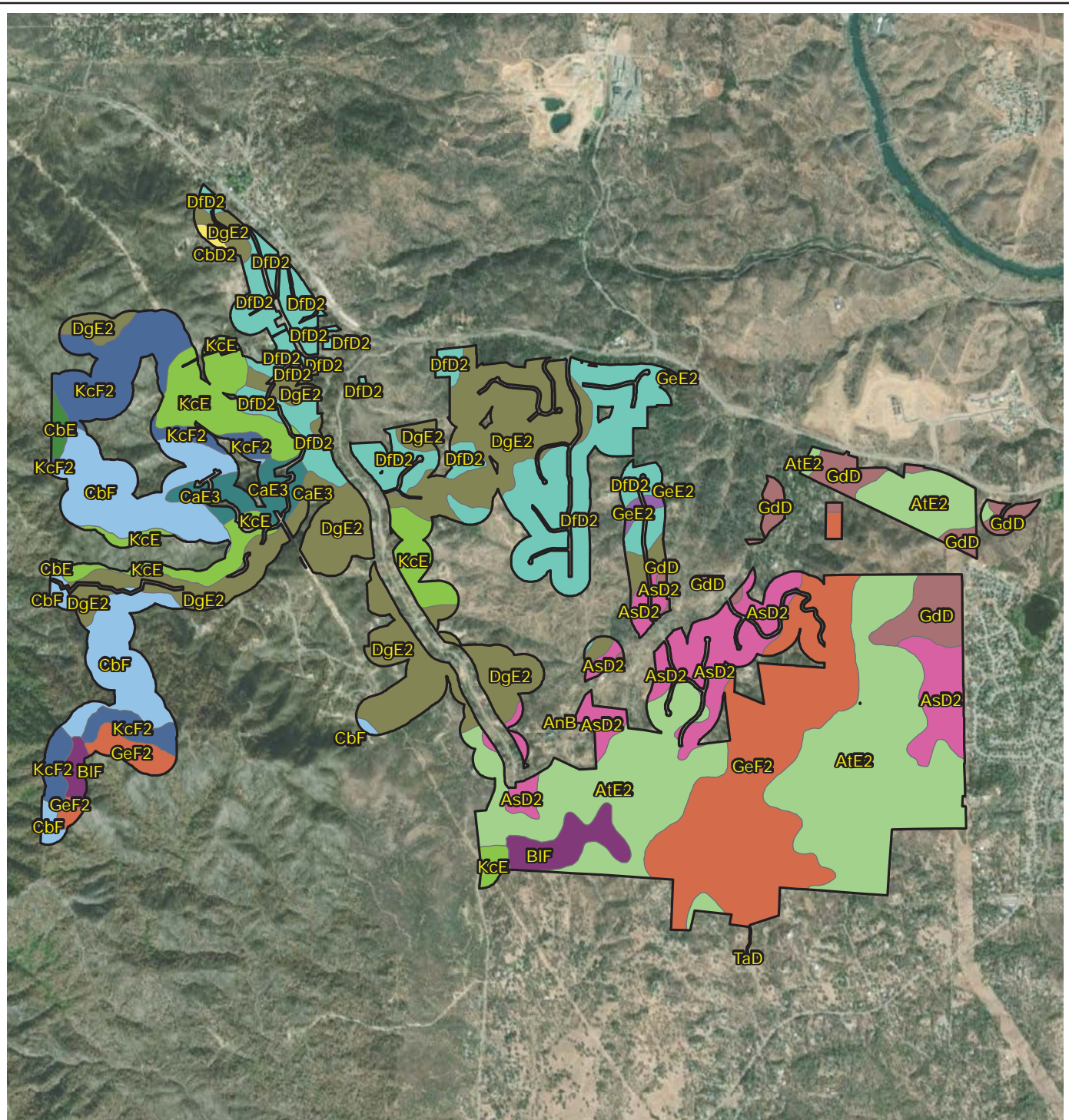


 Feet

SOURCE: USGS 7.5' TOPOGRAPHIC MAPS, REDDING AND IGO QUADRANGLES

FIGURE 4  
TOPO MAP  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA





Project Area

Soil Type

AnB	CaE3	DfD2	GeF2
AsD2	CbD2	DgE2	KcE
AtE2	CbE	GdD	KcF2
BIF	CbF	GeE2	TaD

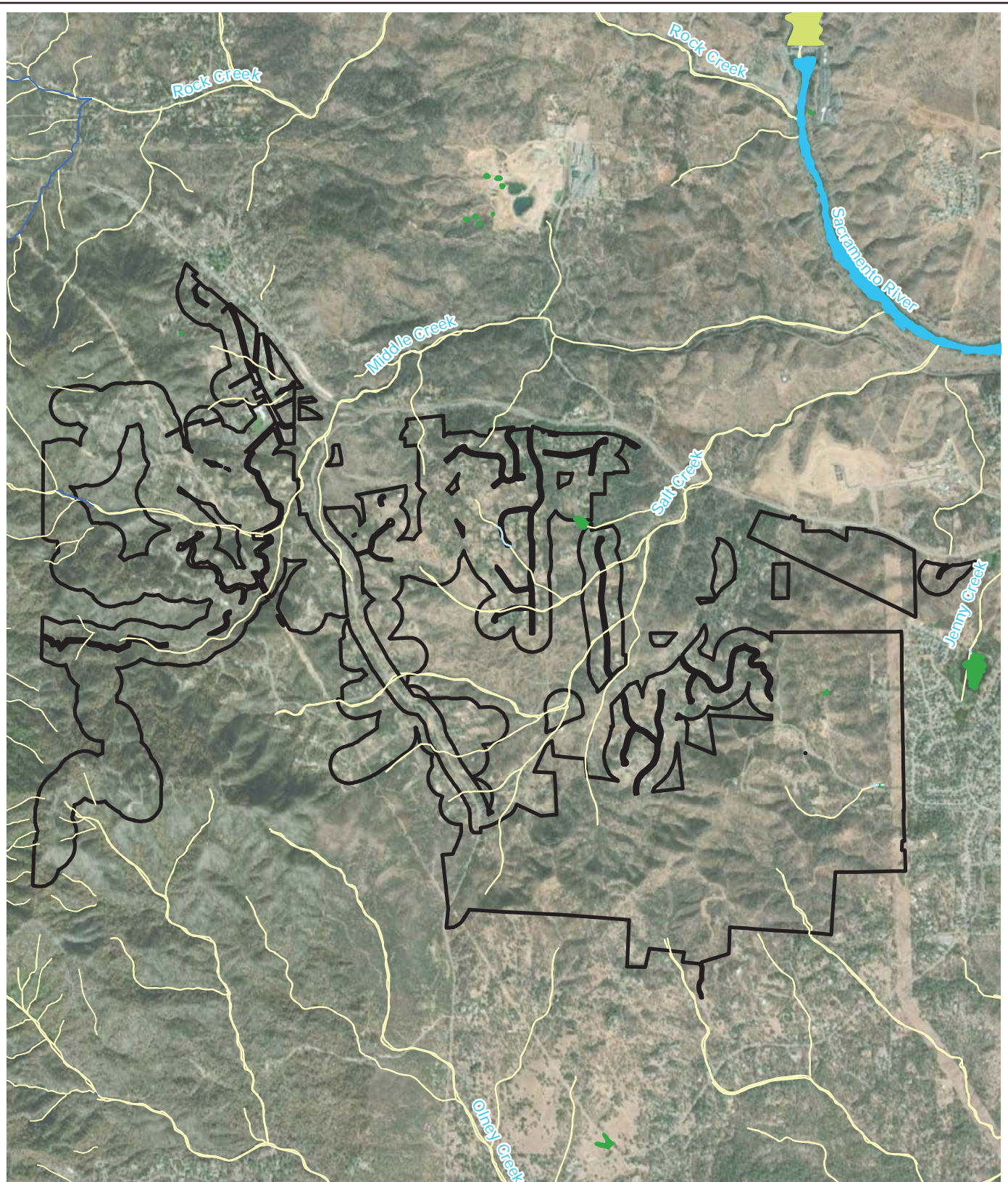









0 0.25 0.5 1 Miles



FIGURE 5  
SOILS  
SOUTH 299 PROJECT AREA  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA





- |   |                 |   |                           |  |                             |
|---|-----------------|---|---------------------------|--|-----------------------------|
|  | Project Area    |  | Riverine, Upper Perennial |  | Riverine, Intermittent      |
|  | Freshwater Pond |  | Riverine, Lower Perennial |  | Riverine, Unknown Perennial |
|  | Lake, Limnetic  |   |                           |  |                             |



0 1,500 3,000 6,000 Feet

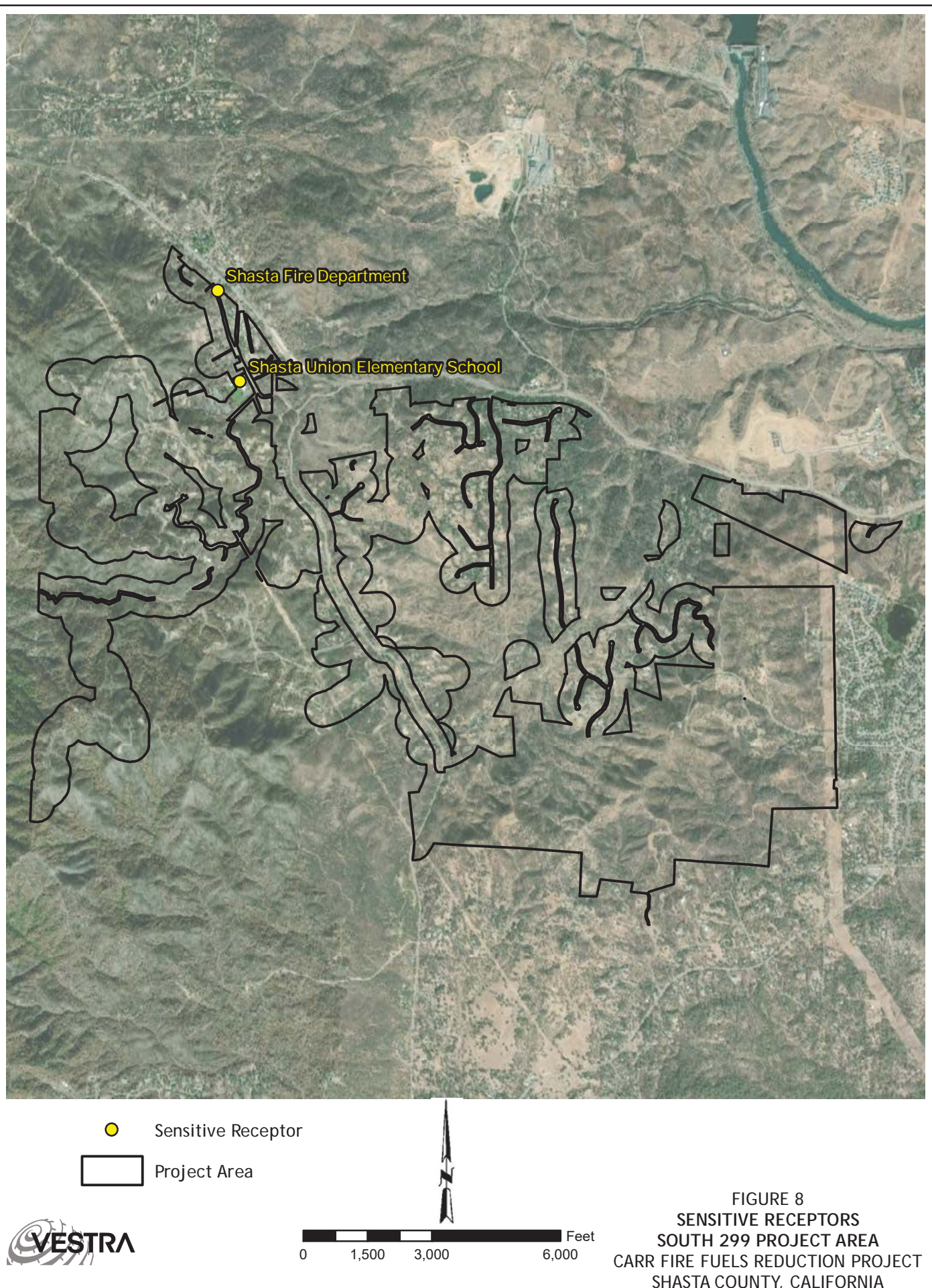
SOURCE: USFWS NATIONAL WETLAND INVENTORY 2019; USGS NHD 2019

**FIGURE 6**  
**HYDROLOGY**  
**SOUTH 299 PROJECT AREA**  
**CARR FIRE FUELS REDUCTION PROJECT**  
**SHASTA COUNTY, CALIFORNIA**

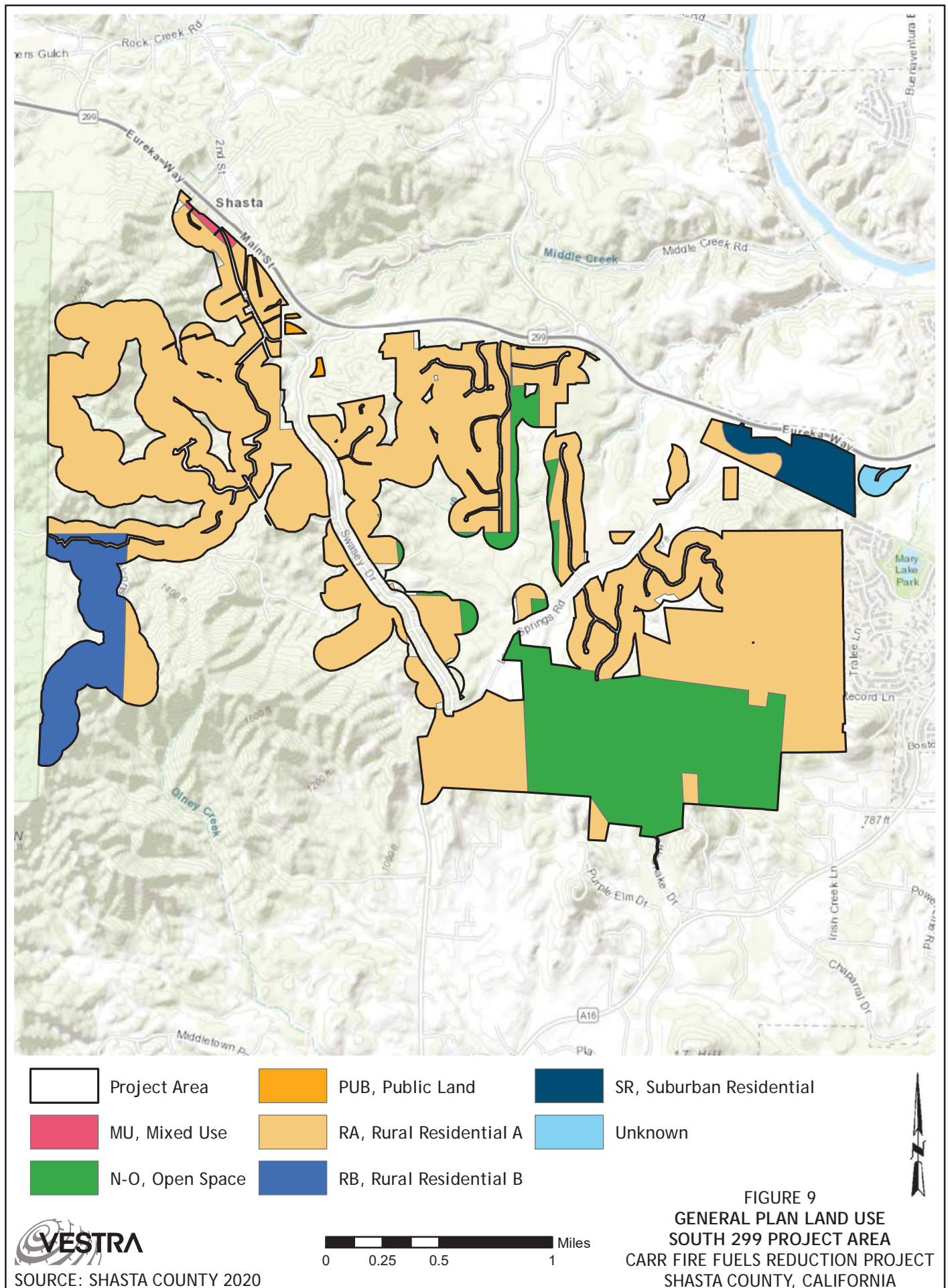






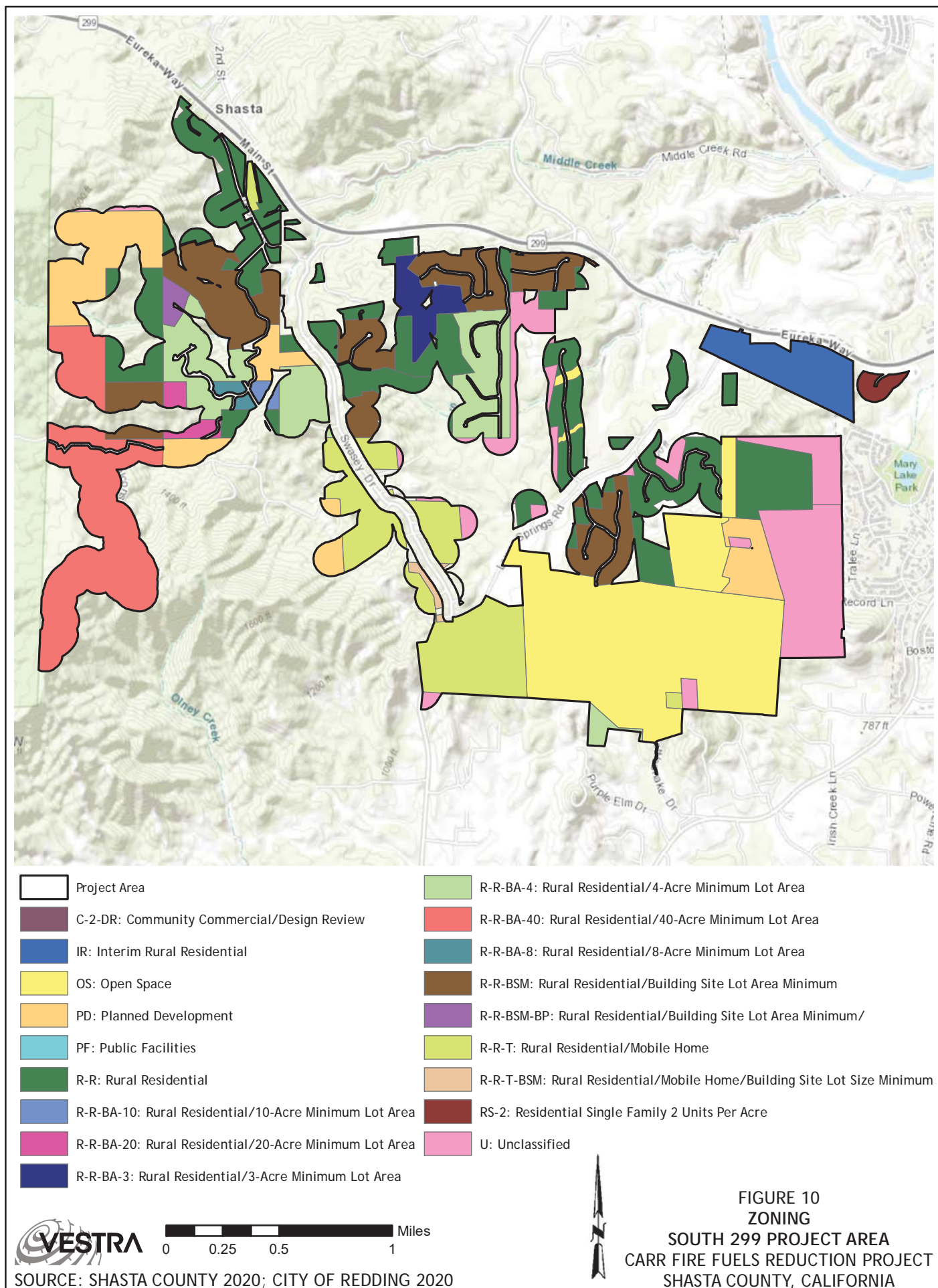






SOURCE: SHASTA COUNTY 2020

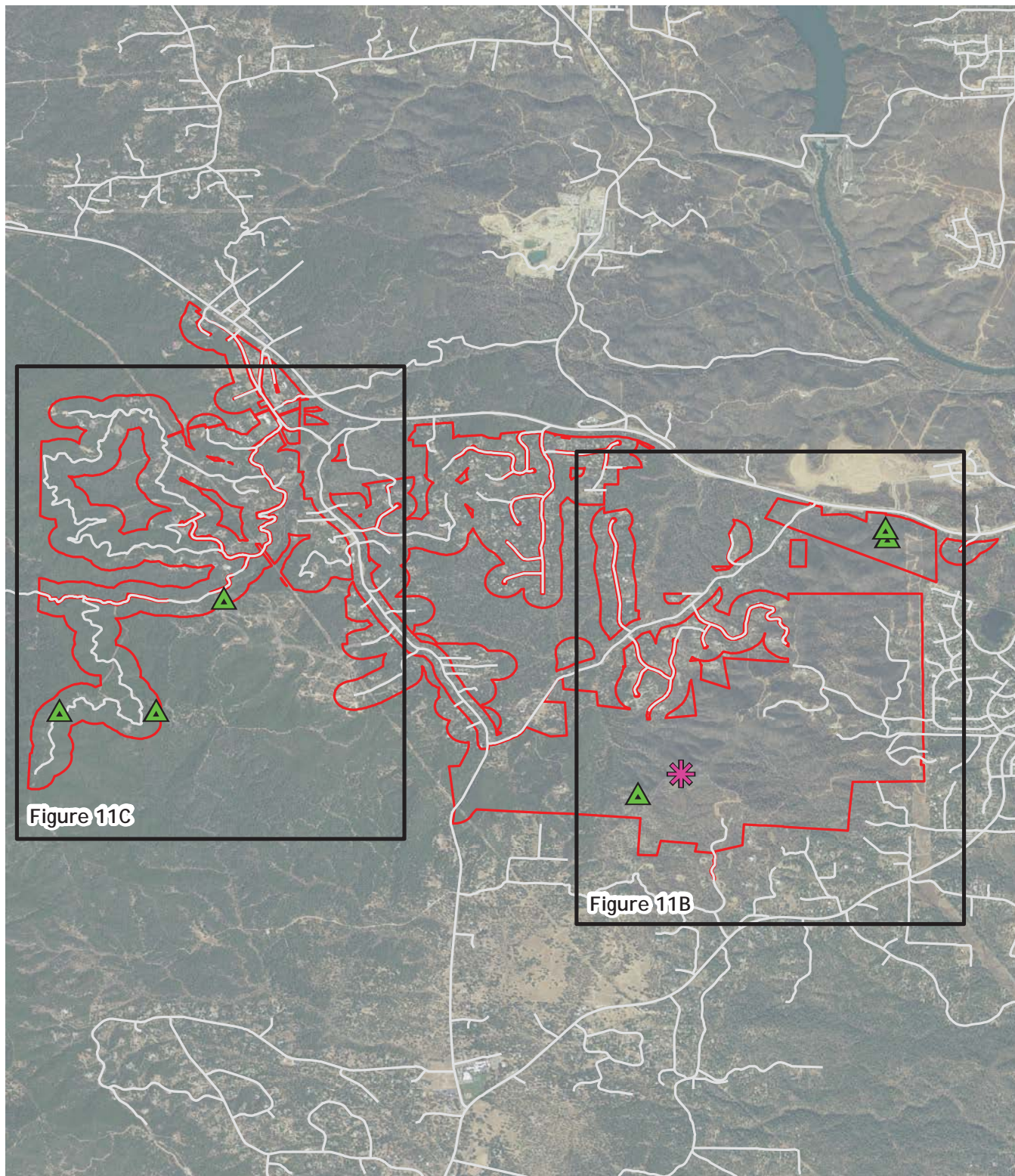
P:\GIS\72002\CEQA\72002\_LandUse.mxd



SOURCE: SHASTA COUNTY 2020; CITY OF REDDING 2020

P:\GIS\72002\CEQA\72002\_Zoning.mxd





*Clarkia borealis ssp. borealis*



*Lathyrus sulphureus var. argillaceus*



Project Area

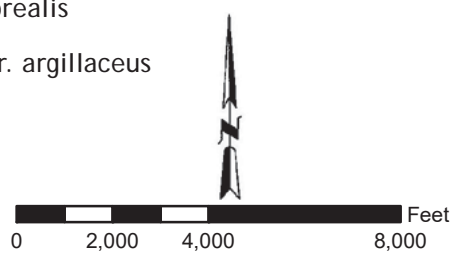
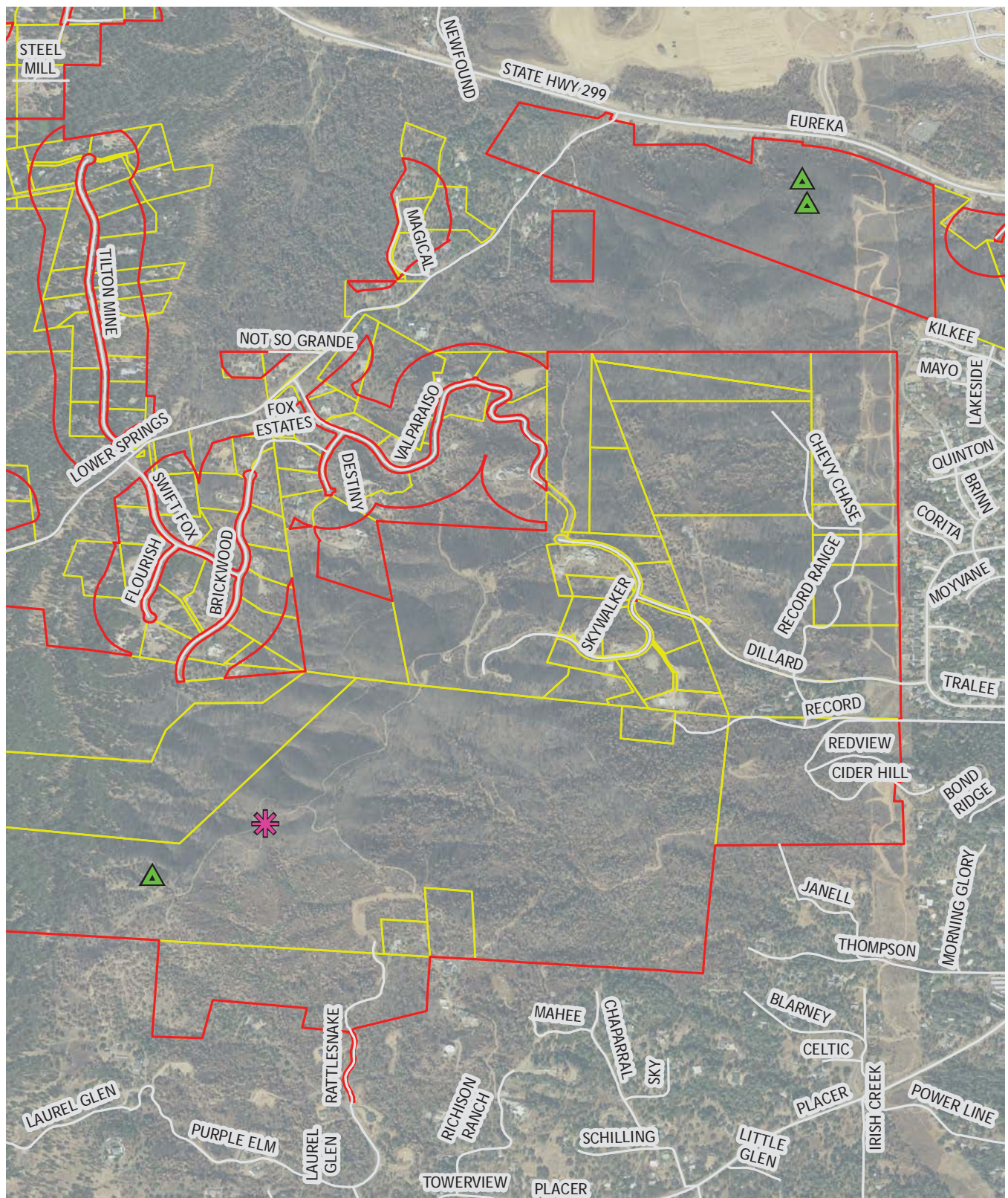


FIGURE 11A  
AREA SURVEYED FOR RARE PLANTS  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA





*Clarkia borealis* ssp. *borealis*



*Lathyrus sulphureus* var. *argillaceus*



Project Area



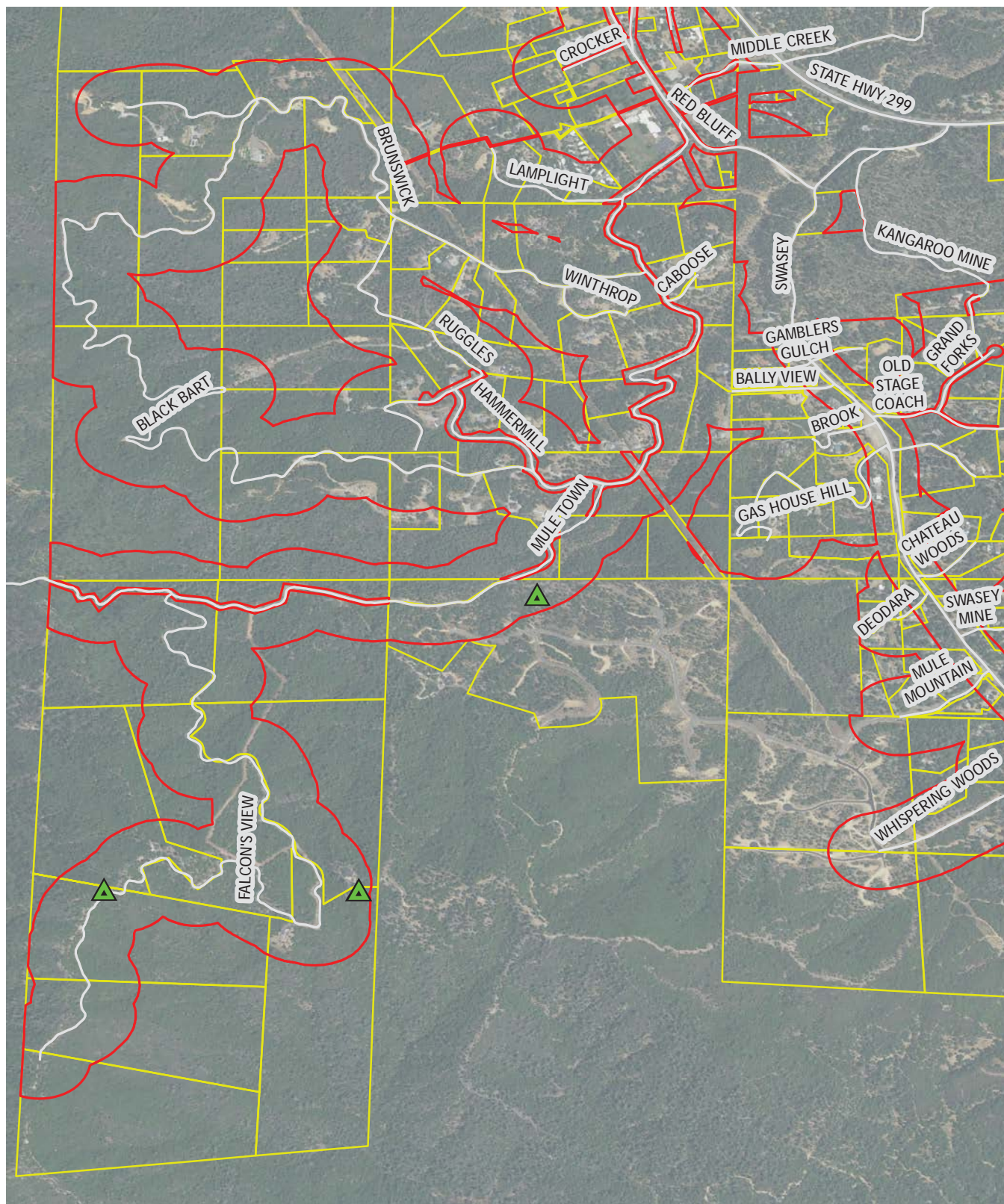
Project Parcels



FIGURE 11B  
RARE PLANT OBSERVATIONS  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA







*Clarkia borealis ssp. borealis*



*Lathyrus sulphureus var. argillaceus*



Project Parcels



Project Area



FIGURE 11C  
RARE PLANT OBSERVATIONS  
CARR FIRE FUELS REDUCTION PROJECT  
SHASTA COUNTY, CALIFORNIA

