

**Initial Study/Negative Declaration  
for the proposed  
Jenner Headlands Preserve Vegetation Management Project  
Sonoma County, California  
State Clearinghouse Number 2016012051**



prepared by:

The California Department of Forestry and Fire Protection (CAL FIRE)  
The Lead Agency Pursuant to Section 21082.1 of the  
California Environmental Quality Act (CEQA)

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**January, 2016**

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## NEGATIVE DECLARATION

### Introduction and Regulatory Context

#### Stage of CEQA Document Development

- Administrative Draft.** This 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 26, 2016, and is being circulated for a 30-day agency and public review period. The public review period ends on February 24, 2016. Instructions for submitting written comments are provided on Pages 5 & 6 of this document.
- 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 changes are displayed in strike-out text for deletions and underlined text for insertions. The CEQA administrative record supporting this document is on file, and available for review, at CAL FIRE's Sacramento Headquarters, Environmental Protection Program, which is located in the Natural Resources Building, 1416 Ninth Street, 15<sup>th</sup> Floor, Sacramento, California.

#### Introduction

This Initial Study/ Negative Declaration (IS/ND) describes the environmental impact analysis conducted for the proposed project. This document was prepared by California Department of Forestry and Fire Protection (CAL FIRE) staff utilizing information gathered from a number of sources including research and field review of the proposed project area and consultation with environmental planners and other experts on staff at other public agencies. Pursuant to Section 21082.1 of the California Environmental Quality Act (CEQA), the Lead Agency, CAL FIRE, has prepared, reviewed, and analyzed the IS/ND 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 significant adverse effects on the environment.

#### Regulatory Guidance

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

An Initial Study (IS) 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 (EIR). This IS/ND conforms to these requirements and to the content requirements of CEQA Guidelines Section 15071.

### **Purpose of the Initial Study**

CAL FIRE has primary authority for carrying out the proposed project and is the lead agency under CEQA. The purpose of this IS/ND is to present to the public and reviewing agencies the environmental consequences of implementing the proposed project and describe the adjustments made to the project to avoid significant environmental 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/ND is being circulated for public and agency review and comment for a review period of 30 days as indicated on the *Notice of Intent to Adopt a Negative Declaration* (NOI). The 30-day public review period for this project begins on January 26, 2016 and ends on February 24, 2016.

The requirements for providing an NOI are found in CEQA Guidelines §15072. These guidelines require CAL FIRE to notify the general public by utilizing at least one of the following three procedures:

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

CAL FIRE has elected to utilize posting of the NOI as the public notification method. The NOI was posted at three prominent locations on and off site in the area where the project is located for the entire 30-day public review period. The three locations where the NOI was posted during the 30-day public review period are:

1. At the Jenner Headlands Preserve entrance gate at the end of Willig Drive in Jenner, CA.
2. At the CAL FIRE Sonoma-Lake-Napa Unit Headquarters office at 1199 Big Tree Road, St. Helena, CA.
3. At CAL FIRE's West Division Headquarters at 2210 College Avenue in Santa Rosa, CA.
4. At the Sonoma County Clerk/Recorder's Office in Santa Rosa, CA.

A complete copy of this CEQA document was made available for review by any member of the public requesting to see it at Locations #2 and #3 above. An electronic version of the NOI and the CEQA document were made available for review for the entire 30-day review period through their posting on CAL FIRE's Internet Web Pages at:

[http://www.fire.ca.gov/resource\\_mgt/resource\\_mgt\\_EPRP\\_PublicNotice.php](http://www.fire.ca.gov/resource_mgt/resource_mgt_EPRP_PublicNotice.php)

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 which 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:

Christopher E. Browder, Deputy Chief, Environmental Protection

California Department of Forestry and Fire Protection  
Resource Management – Environmental Protection Program  
P.O. Box 944246  
Sacramento, CA 94244-2460  
Phone: (916) 653-4995  
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 Negative Declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, CAL FIRE could design and construct all or part of the project.

## **Project Description and Environmental Setting**

### **Project Location**

The project is located at the Jenner Headlands Preserve, which is land held and managed by The Wildlands Conservancy. The property is accessible at the end of Willig Drive in Jenner, CA, although there is a locked gate and permission to access the property must be obtained before entering. The project consists of 265 acres of land within the Preserve, located within portions of T7N R11W Sec. 3, 4, 5, 6, 7; T8N R11W Sec. 32, Mount Diablo Base and Meridian (38° 29.118, -123° 4.731).

### **Background and Need for the Project**

The proposed project is intended to be a landscape-level fuel break to protect nearby communities and natural resources from an advancing wildfire. The fuel break will establish locations where fire control efforts would be safer and more successful at slowing or stopping a fire than surrounding locations with denser vegetation. The shaded fuel break treatment areas are strategically located along major ridgetops to form a nearly continuous east-west fuel break through the forested portion of the Preserve. A long-term goal is to partner with the adjacent private and public landowners and make the east project area part of a continuous fuel break all the way to Pole Mountain to the northwest. This would create a continuous fuel break for over 20,000 linear feet across multiple ownerships.

### **Project Objectives**

1. Create a location with reduced fuels where wildland fire control tactics would be more effective, thereby increasing the chance that a wildland fire could be contained before reaching neighboring communities.
2. Mimic natural ecological processes by returning fire to the landscape.
3. Train CAL FIRE personnel in firing and control techniques.

### **Project Start Date**

The project will commence after the necessary environmental review has been completed. The project will be implemented between September and May as weather and air quality conditions allow.

### **Project Description**

The Jenner Headlands Preserve will create shaded fuel breaks prior to CAL FIRE implementing prescribed burns within them. The planned west project area is 141 acres and approximately 10,300 linear feet, and the planned east project area is 124 acres and approximately 11,500 feet, for a total of 265 acres and approximately 21,800 linear feet. Forty three acres in the east fuel break were treated between 2013 and

2015 by mastication and hand crews, and this will be the first shaded fuel break burn unit. Ladder fuel vegetation was thinned from the shaded fuel break, and brush and trees have begun to sprout. The understory burn will maintain the effectiveness of the fuel break by consuming these small sprouts and the masticated material on the ground with low-intensity fire. As the Preserve works towards treating all 265 planned shaded fuel break acres, CAL FIRE will continue to burn the understory as the fuel breaks are created.

Within the project area are two small open grasslands that will be burned for training and ecological restoration. Training activities will include firing operations and mobile attack from fire engines. Ecological restoration will be achieved through removal of heavy thatch build-up which will promote native grasses and improve forage for browsers. The meadows range in size from one to four acres and will be broadcast burned using wet lines for control. Bulldozers or other heavy equipment will not be used to create control lines. Mowing and weedeating may occur in the meadows prior to burning operations in order to modify fuel arrangement to reduce fire intensity.

### **Environmental Setting of the Project Region**

Jenner Headlands Preserve is a 5,630-acre mosaic of redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii*) forests, oak (*Quercus* spp.) woodland, chaparral, and coastal prairie overlooking the Pacific Ocean. The Preserve adjoins the Pacific Coast Highway (State Highway 1) for 2.5 miles adjacent to Sonoma Coast State Park just north of the Russian River Estuary.

### **Description of the Local Environment**

The project area is located along ridgetops in a general east-west direction through the center of the Preserve. The majority of the project area is moderately sloped with an average slope of 15%. Many locations on the ridgetop are nearly flat, with a few isolated areas with slopes up to 50%. These steeper areas are small, and will be burned with great care in order to keep fire intensity low and prevent high tree scorch heights. Elevation in the project area ranges from 960 feet to 1586 feet.

Within the shaded fuel break project areas, dominant species are Douglas-fir, tanoaks (*Lithocarpus densiflorus*), and madrones (*Arbutus menziesii*), with scattered large redwood specimens throughout. These tree species evolved with regular fires, and will recover well after low-intensity ground fire. With heavy fuel loading on the ground from mastication activities and trees with especially high height to diameter ratios, care will be exercised when burning to prevent excessive stem scorching.

### **Current Land Use and Previous Impacts**

Most of the forestland within the Preserve has been logged many times and has experienced fire suppression for decades. This has resulted in crowded stands with tall, narrow-crowned trees that remain stagnated over time and are susceptible to damaging stand-replacing fires. Ladder fuel vegetation was thinned from the shaded fuel break beginning in 2013 using hand crews and a masticator, and brush and trees have begun to sprout. The understory burn will maintain the effectiveness of the fuel break by consuming these small sprouts and the masticated material with low-intensity fire.

Currently, the Preserve is only open for guided recreation activities, although there is a plan to open the preserve to the public in the future. Approximately 500-700 people per year are hosted on the property through guided hikes and stewardship work days. The proposed project is not in an area where hiking typically occurs, and will be implemented at a time when recreation activities are not scheduled.

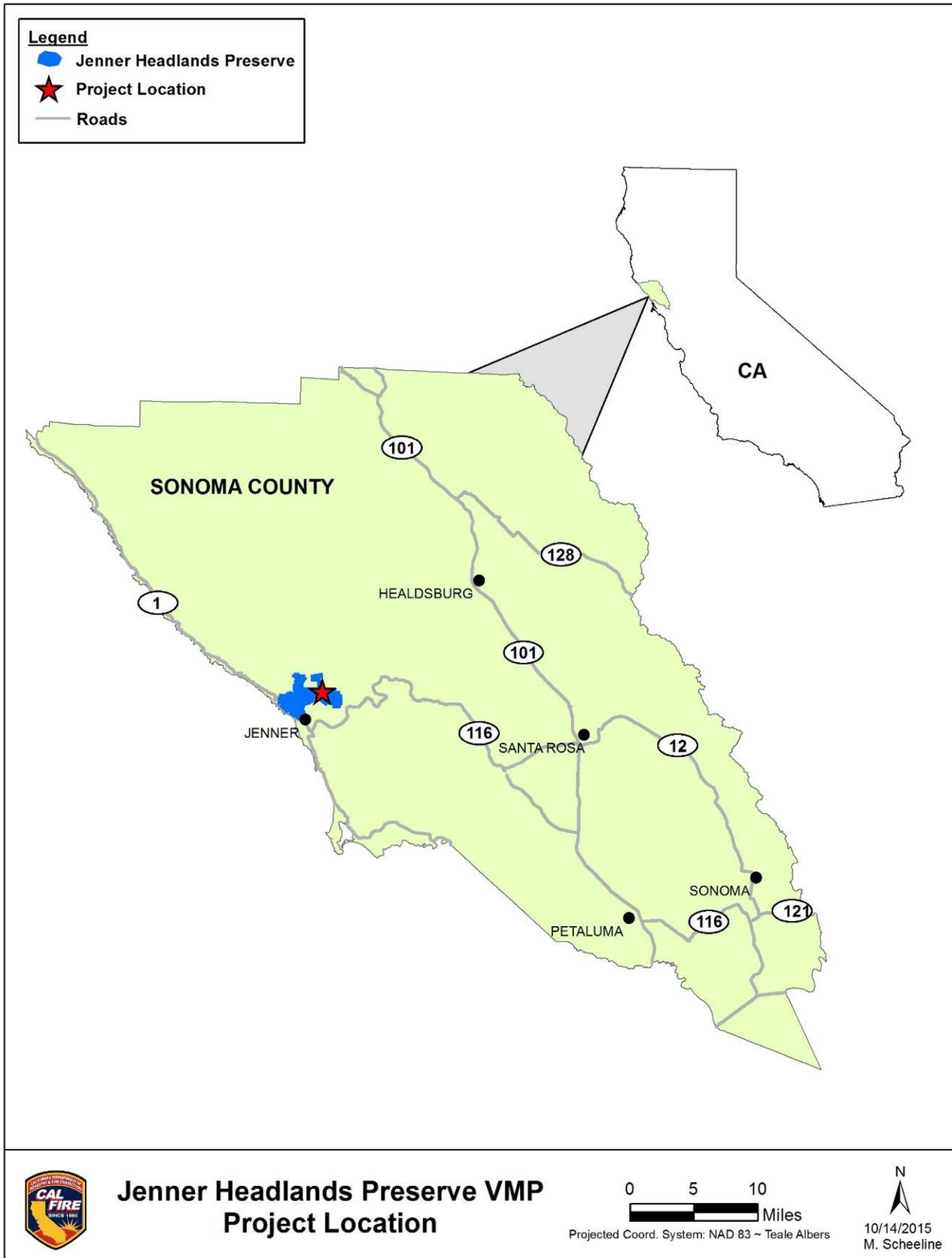
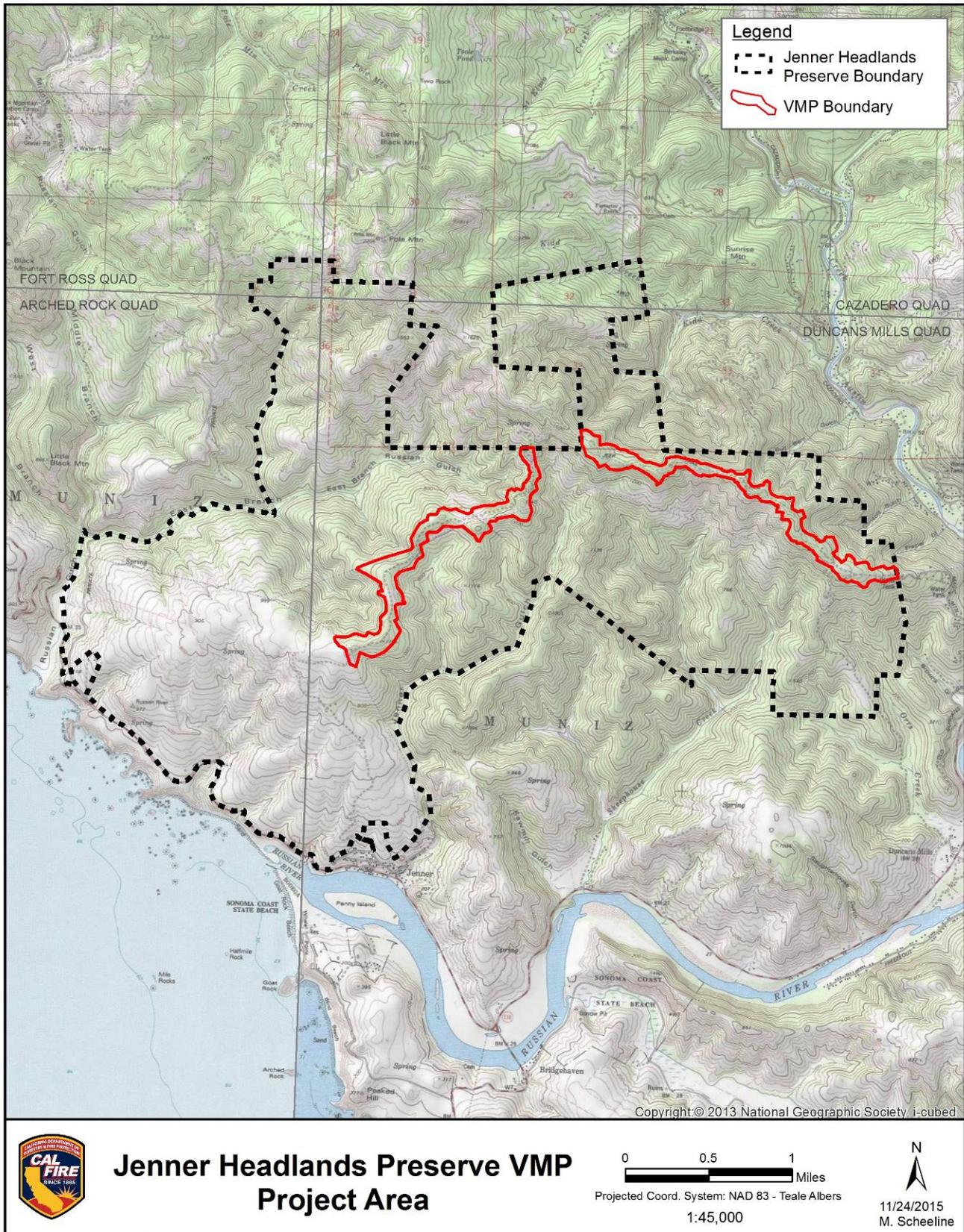


Figure 1: Project Location Map

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.



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Figure 2: Project Area Map

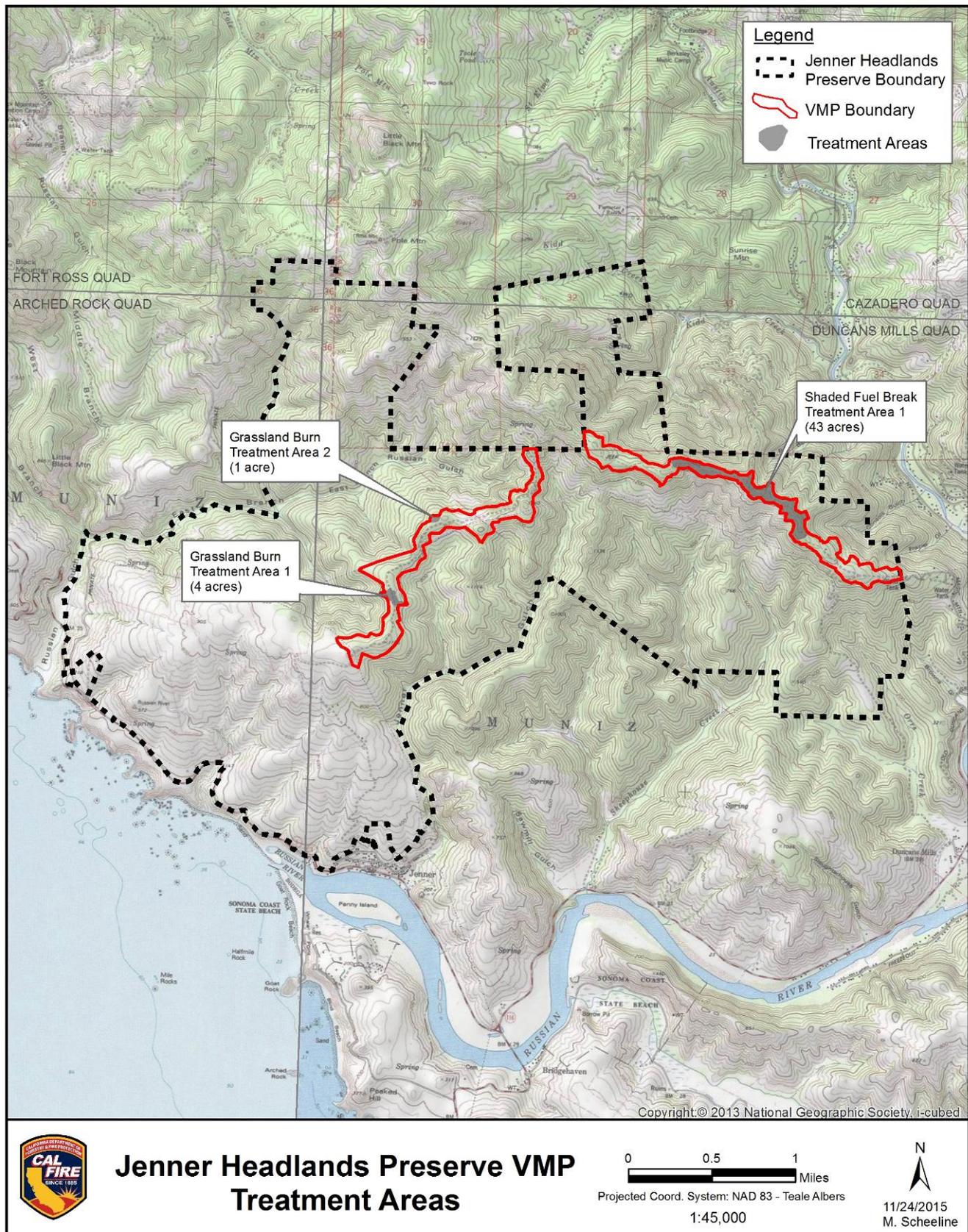


Figure 3: Treatment Areas Map

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.



Photo 1: Shaded fuel break with masticated material and sprouting vegetation.



Photo 2: Meadow bordered by Douglas-fir and oak forest.

## **Conclusion of the Negative Declaration**

### **Environmental Permits**

The proposed project may require the following environmental permits and CAL FIRE may be required to comply with the following State regulations:

No additional permits are expected.

### **Summary of Findings**

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

1. The proposed project will have no effect related to Agriculture and Forestry Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, Land Use Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, and Utilities and Service Systems.
2. The proposed project will have a less than significant impact on Aesthetics, Air Quality, Biological Resources, Greenhouse Gas Emissions, and Hazards and Hazardous Materials.

The Initial Study/Environmental Checklist included in this document discusses the results of resource-specific environmental impact analyses which were conducted by the Department. This Initial Study revealed that no significant environmental effects are expected to result from the proposed project; therefore, revision of the project to eliminate or reduce environmental impacts to a less than significant level was not necessary. CAL FIRE has found, in consideration of the entire record, that there is no substantial evidence that the proposed project, as currently proposed, would result in a significant effect upon the environment. The IS/ND is therefore the appropriate document for CEQA compliance.

## INITIAL STUDY/ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION					
1. Project Title:	Jenner Headlands Preserve Vegetation Management Project				
2. Lead Agency Name and Address:	California Department of Forestry and Fire Protection P.O. 944246 Sacramento, CA 94244-2460				
3. Contact Person and Phone Number:	Christopher E. Browder, 916-653-4995				
4. Project Location:	Jenner Headlands Preserve, Sonoma County				
5. Project Sponsor's Name and Address:	N/A (CAL FIRE is project sponsor and lead agency)				
6. General Plan Designation:	TP B6 160				
7. Zoning:	Timber Production				
8. Description of Project: See Pages 6-7 of this document					
9. Surrounding Land Uses and Setting:	Timber production, rural residential, ranching, recreation				
10: Other public agencies whose approval may be required:	None anticipated				
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:					
<p>The environmental factors checked below are the ones which would potentially be affected by this proposed project and were more rigorously analyzed than the factors which were not checked. The results of this analysis are presented in the detailed Environmental Checklist which follows.</p>					
<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology / Soils
<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation / Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

**DETERMINATION**

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Helge Eng, Deputy Director  
Department of Forestry and Fire Protection  
P.O. Box 944246  
Sacramento, CA 94244-2460

Date Signed

**ANALYSIS OF POTENTIAL ENVIRONMENTAL IMPACTS**

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. Aesthetics. Will the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Will the project have a substantial adverse effect on a scenic vista?**

Less than Significant Impact: A short-term change in the aesthetics of the project area is anticipated due to blackening of the ground where dead material is consumed and minimal scorching of trees. After one season, the visual effects of prescribed burning will be greatly lessened by falling leaves and needles and vegetation regrowth. The project area is only visible from within the Preserve, and will not affect any scenic vistas. The only people who will see the project area are the limited number of recreationists permitted within the Preserve during organized activities.

**b) Will the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

No Impact: The project area is not visible from a state scenic highway.

**c) Will the project substantially degrade the existing visual character or quality of the site and its surroundings?**

No Impact: The project will not substantially degrade the existing visual character or quality of the site and its surroundings.

**d) Will the project create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?**

No Impact: The project will not create a new source of light or glare.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**II. Agriculture and Forest Resources.**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection

regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) 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"/> |
| c) 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"/> |
| d) 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"/> |
| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Discussion**

**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?**

No Impact: The project will not convert any farmland.

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

No Impact: The project will not conflict with existing zoning or a Williamson Act contract.

**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))**

No Impact: The project will not conflict with existing zoning or cause any rezoning of forest land or timberland.

**d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

No Impact: The project will not result in the loss of forest land or cause conversion of forest land to non-forest use.

**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 or conversion of forest land to non-forest use?**

No Impact: The project will not involve any changes in the existing environment which could result in a conversion of allowable uses.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>III. Air Quality.</b>				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Will the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Information about Air Quality**

**Discussion**

**a) Will the project conflict with or obstruct implementation of the applicable air quality plan?**

No Impact: The project will not conflict with or obstruct implementation of the air quality plan.

**b) Will the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

Less Than Significant Impact: A smoke management plan will be submitted to the Northern Sonoma County Air Pollution Control District. Burning will only occur on designated burn days and within the approved prescription. Burns will be conducted in small units (<10 acres per day) which will minimize smoke impacts. These measures will ensure that smoke generated from the project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

**c) Will 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

No Impact: The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment.

**d) Will the project expose sensitive receptors to substantial pollutant concentrations?**

No Impact: The project will not expose sensitive receptors to substantial pollutant concentrations. Burning will occur on designated burn days, within prescription, and in small units (<10 acres) in order to minimize pollutant concentrations.

**e) Will the project create objectionable odors affecting a substantial number of people?**

No Impact: The project will not create objectionable odors that would affect a substantial number of people. Burning will occur on designated burn days, within prescription, and in small units (<10 acres) in order to minimize pollutant concentrations.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IV. Biological Resources. Will the project:</b>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Information about Biological Resources**

**Discussion**

**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?**

Less Than Significant Impact: A search of the California Natural Diversity Database (CNDDDB) resulted in one recorded species within the project area, the Sonoma tree vole (*Arborimus pomo*). The Sonoma tree vole is a California Department of Fish and Wildlife (CDFW) Species of Special Concern and is restricted to coastal forests in Sonoma, Mendocino, and Humboldt Counties. Sonoma tree voles are one of the most highly specialized rodents in the world, since they subsist almost entirely on a diet of Douglas-fir needles. Sonoma tree voles usually nests in trees rather than the ground, sometimes using old nests of birds, squirrels, or woodrats, and they prefer larger mature trees. The stand of trees making up the shaded fuel break project is young and small-diameter, and is not prime habitat for tree vole nesting; if voles and nests do occur in trees within the project area, they will be safely out of the way of the low-intensity burning activities where flame heights and scorching will be minimal. Tree voles breed year-round, so burning that may occur in the spring would not affect a limited breeding window. Burning in the shaded fuel breaks and open meadows will not affect this species due to its nesting habits and life cycle. The CDFW was notified by mail and by telephone of the proposed project, but no comments were received regarding the 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 Game or the U.S. Fish and Wildlife Service?**

No Impact: The project area does not include any riparian habitat or sensitive natural communities.

**c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No Impact: There are no wetlands in the project area. The project will not cause any changes in hydrology which could impact wetlands outside the project area.

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

No Impact: The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, will not interfere with any wildlife corridors, and will not impede the use of native wildlife nursery sites.

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

No Impact: The project will not conflict with any local policies or ordinances protecting biological resources, including tree preservation policies and ordinances.

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

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

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. Cultural Resources. Will the project:</b>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Information about Cultural Resources**

**Discussion**

**a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?**

No Impact: An archaeological survey report was prepared by Megan Scheeline in December, 2015. The report was reviewed and approved by CAL FIRE Archaeologist Chuck Whatford. Sites within the project area will be avoided and will not be impacted.

**b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

No Impact: An archaeological survey report was prepared by Megan Scheeline in December, 2015. The report was reviewed and approved by CAL FIRE Archaeologist Chuck Whatford. Sites within the project area will be avoided and will not be impacted.

**c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

No Impact: The project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

**d) Would the project disturb any human remains, including those interred outside of formal cemeteries?**

No Impact: The project does not include ground disturbance or excavation, and no disturbance of any human remains, including those interred outside of formal cemeteries, is expected to occur. If human remains are discovered, a CAL FIRE Archaeologist will be contacted and the protocols of the County Coroner and the Native American Heritage Commission will be followed.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VI. Geology and Soils. Would the project:</b>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

**ii) Strong seismic ground shaking?**

**iii) Seismic-related ground failure, including liquefaction?**

**iv) Landslides?**

No Impact: The project will not cause rupture of a known earthquake fault, will not cause seismic ground shaking, will not cause seismic-related ground failure, including liquefaction, and will not cause any landslides or increase landslide potential.

**b) Would the project result in substantial soil erosion or the loss of topsoil?**

No Impact: The project consists of low-intensity broadcast burning that will not result in substantial soil erosion or the loss of topsoil.

**c) 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?**

No Impact: The project is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and will therefore not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

**d) 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 risks to life or property?**

No Impact: The project is not located on an expansive soil, and will not create substantial risks to life or property.

**e) 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?**

No Impact: The project is not located where soils would be incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

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ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**VII. Greenhouse Gas Emissions. Would the project:**

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

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**Information about Greenhouse Gas Emissions**

**a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less Than Significant Impact: The project will generate greenhouse gas emissions by burning of vegetation and the use of fuel by vehicles traveling to and from the site. Emissions released by project activities are estimated to be 475.37 metric tons CO<sub>2</sub>e per year, which is below the significance level of 900 metric tons per year.

Total emissions from project activities per year (refer to detailed calculations below):  
 2.42 metric tons CO<sub>2</sub>e (fossil fuel consumption) + 461.58 metric tons CO<sub>2</sub>e (shaded fuel break burning) + 11.37 metric tons CO<sub>2</sub>e (grassland meadow burning) = **475.37 metric tons CO<sub>2</sub>e**

Fossil Fuel Consumption

- 16 fire engine days and 24 pickup truck days
- Average 40 miles roundtrip per engine and pickup (40 miles for 16 engine days = 640 miles; 40 miles for 24 pickup truck days = 960 miles)
- Mobile attack: 2 hours/day for 2 days = 4 mobile attack hours
- 160 gallons drip torch fuel (half diesel and half gasoline)

Engine Travel:	640 miles / 8 miles per gallon =	80 gallons
Mobile Attack:	4 hours x 8 gallons per hour =	32 gallons
Diesel Drip Torch Fuel:		<u>80 gallons</u>
		112 gallons diesel
Gasoline Drip Torch Fuel:		80 gallons gasoline
Pickup Truck Travel:	960 miles / 15 miles per gallon =	<u>64 gallons gasoline</u>
		144 gallons gasoline

112 gallons diesel x 10.15 kg CO<sub>2</sub>/gal. = 1,137 kilograms CO<sub>2</sub>e  
 1,137 kilograms CO<sub>2</sub>e ÷ 1000 kg/metric ton = 1.14 metric tons CO<sub>2</sub>e from diesel

144 gallons gasoline x 8.88 kg CO<sub>2</sub>/gal. = 1,279 kilograms CO<sub>2</sub>e  
 1,279 kilograms CO<sub>2</sub>e ÷ 1000 kg/metric ton = 1.28 metric tons CO<sub>2</sub>e from gasoline

Fossil Fuel Consumption = 1.14 + 1.28 = **2.42 metric tons CO<sub>2</sub>e** from diesel and gasoline

Broadcast Burning

A First Order Fire Effects Model (FOFEM) program was used to estimate greenhouse gas emissions from broadcast burning for the project. The FOFEM results are attached to this report in Appendix A.

Shaded fuel break:

17.10 tons C/acre (preburn) – 7.19 tons C/acre (postburn) = 9.91 tons C/acre consumed  
 9.91 tons C/acre x 0.907185 = 8.99 metric tons C/acre  
 8.99 metric tons C/acre x 3.667 = 32.97 metric tons CO<sub>2</sub>e/acre  
 32.97 metric tons CO<sub>2</sub>e/acre x 14 acres per year = **461.58 metric tons CO<sub>2</sub>e** from broadcast burning in shaded fuel breaks per year

Grassland meadows:

0.68 tons C/acre (preburn) – 0.0 tons C/acre (postburn) = 0.68 tons C/acre consumed

0.68 tons C/acre x 0.907185 = 0.62 metric tons C/acre

0.62 metric tons C/acre x 3.667 = 2.27 metric tons CO<sub>2</sub>e/acre

2.27 metric tons CO<sub>2</sub>e/acre x 5 acres per year = **11.37 metric tons CO<sub>2</sub>e** from broadcast burning in grassland meadows per year

<b>Conversion Factors</b>	
1 gallon diesel = 10.15 kilograms CO <sub>2</sub>	1 metric ton = 1000 kilograms
1 gallon gasoline = 8.88 kilograms CO <sub>2</sub>	1 ton = 0.907185 metric tons
One ton carbon = 3.667 tons CO <sub>2</sub>	

### Discussion

Prescribed burning is generally used to reduce the fuel load of the forest floor and coarse woody debris, as well as a portion of the above ground biomass. The purpose of the prescribed fire is to reduce the risk of large damaging fires by creating conditions that increase the effectiveness of fire suppression. Prescribed fire typically does not affect soil carbon due to lower burn temperatures than wildfire and limits carbon release because it typically affects only understory plants and ladder fuels. Prescribed burning returns some carbon dioxide, methane, nitrous oxide, and particulate matter to the atmosphere. Combustion generally is more complete than wildfire, which releases higher concentrations of the other greenhouse gasses and particulate matter (Mader 2007). Actively managed forests with fuels management generally exhibit below-average fire frequency (Eckert 2007).

An important cause of carbon loss is catastrophic wildfires, especially in fire-adapted ecosystems such as those of the Sierra Nevada Mountains. Wildfires may emit up 100 tons of CO<sub>2</sub> per acre depending on forest type, density, and fire intensity (Helms 2007). According to a study by R. Neil Sampson, a prescribed fire could cause 35% reduction in the emissions that can otherwise be expected from the average wildfires. Wildfires also remove carbon from surface soils and emit significant quantities of aerosols, particulates, and nitrous oxide and methane, which are more potent greenhouse gasses than CO<sub>2</sub>. Low intensity fires fail to kill the majority of the trees, but reduce fuel hazards for subsequent wildfires. Unnaturally dense forests provide fuel for unnaturally intense and large wildfires. High intensity fires are catastrophic in that they kill many trees, and convert much carbon stored as biomass to CO<sub>2</sub> emissions to the atmosphere. (Mader 2007). Unmanaged forests are at greatest risk of losing large amounts of stored carbon to the atmosphere.

Fuel reduction treatments, such as mechanical thinning and prescribed burning, can be used to reduce CO<sub>2</sub> emissions from wildfires although both treatments have direct carbon emissions associated with implementation while reducing carbon stocks. The fraction of fuel combusted during a fire event tends to increase with increasing burn severity. Prescribed fires are typically less severe than wildfire since they are implemented when atmospheric conditions are stable and fuel moisture is high enough to maintain flame length, combustion, and rate of spread within prescription. Additionally, prescribed fire conditions are such that overstory tree mortality rates are low, leaving much of the live-tree carbon pool intact. As a result, the amount of biomass combusted during prescribed fire is less than what would occur during a wildfire.

Fire is one of the largest potential risks to loss of stored terrestrial C and is a loss pathway that is difficult to quantify due to the high degree of spatial and temporal variation in fire emissions. At multi-decadal time scales, wildfires have a near neutral effect on atmospheric CO<sub>2</sub>: forest regrowth balances punctuated C losses due to combustion, assuming that fire return intervals remain constant (Wiedinmyer, C. and Jason C Neff, 2007).

Fuel reduction projects that do not change the vegetation type are carbon neutral over time. The time needed to sequester the amount of carbon released by the treatment is determined by the amount of carbon released and the subsequent regrowth of the vegetation. Treatments that reduce the number of trees or competition from other vegetation, leading to older larger more fire resistant trees, reduce the probability of the stand being lost to catastrophic wildfire, thereby reducing the amount of carbon released when a wildfire occurs. As a consequence, the treatment increases the probability the larger trees will remain alive and sequestering carbon farther into the future. Treatments also release nutrients to the soil increasing the growth and capacity to sequester carbon in the remaining trees.

California’s wildlands are going to burn and the carbon is going to be released. Through prescribed fire land managers can have a say in the timing and quantity of some of those releases. Land managers can also lessen the impacts or provide benefits for other environmental resources. Fire hazard reduction may be an objective of prescribed fire; however, other objectives such as control of invasive species, wildlife habitat improvement, or range improvement are often also objectives. If a wildfire does happen to enter an area that was treated, the wildfire may be contained sooner with reduced area burned and consequently reduced carbon emissions. The reduced number of acres or fire intensity may have benefits to other resource areas beside the reduction of carbon emissions. The reduced wildfire size or intensity may also have benefits to environmental resources, public health, and firefighter safety.

All CAL FIRE prescribed burns get a Smoke Management Permit from the local Air District. Burning is done on approved burns days as determined by the Air District. This process ensures there are not any significant smoke impacts to public health from the project.

Prescribed burn projects undertaken by CAL FIRE are a management tool. These projects only take place on working landscapes. They are not used to convert areas to other land uses. The land remains in production and therefore is available to sequester carbon into the future. Conversion of land to other uses such as factories or subdivisions would have a much greater increase in carbon emissions. Prescribed fires are also designed to achieve the landowners’ objectives; they are carefully planned to minimize the area treated and to only consume the amounts of fuel necessary to meet the prescribed burn objectives. Prescribed burns are not initiated without specific burning objectives to be achieved. CAL FIRE does not believe prescribed burning of understory stands produces an increase in the long term release of greenhouse gases from forested landscapes.

**b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

No Impact: The project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VIII. Hazards and Hazardous Materials. Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, Would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, Would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) 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"/> |
| h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
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## Discussion

### **a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

No Impact: Drip torch fuel will be transported to the project area in containers designed for that use. No other hazardous materials will be transported, used, or disposed of.

### **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?**

No Impact: There are no reasonably foreseeable upset and/or accident conditions that could release hazardous materials into the environment associated with the project.

### **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?**

No Impact: The project is not within one-quarter mile of any existing or proposed schools.

### **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?**

No Impact: The project is not located on a site which is included on a list of hazardous materials sites.

### **e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

No Impact: The project is not located within an airport land use plan or within two miles of any airport.

### **f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

No Impact: The project is not in the vicinity of a private airstrip.

**g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

No Impact: The project will not impair implementation of or physically interfere with an adopted emergency response or evacuation plan.

**h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

Less Than Significant Impact: The project involves prescribed fire, with which there is always a chance of escape. Personnel carrying out the burn are highly trained with prescribed burning and wildland firefighting, and will take all safety precautions necessary to avoid an escaped fire. Fire engines will be on-site during burning activities and patrols will be used once burning is complete to monitor the area. The project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. Hydrology and Water Quality. Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level that will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunamis, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Would the project violate any water quality standards or waste discharge requirements?**

No Impact: The project will not violate any water quality standards or waste discharge requirements.

**b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?**

No Impact: The project will not substantially deplete groundwater supplies or interfere with groundwater recharge. There will be no effect on aquifer volume or groundwater table level as a result of the project.

**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, in a manner which would result in substantial on- or off-site erosion or siltation?**

No Impact: There is no excavation or ground disturbance associated with the project. The project will not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation.

**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 substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?**

No Impact: There is no excavation or ground disturbance associated with the project. Broadcast burning will be implemented using a “cool” burn prescription that will not be hot enough to cause hydrophobic soil conditions which could affect runoff rates. The project will not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding.

**e) Would the project 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?**

No Impact: The project will not contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

**f) Would the project otherwise substantially degrade water quality?**

No Impact: The project will not have any impacts on water quality.

**g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

No Impact: The project does not include the placement of any housing and is not within a 100-year flood hazard area.

**h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?**

No Impact: The project does not include the placement of any structures and is not within a 100-year flood hazard area.

**i) Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?**

No Impact: The project will not expose people or structures to a significant risk of loss, injury or death involving flooding.

**j) Would the project result in inundation by seiche, tsunami, or mudflow?**

No Impact: The project will not result in inundation by seiche, tsunami or mudflow.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. Land Use and Planning. Would the project:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Would the project physically divide an established community?**

No Impact: There are no communities within the project area; therefore no communities will be physically divided by the project.

**b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

No Impact: The project does not conflict with any applicable land use plan, policy, or regulation, including the management plan for the Jenner Headlands Preserve. The project is within the jurisdictional area of the California Coastal Commission, but does not conflict with any coastal ordinances or guidelines.

**c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?**

No Impact: The project does not conflict with any applicable habitat conservation plan or natural community conservation plan.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XI. Mineral Resources. Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**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?**

No Impact: There are no known mineral resources in the project area.

**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?**

No impact: There are no locally important mineral resource recovery sites within the project area.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XII. Noise. Would the project result in:</b>				
a) Exposure of persons to or generation of noise levels 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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, will 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"/>
f) For a project within the vicinity of a private airstrip, will 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"/>

**Discussion**

**a) Would the project create exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

No Impact: The only noise generated by the project will be from fire engines operating in a remote area. This will not expose persons to or generate noise levels in excess of standards established in local plans, ordinances, or other applicable noise standards.

**b) Would the project create exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

No Impact: The project will not generate excessive groundborne vibration or noise levels.

**c) Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

No Impact: The project will not create any permanent sources of noise.

**d) Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

No Impact: The only noise generated by the project will be from fire engines operating in a remote area. This will not create a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

**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 expose people residing or working in the project area to excessive noise levels?**

No Impact: The project is not located within an airport land use plan or within two miles of any airport.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact: The project is not within the vicinity of a private airstrip.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. Population and Housing. Would the project:</b>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

No Impact: The project will not induce population growth. There are no new homes, businesses or expansion of infrastructure associated with the project.

**b) Would the project displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?**

No Impact: No homes will be affected by the project.

**c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

No Impact: There are no residents within or near the project area that will be displaced by the project.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XIV. Public Services. Would the project:**

a) 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 any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**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 any of the public services:**

**Fire protection?**

**Police protection?**

**Schools?**

**Parks?**

**Other public facilities?**

No Impact: The project will not result in any changes that would require expansion or creation of public services, including fire protection, police protection, schools, parks, or other public facilities.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XV. Recreation. Would the project:</b>				
a) 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"/>
b) 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"/>

**Discussion**

**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?**

No Impact: The project is within a nature preserve that is currently only open for guided recreation activities, although there is a plan to open the preserve to the public in the future. The project will not increase the recreation that is allowed or may occur in the area. Physical deterioration of the area will not occur as a result of the project.

**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?**

No Impact: The project is within a nature preserve that is currently only open for guided recreation activities, although there is a plan to open the preserve to the public in the future. The project will not require the construction or expansion of any recreational facilities.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVI. Transportation/Traffic. Would the project:</b>				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a 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"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

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

No Impact: The project is in a remote area of a nature preserve and will not impact traffic circulation patterns.

**b) Would the project conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

No Impact: The project is in a remote area of a nature preserve and will not impact traffic congestion management.

**c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

No Impact: The project is in a remote area of a nature preserve and will not impact air traffic patterns.

**d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

No Impact: The project is in a remote area of a nature preserve and does not include any design features related to traffic.

**e) Would the project result in inadequate emergency access?**

No Impact: The project will improve emergency access by creating a location where fire crews could more safely combat a wildfire. Emergency access will not be degraded by the project.

**f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

No Impact: The project is in a remote area of a nature preserve and will not impact public transit, bicycle, or pedestrian facilities.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVII. Utilities and Service Systems. Would the project:</b>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

**a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

No Impact: The project entails burning of vegetation and will not generate wastewater.

**b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

No Impact: The project entails burning of vegetation and will not result in the construction or expansion of water or wastewater facilities.

**c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

No Impact: The project entails burning of vegetation and will not require or result in the construction or expansion of storm water drainage facilities.

**d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

No Impact: The project will not require the use of water supplies from any existing entitlements or resources.

**e) 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?**

No Impact: The project will not require service from a wastewater treatment provider.

**f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?**

No Impact: The project will not require service by a landfill.

**g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

No Impact: The project will not generate any solid waste.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XVIII. Mandatory Findings of Significance.**

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does 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"/>

Authority: Public Resources Code Sections 21083 and 21083.05.

Reference: Government Code Section 65088.4, Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083.05, 21083.3, 21093, 21094, 21095, and 21151; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors* (1990), 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

**Discussion**

**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, 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?**

No Impact: The project does not 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, 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.

**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.)**

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

**c) Would the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?**

No Impact: The project does not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

## APPENDIX A

Results of FOFEM model execution on 1/7/2016

**FUEL CONSUMPTION CALCULATIONS: Shaded Fuel Break**

Region: PacificWest  
 Cover Type: 038 Douglas-fir -- madrone -- tanoak forest  
 Fuel Type: Natural

FUEL CONSUMPTION TABLE						
Fuel Component Name	Preburn Load (t/acre)	Consumed Load (t/acre)	Postburn Load (t/acre)	Percent Reduced (%)	Equation Reference Number	Moist. (%)
Litter	0.00 u	0.00	0.00	0.0	999	
Wood (0-1/4 inch)	1.00	1.00	0.00	100.0	999	
Wood (1/4-1 inch)	3.00 u	3.00	0.00	100.0	999	10.0
Wood (1-3 inch)	12.00 u	11.78	0.22	98.1	999	
Wood (3+ inch) Sound	13.00	2.22	10.78	17.1	999	15.0
3->6	1.50	0.87	0.63	57.8		
6->9	1.50	0.43	1.07	28.3		
9->20	3.00	0.46	2.54	15.4		
20->	7.00	0.46	6.54	6.6		
Wood (3+ inch) Rotten	0.00	0.00	0.00	0.0	999	15.0
3->6	0.00	0.00	0.00	0.0		
6->9	0.00	0.00	0.00	0.0		
9->20	0.00	0.00	0.00	0.0		
20->	0.00	0.00	0.00	0.0		
Duff	1.00 u	0.67	0.33	66.7	2	40.0
Herbaceous	0.20	0.20	0.00	100.0	22	
Shrubs	1.27	0.76	0.51	60.0	23	
Crown foliage	2.00 u	0.30	1.70	15.0	37	
Crown branchwood	1.00 u	0.08	0.93	7.5	38	
<b>Total Fuels</b>	<b>34.47</b>	<b>20.00</b>	<b>14.47</b>	<b>58.0</b>		

'u' Preburn Load is User adjusted

## FIRE EFFECTS ON FOREST FLOOR COMPONENTS

Duff Depth Consumed (in) 0.8 Equation: 6  
 Mineral Soil Exposed (%) 50.8 Equation: 10

## Ground and Surface Fuel Carbon Loading

Fuel Component Name	Preburn Carbon (t/acre)	Postburn Carbon (t/acre)
Litter	0.00	0.00
Wood	14.50	5.50
Duff	0.37	0.12
Herbaceous	0.10	0.00
Shrub	0.63	0.25
Foliage+Branch	1.50	1.31
<b>Total</b>	<b>17.10</b>	<b>7.19</b>

## FUEL EMISSIONS CALCULATIONS

	Emissions flaming	-- lbs/acre smoldering	total
PM 10	94	253	347
PM 2.5	80	214	294
CH 4	24	130	154
CO	199	2854	3053

CO 2	54308	11617	65925
NOX	98	0	98
S02	31	9	40

	Consumption tons/acre	Duration hour: mi n: sec
Flaming:	15.27	00: 13: 15
Smoldering:	4.73	00: 47: 15
Total:	20.00	
Unit Average Combustion Efficiency:	0.90	

TITLE: Results of FOFEM model execution on date: 1/7/2016

**FUEL CONSUMPTION CALCULATIONS: Meadows**

Region: PacificWest  
 Cover Type: SRM 214 - Coastal Prairie  
 Fuel Type: Natural  
 Fuel Reference: Shiflet 1994

FUEL CONSUMPTION TABLE						
Fuel Component Name	Preburn Load (t/acre)	Consumed Load (t/acre)	Postburn Load (t/acre)	Percent Reduced (%)	Equation Reference Number	Moist. (%)
Litter	0.00	0.00	0.00	0.0	999	
Wood (0-1/4 inch)	0.00	0.00	0.00	0.0	999	
Wood (1/4-1 inch)	0.00	0.00	0.00	0.0	999	10.0
Wood (1-3 inch)	0.00	0.00	0.00	0.0	999	
Wood (3+ inch) Sound	0.00	0.00	0.00	0.0	999	15.0
3->6	0.00	0.00	0.00	0.0		
6->9	0.00	0.00	0.00	0.0		
9->20	0.00	0.00	0.00	0.0		
20->	0.00	0.00	0.00	0.0		
Wood (3+ inch) Rotten	0.00	0.00	0.00	0.0	999	15.0
3->6	0.00	0.00	0.00	0.0		
6->9	0.00	0.00	0.00	0.0		
9->20	0.00	0.00	0.00	0.0		
20->	0.00	0.00	0.00	0.0		
Duff	0.00	0.00	0.00	0.0	2	40.0
Herbaceous	1.35	1.35	0.00	100.0	22	
Shrubs	0.00	0.00	0.00	0.0	23	
Crown foliage	0.00	0.00	0.00	0.0	37	
Crown branchwood	0.00	0.00	0.00	0.0	38	
<b>Total Fuels</b>	<b>1.35</b>	<b>1.35</b>	<b>0.00</b>	<b>100.0</b>		

**FIRE EFFECTS ON FOREST FLOOR COMPONENTS**

Duff Depth Consumed (in)      0.0      Equation: 6  
 Mineral Soil Exposed (%)      100.0      Equation: 10

**Ground and Surface Fuel Carbon Loading**

Fuel Component Name	Preburn Carbon (t/acre)	Postburn Carbon (t/acre)
Litter	0.00	0.00
Wood	0.00	0.00
Duff	0.00	0.00
Herbaceous	0.68	0.00
Shrub	0.00	0.00
Foliage+Branch	0.00	0.00
<b>Total</b>	<b>0.68</b>	<b>0.00</b>

FUEL EMISSIONS CALCULATIONS (Meadows)

Region: Pacific West  
 Cover Type: SRM 214 - Coastal Prairie  
 Fuel Type: Natural  
 Fuel Reference: Shiflet 1994

	Emissions flaming	-- lbs/acre smoldering	total
PM 10	8	0	8
PM 2.5	7	0	7
CH 4	2	0	2
CO	18	0	18
CO 2	4802	0	4802
NOX	9	0	9
S02	3	0	3

	Consumption tons/acre	Duration hour: min: sec
Flaming:	1.35	00:01:00
Smoldering:	0.00	00:00:00
Total:	1.35	
Unit Average Combustion Efficiency:	0.97	

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