

**Final Initial Study/Mitigated Negative Declaration
for the proposed
Coon Creek Vegetation Management Project
San Luis Obispo County, California
State Clearinghouse Number 2011121043**



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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MITIGATED 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 December 14, 2011, and ~~was is being~~ circulated for a 30-day agency and public review period. The public review period ~~ends~~ ended on January 12, 2012. Instructions for submitting written comments are provided on Page 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 which is located in the Natural Resources Building, 1416 Ninth Street, Room #1516-37 36 (VMP Program Office) on the 15th Floor, Sacramento, California.

Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND¹) describes the environmental impact analysis conducted for the proposed project. This document was prepared by California Department of Forestry and Fire Protection (CAL FIRE) and Department of Parks & Recreation (DPR) 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/MND and declares that the statements made in this document reflect CAL FIRE's independent judgment as Lead Agency pursuant to CEQA. CAL FIRE further finds that the proposed project, which includes revised activities and mitigation measures designed to minimize environmental impacts, will not result in significant adverse effects on the environment.

Regulatory Guidance

This IS/MND has been prepared by CAL FIRE and DPR 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

¹ A list and definition of the acronyms and symbols used in this CEQA document is presented on pages 64-65.

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/MND 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/MND 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/MND 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 Mitigated Negative Declaration* (NOI). The 30-day public review period for this project begins on December 14, 2011 and ends on January 12, 2012.

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 the second of the three notification options. The NOI was posted at five prominent locations on and off site in the area where the project is located for the entire 30-day public review period. The locations where the NOI was posted during the 30-day public review period are:

1. San Luis Obispo Coast District Headquarters California Department of Parks & Recreation 750 Hearst Castle Road San Simeon, CA 93452	2. Northern Service Center California Department of Parks & Recreation One Capitol Mall - Suite 410 Sacramento, California 95814
3. CAL FIRE Unit Headquarters 635 N. Santa Rosa San Luis Obispo, CA 93405	4. South Bay Fire Station 2315 Bayview Heights Drive Los Osos, CA 93402
5. Montana de Oro State Park Spooner Ranch House Pecho Valley Road San Luis Obispo County	

A complete copy of this CEQA document was made available for review by any member of the public requesting to see it at Locations #3, #4 and #5 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:

1. CAL FIRE’s Internet Web Site:
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:

Dan Foster, Senior Environmental Planner
California Department of Forestry and Fire Protection
Resource Management – Environmental Protection Program
P.O. Box 944246
Sacramento, CA 94244-2460
Phone: (916) 653-0839
Email: sacramentopubliccomment2@fire.ca.gov

After comments are received from the public and reviewing agencies, CAL FIRE will consider those comments and may (1) adopt the Mitigated Negative Declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, CAL FIRE could plan and implement all or part of the project.

Project Description and Environmental Setting

Project Location

Situated in San Luis Obispo County, just 12 miles westerly of the city of San Luis Obispo, Montana de Oro State Park (MDO) is a 7,845 acre park of varied habitats including coastal sand dunes, marine terraces, perennial streams, oak woodlands and coastal sage scrub communities. MDO is bordered to the north by the Community of Los Osos. The Pacific Ocean borders the western edge of the park. Private lands within the Irish Hills border the eastern and southern borders (PG&E). Access to MDO and the project area is via Pecho Valley Road. The southern boundary of MDO splits the proposed project area into roughly equal halves. The northeastern half of the project area within MDO is located on assessor's parcels 076-011-004, 005, & 007. The southwestern half of the project area on Pacific Gas and Electric (PG&E) property is located within assessor's parcels 076-011-006, 008, & 027. The Coon Creek burn unit is bordered on the north by Coon Creek, on the south and east by prominent ridgelines, and on the west by the PG&E entrance road from Pecho Valley Road. The center of the project area is at north latitude 35° 14.85' and west longitude 120° 52.57'. The project area is within an unsurveyed portion of Township 31 South, Range 10 East, Mount Diablo Baseline & Meridian and can be located on portions of the following USGS 7.5' topographic maps: *Morro Bay South*, *Morro Bay South OE W*, *Port San Luis*, *Port San Luis OE W*. See Figure 1 vicinity map.

Background and Need for the Project

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by CAL FIRE and DPR to evaluate the potential environmental effects of the proposed Coon Creek Vegetation Management Project (VMP) at Montana de Oro State Park and the PG&E Diablo Canyon Property, located near the Community of Los Osos, San Luis Obispo County, California. The proposed project would use prescribed fire to stimulate regeneration of Bishop pines and Pecho manzanita. The purpose of this project is to create a mosaic of manzanita age classes as a safeguard against a catastrophic stand replacing fire, maintain Bishop pine forests, and reduce fire hazards in the Irish Hills.

The Irish Hills in this context refers to a geographic planning unit used by CAL FIRE and concerned stakeholders to identify, plan, and carry out projects of various types that will help prevent catastrophic wildfires and achieve important biological benefits. The Irish Hills planning area is bounded on the west by the Pacific Ocean, on the south and east by Highway 101, and on the north by Los Osos Valley Road. Ongoing projects include fuel hazard reduction in See & Davis Canyons and vegetation management work by PG&E near the Diablo Canyon Nuclear Power Plant (DCNPP). Prescribed burning of adjacent areas has occurred each fall for the past 2 years (see Figure 2).

This particular area of focused treatments was identified due to the high fire hazard present, the lack of fire history within the Irish Hills and the presence of DCNPP. The high fire hazard is a product of the steep topography in alignment with the prevailing winds, the heavy fuels present, and a high human population from recreation in MDO. The project area and other nearby treatments are at the point nearest the perceived risk and at the upwind side of a large (the Irish Hills includes over 50,000 acres) expanse of dense, heavy, mature vegetation types. It is believed that this area is the highest priority for treatment within the Irish Hills in order to reduce the risk of a catastrophic fire which would have the potential to consume the entire Irish Hills area.

Prescribed burning within the MDO and adjacent PG&E lands has been identified at this location as the most natural, most beneficial, and most feasible treatment method available for achieving a number of important objectives. Fire suppression over the last century and the coastal climate has led to the buildup of tremendous fuel loads which will eventually burn. This interruption in the normal fire regime has also led to the development of mostly mature and overmature vegetation types with poor natural regeneration and less than desirable biodiversity due to the site occupancy of primarily mature shrubs and lack of grasses and herbaceous plants. Throughout much of the project area, mature shrub canopies have excluded shade intolerant grasses and forbs thereby reducing biodiversity. In addition to reducing the amount of vegetation to reduce the fire hazard, prescribed burning mimics the natural process of burning which helps to renew the areas burned by allowing for the normal successional processes to occur.

The Bishop pine forest located on a portion of the project area is a disjunct population found in the Irish Hills. The age of most of the forest in the Irish Hills is thought to be approaching the 80 year maximum age of the trees, and if left untreated, eventually this stand in MDO could succumb to senescence and the potential loss of this stand of Bishop pines. Bishop pines are one of several fire-dependent species that must have fire to open serotinous cones and permit seed germination. The trees within the burn unit are about 47 years old, possibly originating from a stand replacing fire that appears to have burned through the area (based on tree-rings of pines, manzanita, chamise, and ceanothus). Although available fire history data cannot confirm it, local ranchers remember a fire in the early 1960's. This 47 year old stand is considered mature moving into overmaturity as Bishop pine stands seldom reach the 80 year maximum. Thus, a fire at this age would be appropriate to remove old trees and stimulate generation of new fire-dependent seedlings. Adjacent burns have produced adequate reproduction in Bishop pine stands (see Figure 10).

The Pecho manzanita (*Arctostaphylos pechoensis*) is a local endemic shrub found only in the Irish Hills. This plant is listed as a CNPS 1B rare plant. The stand of manzanitas in the Irish Hills is lacking in age class diversity, which can be a concern should a large catastrophic fire burn the majority of the stand at once. Thus, this prescribed fire will be used to study seed germination of manzanita to prepare for future fires, as well as to create a mosaic of age classes. While the fire return interval for these manzanitas may be much longer than the roughly 50 years proposed here, the burn unit would act as a variant within the larger manzanita population. Burning large percentages of the overall manzanita population in the Irish Hills is not advisable, but creating diversity in age structure is a safeguard to protect the species. Due to the limited habitat for this species, and its vulnerability to a large wildfire, reintroducing fire in small areas will break

up the continuity of the mature habitat and, assuming that adequate natural regeneration occurs, will reduce the likelihood of the entire habitat being lost in a single catastrophic event. Documentation of the results of natural regeneration will also provide managers with a case study to determine if fire is a potential management tool that could enhance the habitat for this species. If found to be beneficial, fire use could be increased to improve habitat; if poor regeneration occurs, more aggressive steps may be determined to limit or exclude fire in the future and develop measures to augment the existing habitat. Burning in adjacent areas has produced excellent reproduction of the species as hoped for.

State Parks conducted a small scale study burn in the north end of MDO 20 years ago to study the effects of burning in Morro manzanita habitat. This site has been monitored and the results documented over time. The same type of scientific study and monitoring project is planned for Pecho manzanita following this project.

Project Objectives

The objectives for this project are: (1) to maintain Bishop pine forests, (2) diversify sensitive Pecho manzanita age structure, (3) reduce the threat of catastrophic fire in the Irish Hills, and (4) protect DCNPP from fire. Currently, fire suppression has created Bishop pine stands at or near their maximum age and an overall vegetative age class that is of consistent age and thus susceptible to a single catastrophic fire. Pecho manzanita stands are mostly mature and prescribed fire within a portion of this range will help ensure some diversity of age structure. The Irish Hills has experienced only a few relatively small fires over the past century, and targeted burns in strategic locations such as this will reduce the risk of a large catastrophic fire. DCNPP is vulnerable to a large wildfire which could shut down electricity to millions of customers in Southern California. This and other ongoing projects will reduce the risk to these vital transmission lines.

Project Start Date

As conditions allow in late fall or winter 2011 or in subsequent years.

Project Description

This project will use various ignition techniques to create a stand replacing fire within established control lines. The stand replacing fire planned here will have similar results as from a wildfire; however, a wildfire would likely be a much larger, catastrophic type event. Approximately 430 acres will be treated in this controlled burn. A wildfire in the Irish Hills, due to the terrain and vegetation, in even less-than-extreme conditions, is capable of consuming the entire area of over 50K acres. This could severely impact unique habitats found here such as the Bishop pine and Pecho manzanita stands. Although stand-replacing conditions are considered warranted for this particular stand as a part of the natural cycle, stand replacing conditions through this entire forest are not desirable due to the unforeseen adverse impacts of such a large scale event. Documentation of the effects of fire on this small stand will allow managers to take appropriate precautions in other areas of the forest. If prescribed fire produces adequate, healthy reproduction as has occurred in adjacent areas (see Figure 10) the use of fire as a tool in the overall forest may increase, whereas if reproduction is poor, fire may be limited in the forest or in individual stands through other means. Vegetative characteristics of this north facing slope will allow a mosaic burn in which islands and strips of unburned fuel remain. Strip head fires will be used to reduce fire intensity and allow short uphill runs with some backing fire. Aerial ignition (helitorch) will be used on only the upper ½ of the slope in order to allow the backing fire on the lower portion of the slope to self-extinguish prior reaching the riparian area along Coon Creek. No ignition is planned for the lower slopes in the vicinity of Coon Creek. The downhill burn boundary is a hand-line that will retain a vegetative buffer strip along the west side of Coon Creek that will maintain a 100-300 foot-wide buffer of protective vegetation from the edge of the riparian vegetation. This buffer consists of a control line established by hand crews (hand-line) that will keep fire from consuming the

protective riparian vegetation. From where the hand-line ends along Coon Creek to the southern end of the project area on an existing road, the control line was created through the use of mastication equipment which shredded the vegetation on the designated ridge (see masticated area in Figure 1). The remaining western side of the project area consists of an existing road which was the boundary of an adjacent prescribed burn completed on 11/12/10. Project will be burned in accordance with a Smoke Management Plan (SMP) approved by the San Luis Obispo County Air Pollution Control District (APCD). Burning at this location is normally carried out during offshore wind conditions that disperse smoke out to sea in a southerly direction. A study of Bishop pine and Pecho manzanita recruitment will follow the burn project and document the results.

Acceptable burn parameters will be specified in accordance with a burn plan prepared under CAL FIRE's Vegetation Management Program (VMP). All meteorological conditions for an acceptable burn will be detailed including expected fire behavior based on a range of relative humidity, temperature, and wind speed and direction. An ignition plan will be prepared just prior to the burn as part of an Incident Action Plan (IAP) that details how the burn will be conducted and addresses all necessary operational components of the burn according to the Incident Command System (ICS).

Environmental Setting of the Project Region

The proposed project is located in San Luis Obispo County along the western edge of the central coast region of California (see Figure 1). The proposed project is approximately 9 miles west of the county seat of San Luis Obispo, 4 miles south of Los Osos, and 8 miles northwest of Port San Luis. The elevation at the project site ranges from approximately 100 to 1,300 feet above sea level and the aspect is northerly. The following description of the environmental setting of the project site was obtained from the United States Forest Service (USFS) web site source describing the South Coastal Santa Lucia Range Subsection (USFS n.d.).

SUBSECTION 261AK - SOUTH COASTAL SANTA LUCIA RANGE

This subsection is the southern part of the Santa Lucia Range that is near the coast, between the Nacimiento fault and the Pacific Ocean. The climate is hot and subhumid; it is modified greatly by marine influence.

Lithology and Stratigraphy. This subsection consists of mostly folded, faulted, and generally metamorphosed sedimentary and volcanic rocks of the Franciscan Complex and much less extensive Cretaceous sediments of the great valley sequence. Some ultramafic rock occurs in this subsection. Late Quaternary alluvium occurs in Los Osos Valley and some Quaternary marine sediments are along the coast.

Geomorphology. This is a subsection of northwest trending mountains and hills with rounded ridges, steep sides, and mostly narrow canyons. Los Osos Valley, approximately 6 miles south of the project site, is a broad one with substantial areas of floodplain, alluvial fans, and terraces. Remnants of marine terraces are present on narrow benches along the coast. Sand dunes are common along the coast, both adjacent to the beach and on marine terraces. The subsection elevation range is from sea-level up to 3408 feet on Pine Mountain and 3744 feet on Alder Peak at the northwest edge of the subsection. Mass wasting and fluvial erosion are the main geomorphic processes. Sedimentation is an important process in Los Osos Valley. Wind is an important geomorphic agent along the coast.

Soils. The soils are mostly Lithic Xerorthents, Lithic and Pachic Ultic Haploxerolls, serpentinitic Lithic Argixerolls, and Chromic Pelloxererts. Most of these soils are present on Miocene rocks, also, plus shallow Pachic Haploxerolls and Calcic Pachic Haploxerolls at the relatively dry southeast end of the subsection. Pachic Haploxerolls and Chromic Pelloxererts are common on alluvium and marine terraces. Typic and Alfic Xeropsamments prevail in eolian sand behind beaches and on some marine terraces. The soils are well drained, and most are leached free of carbonates, except those on Miocene rocks at the southwest end of the subsection. The soil temperature regimes are thermic. Soil moisture regimes are xeric.

Vegetation. The predominant natural plant communities are Coast live oak series, Chamise series, Manzanita shrublands, and Needlegrass grasslands. Some edaphic associations are Chamise series on shallow soils, Leather oak series on shallow serpentine soils, Needlegrass grasslands on Vertisols, and Manzanita shrublands on silicic sandstones. California sagebrush - black sage series is common near the coast and Coast live oak series and Valley oak series are common in Los Osos Valley. The dunes support a succession of plant communities, from bare dune through herbaceous communities and Coyote brush series to California sagebrush - black sage series on stabilized dunes.

Characteristic vegetation series by lifeform include:

Dune vegetation: Dune lupine-goldenbrush series, Sand-verbena - beach bursage series, Yellow bush lupine series.

Saltmarsh vegetation: Cordgrass series, Ditchgrass series, Pickleweed series, Saltgrass series, Sedge series.

Grasslands: California annual grassland series, Purple needlegrass series.

Shrublands: Black sage series, Blue blossom series, California encelia series, California sagebrush series, California sagebrush - black sage series, Chamise series, Chamise - bigberry manzanita series, Chamise - black sage series, Chamise - wedgeleaf ceanothus series, Coyote brush series, Deer brush series, Eastwood manzanita series, Leather oak series, Scrub oak series, Wedgeleaf ceanothus series, Woollyleaf manzanita series.

Forests and woodlands: Bishop pine series, California bay series, California sycamore series, Coast live oak series, Knobcone pine series, Mixed oak series, Sargent cypress series, Tanoak series, Valley oak series, White alder series.

Climate. The mean annual precipitation is about 20 to 40 inches. It is practically all rain, except for some snow on at higher elevations. Mean annual temperature is about 50° to 60° F. The mean freeze-free period is about 250 to 300 days.

Surface Water. Runoff is rapid and all but the larger streams are generally dry during the summer. Streams on the seaward side of the mountains in the northwestern part of the subsection may be perennial. There are no natural lakes, other than temporary ponding behind dunes.

Description of the Local Environment

Montana de Oro State Park consists of 7,845 acres of varied coastal habitats including dunes, coastal bluff, perennial streams in deep canyons, coastal scrub covered hills mixed with oak woodland and a Bishop pine forest. MDO supports heavy recreational pressure for coastal activities including surfing, horseback riding, mountain biking and hiking on an extensive trail network.

Adjacent PG&E lands primarily support DCNPP and the associated infrastructure, however, there is Pt. Buchon hiking trail that begins in MDO and extends for 3 miles along the coastal plain towards DCNPP. This trail is on the access road that forms the northern tip of the project area. Cattle and goat grazing are also conducted on the coastal plain on PG&E property. The project area itself is not used for agricultural operations of any kind and due to the steep terrain and dense vegetation; recreational opportunities are limited to viewing from areas of the park northeast of Coon Creek. Coon Creek trail is east of the project area and mostly on the east side of the creek. Access to PG&E property is strictly controlled and no recreation is offered except on Pt. Buchon trail.

The project site lies partially within the California Coastal Zone. This area was established by the California Coastal Act of 1976. Approximately 60 acres of the northwest end of the project area is within the coastal zone. All work carried out under this proposed project will be in accordance with applicable Coastal Act rules and requirements.

Current Land Use and Previous Impacts

Current land use on the project area is public recreation and viewing from adjacent areas. The project site itself is not accessible to the public due to dense vegetation including extensive stands of poison oak and a

lack of trails. The PG&E portion of the project is not accessible to the public except on the Pt. Buchon trail along the northwestern edge of the project.

Previous impacts are unknown and not discernable from the landscape. Anecdotal stories suggest controlled burns were ignited in the area by local ranchers; this is consistent with a tree ring study that suggests a fire crossed the area about 47 years ago. No documented wildfire history has been found to indicate otherwise.



Figure 1. Project Vicinity Map.

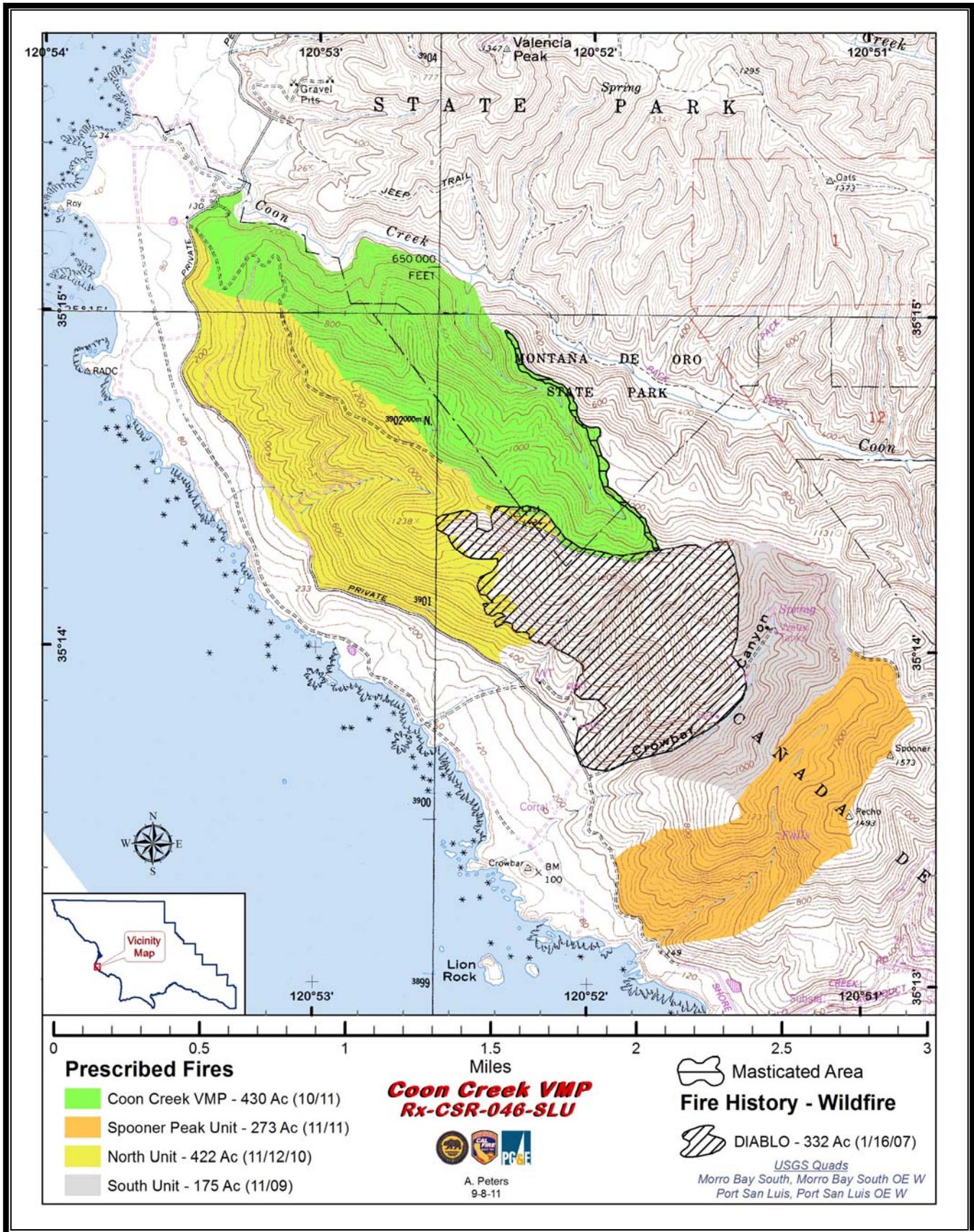


Figure 2. Fire History Map.

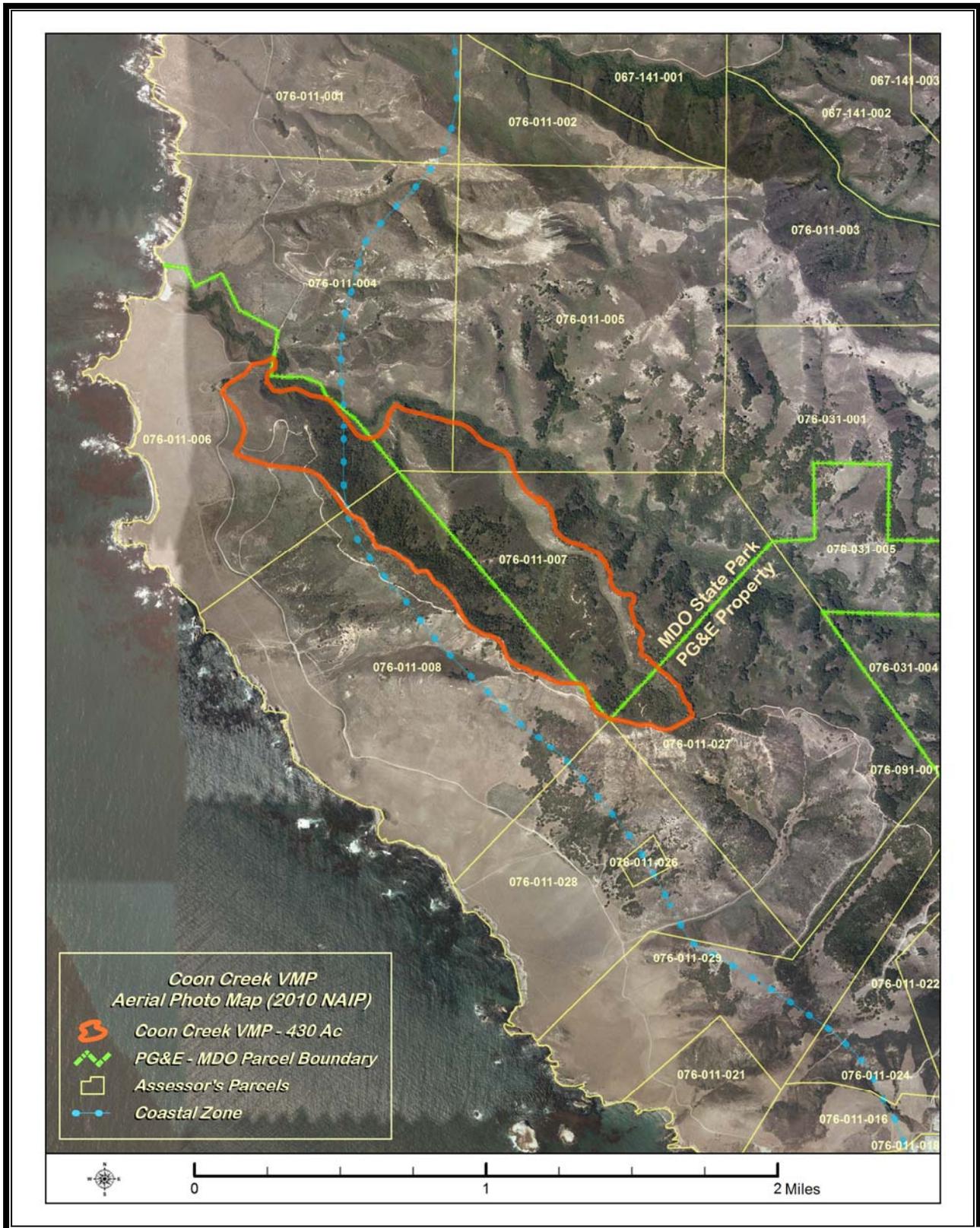


Figure 3. Aerial Photo Map.

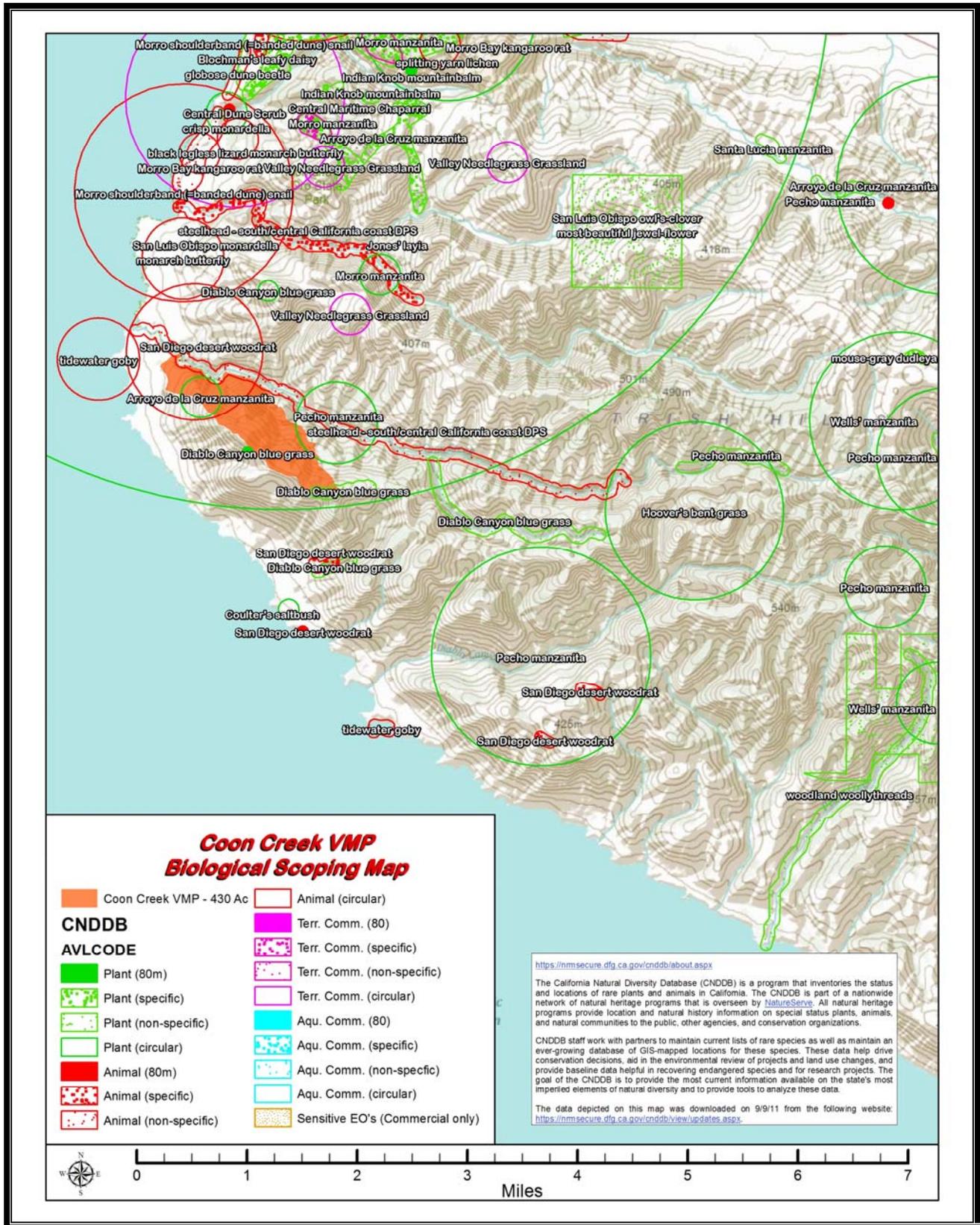


Figure 4. Biological Scoping Map.

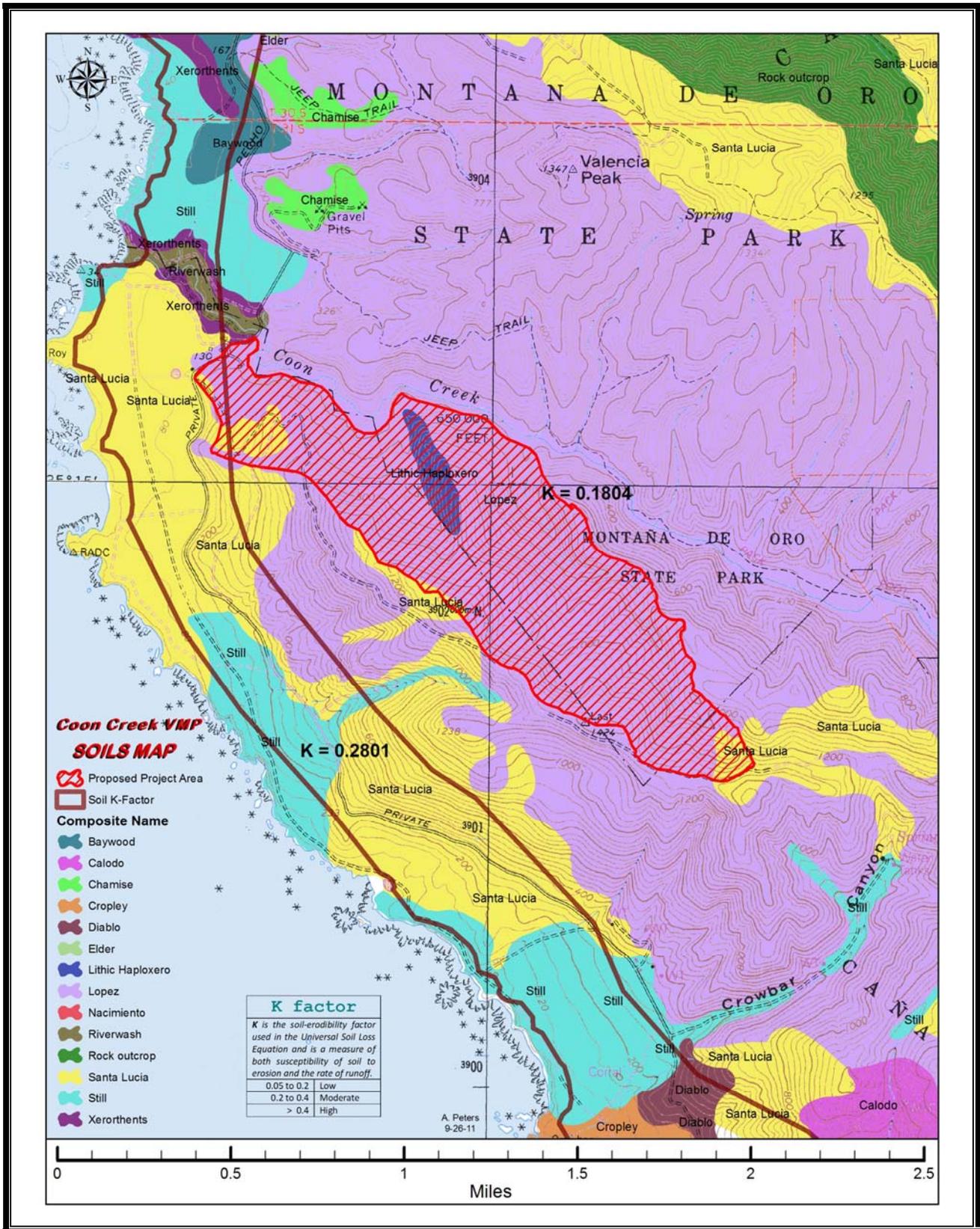


Figure 5. Soils Map.

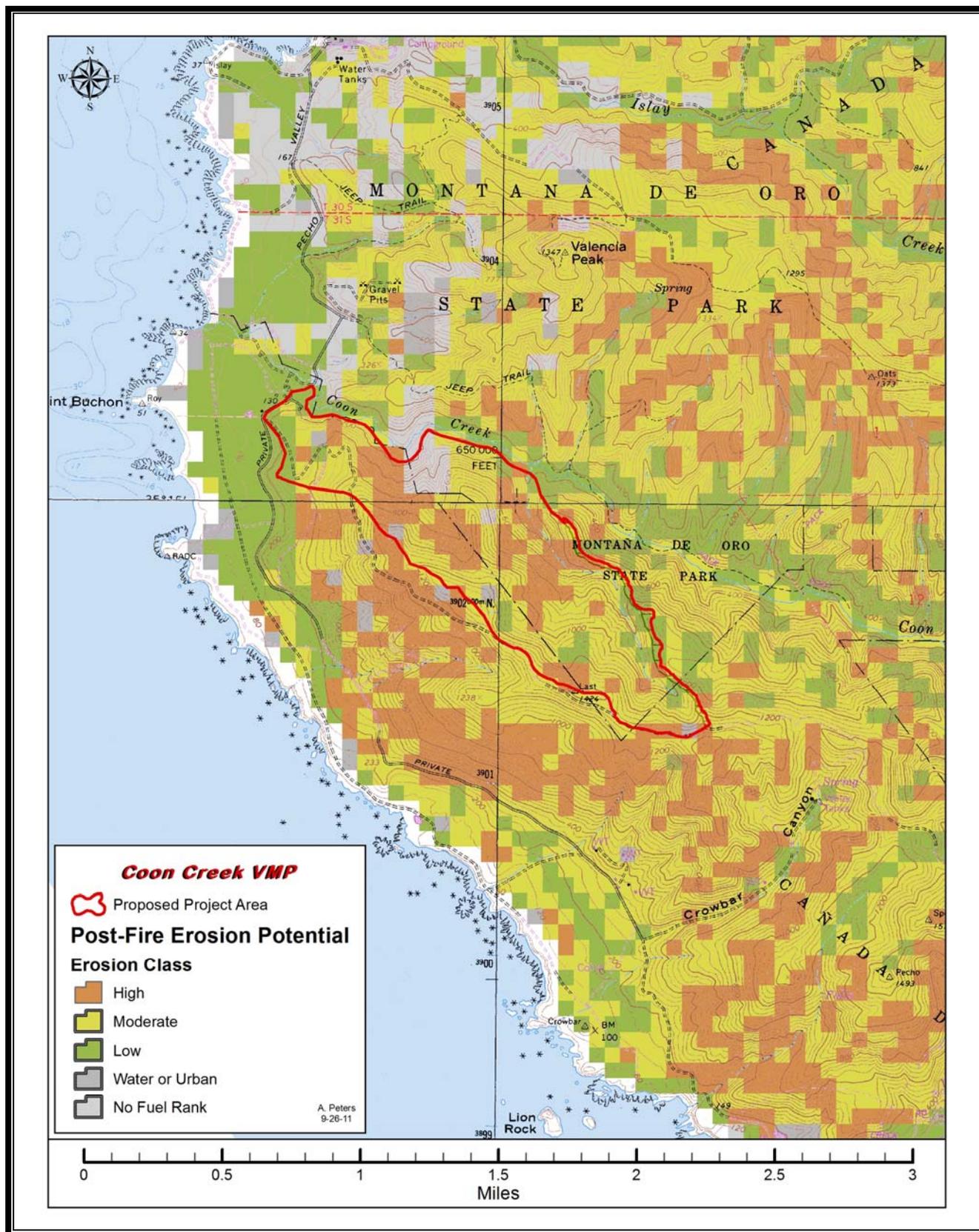


Figure 6. Erosion Potential Map.

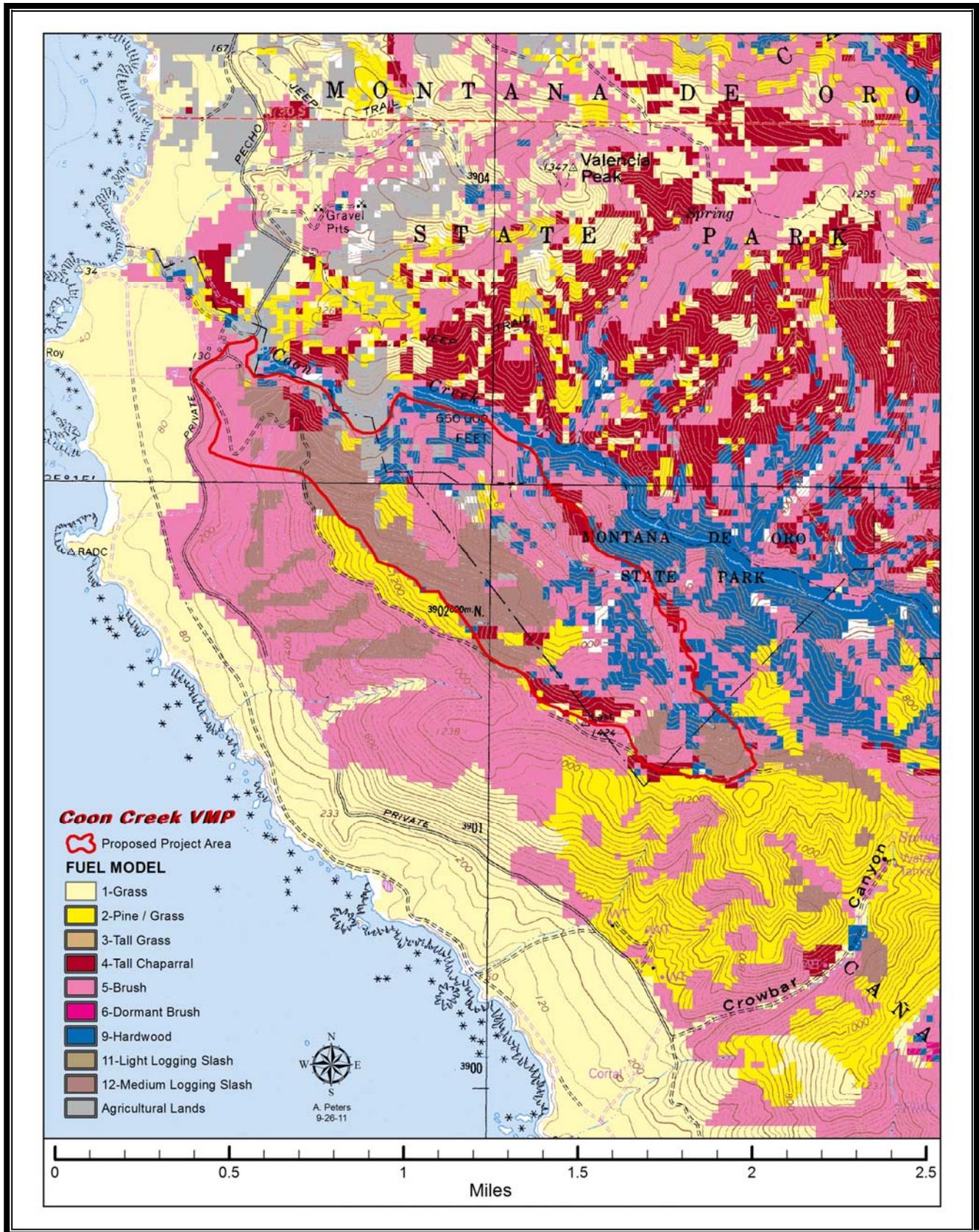


Figure 7. Fuel Model Map.

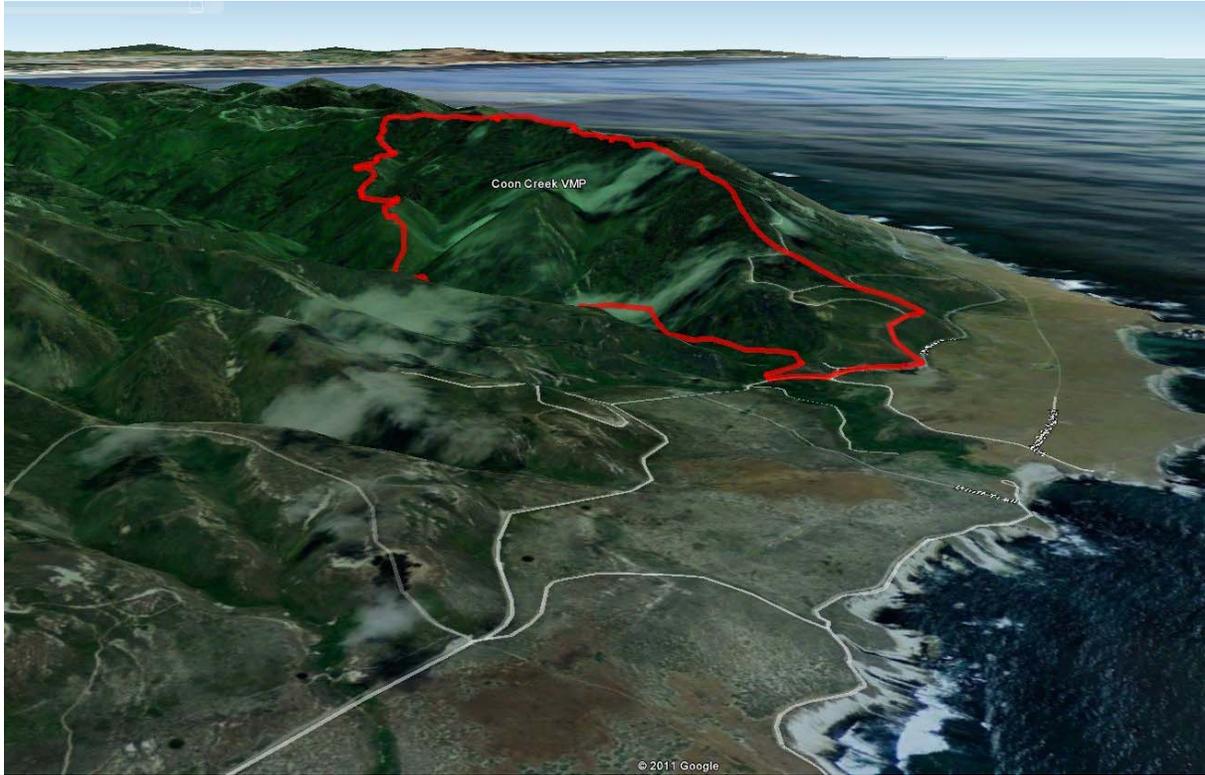


Figure 8. 3-D Google Earth View Looking South.



Figure 9. 3-D Google Earth View Looking Southeast.

Conclusion of the Mitigated 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:

1. All burning must be conducted in accordance with an approved Smoke Management Plan and permit issued by APCD.

Mitigation Measures

The following 3 mitigation measures will be implemented by CAL FIRE and DPR to avoid or minimize environmental impacts. Implementation of these mitigation measures will reduce the environmental impacts of the proposed project to a less than significant level.

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

Mitigation Measure #2: Procedures for Inadvertent Discovery of Human Remains

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging activities in the area of the burial and notify the SLO County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of SLO County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in PRC § 5097.

Summary of Findings

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

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

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 potentially significant environmental effects could result from the proposed project; however, CAL FIRE revised its project plans and has developed mitigation measures which will eliminate impact or reduce environmental impacts to a less than significant level. CAL FIRE has found, in consideration of the entire record, that there is no substantial evidence that the proposed project as currently revised and mitigated would result in a significant effect upon the environment. The IS/MND is therefore the appropriate document for CEQA compliance.

INITIAL STUDY/ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION					
1. Project Title:	Coon Creek VMP (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:	Alan Peters, (805) 543-4244				
4. Project Location:	Montana de Oro State Park and PG&E Diablo property, San Luis Obispo County				
5. Project Sponsor's Name and Address:	Same as Lead Agency				
6. General Plan Designation:	N/A				
7. Zoning:	Rural, Recreation				
8. Description of Project:	See Page 8 of this document				
9. Surrounding Land Uses and Setting:	Refer to pages 6-10 of this document				
10: Other public agencies whose approval may be required:	SLOAPCD, DPR				
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 checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials	<input checked="" 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 checked="" type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation / Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input checked="" 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.

Daniel G. Foster

December, 14, 2011

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Date Signed

ANALYSIS OF POTENTIAL ENVIRONMENTAL IMPACTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Will the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 – MDO State Park is a popular recreation area and receives moderate year-round pressure from the public. MDO is primarily used for surfing, hiking, horseback riding and mountain biking. The project area is at the southwestern corner of the Park and is plainly visible (see Figures 8 & 9) from many areas within the southern portions of the Park. Burning this area will have an obvious effect on the appearance of this hillside; however, this effect is short term, small in scale and considered vital to protect against a larger landscape-scale wildfire that could burn the entire Park and the surrounding areas causing significant detrimental viewshed impacts. State Parks staff will use this burn as an educational tool to discuss with the public the value of fire on the landscape and the natural processes of forest regeneration and succession.

Fire is a normal, natural part of this environment and it is difficult to assess the level of potential impacts to aesthetics in this case since it is largely a matter of people’s varying opinions. Since the majority of the public have likely not viewed freshly burned areas, it is expected that some will not like the immediate post-burn appearance, some will like it, and many will be indifferent or inquisitive. Significant impacts, however, are not considered likely due to the relatively small size of the project within MDO Park, and the short-term nature of the temporary change in appearance. It is expected that green vegetation will recapture the site within 2-3 months and shrubs and live oak will begin to dominate the site within the first year. The long-term vegetation composition will not be altered except that an initial increase in plant biodiversity will likely result due to the early successional stages of plant growth that will quickly recapture the site. A significant increase in the number and variety of grasses, forbs and wildflowers will become apparent for the first few years after the burn.

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

Less Than Significant Impact – The proposed project will result in a short term change in the appearance of vegetation on the hillside to be treated. This burn is expected to result in a mosaic of burned and unburned vegetation. The burned areas will obviously appear black for a period of weeks to a few months. This hillside is most often viewed from a distance of ¼ to 2 miles by those looking southward (see Figures 8 & 9). Due to the moist marine air and the aggressive nature of the fire-dependent species that grow here, the vegetation will begin to recapture the site within days and it is expected that the burned areas will be fully greened up within 4-6 months. Since this hillside is not

accessible and can only be viewed from a distance, it is expected that most visual evidence of burning will be gone within 2 years. No historic buildings are located within the project area. Rock outcrops will not be damaged by a transient fire. Bishop pine trees will experience mortality while a new generation of trees will emerge, as is the natural cycle. Vegetation in general will change from the current state and then begin a process of returning to a similar state over time, as is the natural cycle. No lasting or permanent changes in the visual character of the hillside to be treated are anticipated.

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

Less Than Significant Impact – The project will result in short term temporary changes in the appearance of the vegetation in the area burned. A substantial change in the appearance would be likely following a catastrophic, landscape-scale wildfire, whereas burning the small project area will result in temporary effects that affect a small portion of the watershed. The mature trees and shrubs currently occupying the site will be burned in a mosaic pattern which will leave islands and strips of unburned vegetation. The mature vegetation, where burned, will be quickly replaced by early successional stages of new plant growth which will be dominated for the first couple years by grasses and herbaceous plants. Within five years, sprouting trees and shrubs will once again dominate the site. Since fire is a common and natural part of the environment, and since the temporary change in the appearance of the vegetation will last from a few weeks to a few years, and due to the relatively small scale of the project on a watershed basis, no significant changes are expected. After the first spring growing season following the burn, the burned area will not likely be discernable to the uneducated eye.

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 – Burning natural vegetation will in no way impact light or glare at this site.

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?

- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

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 – Project area does not contain any farmland components.

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

No Impact – Project area does not contain any farmland components.

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 – Project will cause no change to the zoning of the affected parcels.

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

No Impact – Project would maintain forested areas by stimulating regeneration through fire. No conversion to non-forest would occur.

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 – Project area does not contain any farmland components. Project would maintain forested areas by stimulating regeneration through fire. No conversion to non-forest would occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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III. Air Quality.

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?
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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

Air pollution is commonly defined as the introduction of chemicals, particulate matter, or biological substances into the air that cause harm to humans or the environment. Vegetation smoke is a common and natural component of the environment in California which is important to manage where possible to minimize harmful effects. Prescribed burns such as this project are planned and designed to treat a relatively small, strategically important portion of the landscape in a targeted way that will prevent large uncontrolled wildfires that would likely cause significant adverse impacts. Most areas of California have burned in the past, and most wildland vegetation in California will burn at some point. Projects like this are an attempt to influence how this occurs and minimize the potential harmful effects.

The project site is located within the San Luis Obispo County Air Pollution Control District (SLOAPCD). For this proposed prescribed burn, particulate matter (PM) is the air pollutant of greatest concern. Particulate matter is fine mineral, metal, soot, smoke and dust particles suspended in the air. For health reasons, the greatest concern is with inhalant particulate matter less than 10 microns in diameter (PM₁₀), which can lodge in the most sensitive areas of the lungs, and cause respiratory and other health problems. SLO County is in attainment for federal PM standards but is in nonattainment for California's 24-hour and annual PM₁₀ standards.

Air quality within SLO County is regulated by the U.S. Environmental Protection Agency (EPA) and the Air Resources Board at the federal and state levels, respectively, and locally by the SLOAPCD. In general, the air quality in SLO County is good, but the SLOAPCD seeks to improve air quality conditions in the County through a comprehensive program of planning, regulation, enforcement, technical innovation and education to promote the understanding of air quality issues. The clean air strategy of the SLOAPCD includes the development of programs for attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The SLOAPCD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the federal Clean Air Act (CAA) federal Clean Air Act Amendments of 1990 (CAAA) and the California Clean Air Act (CCAA).

In compliance with the CCAA, air districts submit Air Quality Attainment Plans (AQAP) primarily to address ozone non-attainment. SLOAPCD adopted the 2001 Clean Air Plan (CAP) to achieve and maintain the state ozone standard by the earliest practicable date. The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plans must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections. The AQAPs stress attainment of ozone standards and focuses on strategies for reducing reactive organic gas and nitrogen oxide emissions. It promotes active public involvement, enforcement of compliance with district rules and regulations, education in the public and private sectors, development and promotion of transportation and land use programs designed to reduce vehicle miles traveled within the region, and implementation of stationary and mobile source control measures. The AQAPs, such as SLOAPCD's CAP, become part of the State Implementation Plan in accordance with the requirements of the CCAA.

In SLO County, all prescribed burning such as proposed by this project must be carried out according to a Smoke Management Plan approved by the APCD. The planning process for project burns such as this includes daily State-wide ARB conference calls attended by ARB, APCD, meteorologists, and project proponents where weather conditions and smoke related issues are discussed and planned to manage smoke in the best way possible. In addition to a Smoke Management Plan, this project will also be entered into the Prescribed Fire Information and Reporting System (PFIRS - <https://secure.arb.ca.gov/pfirs/>) which helps all air quality agencies access and manage smoke related information. Projects are planned for conditions that allow for adequate vertical and horizontal venting and transport of smoke in the direction that causes the least amount of potential air quality impacts, particularly to densely populated areas. For this project, as with most burns directly adjacent to the coast, burning will only occur during offshore wind conditions that transport smoke out over the ocean and generally south towards Point Conception.

Discussion

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

Less Than Significant Impact – Burning under the terms of an approved SMP will ensure compliance with ARP and APCD air quality plans and policies. Burning during offshore wind conditions will help transport all smoke from this project out to sea away from populated areas of the State.

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

Less Than Significant Impact – Project burning will be conducted under the terms of an approved SMP that contains provisions necessary to avoid violating existing air quality standards. Burning during offshore wind conditions will help transport all smoke from this project out to sea away from populated areas of the State.

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)?

Less Than Significant Impact – Project burning will be conducted under the terms of an approved SMP that contains provisions necessary to avoid violating existing air quality standards. Burning during offshore wind conditions will help transport all smoke from this project out to sea away from populated areas of the State.

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

Less Than Significant Impact – Project burning will be conducted under the terms of an approved SMP that contains provisions necessary to avoid impacts to Smoke Sensitive Areas (SSA). Burning during offshore wind conditions will help transport all smoke from this project out to sea away from all SSA's.

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

No Impact – Project will not create objectionable odors. Vegetation smoke is a common, natural component of the environment in California. Project burning will be conducted under the terms of an approved SMP that contains provisions necessary to avoid smoke in populated areas. Burning during offshore wind conditions will help transport all smoke from this project out to sea away from areas containing substantial numbers of people.

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

ENVIRONMENTAL SETTING

Montana de Oro State Park is located at the southern end of the Coast Ranges Geomorphic Province. Most of the park's 7,845 acres consists of rolling foothills and steep, vegetated slopes and canyons. Elevation ranges from sea level to a height of 1,649 feet at the top of Alan Peak. The park is bounded on the west by 39,000 feet of ocean frontage along the southern end of Estero Bay. In addition, the park contains approximately 20,000 feet of bay frontage along the shores of Morro Bay. The coastline consists of wide, wave-cut benches, offshore sea stacks and submerged rocky intertidal habitat. North of Islay Creek, the rocky shoreline gives way to dunes and coastal strand including a four mile long barrier dune, the Morro Bay sandspit.

SPECIAL-STATUS SPECIES²

² For the purposes of this document, special-status species are defined as plants and animals that are legally protected or that are considered sensitive by federal, state, or local resource conservation agencies and organizations. Specifically, this includes species listed as state or federally Threatened or Endangered, those considered as candidates for listing as Threatened or Endangered, species identified by the USFWS and/or CDFG as Species of Concern, animals identified by CDFG as Fully Protected or Protected, and plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered (i.e., plants on CNPS lists 1 and 2).

Sensitive biological resources that occur or potentially occur on the proposed project site are discussed in this section.

The following databases were investigated for sensitive animals, plants, and natural communities that may be found at or near the project site. The California Department of Fish and Game's Natural Diversity Database (CNDDDB, July 2011) was queried for the Morro Bay South 7.5-minute USGS quadrangle. In addition, the U.S. Fish and Wildlife Service (USFWS) Ventura Field Office website (<http://www.fws.gov/ventura/>) was searched for sensitive species in San Luis Obispo County. Finally, the California Native Plant Society's Inventory of Rare and Endangered Plants of California (August 2011) was investigated.

Thirteen special-status wildlife species, twenty-four special-status plant species, and six sensitive natural communities were reported on the Morro Bay South USGS quadrangle (CNDDDB, 2011).

THREATENED AND ENDANGERED SPECIES AND SPECIES OF SPECIAL CONCERN

Threatened and Endangered plants and wildlife species and Species of Concern are special-status species that have legal protection. The following Threatened and Endangered species and Species of Concern are the result of the CNDDDB and CNPS inventory queries for the Morro Bay South USGS quadrangle, and the USFWS list of protected species for San Luis Obispo County.

PLANT SPECIES

There were 21 sensitive plant species identified from the CNDDDB and CNPS inventory search. The majority of these have little or no potential to occur near the project area. Only one of these species has known potential habitat on or near the project area.

Pecho manzanita (*Arctostaphylos pechoensis*) is the only species identified in this query that is known to be common within the project area. Pecho manzanita is widespread in this general vicinity and, as discussed previously, burning will promote establishment of younger age classes in a small portion of the habitat which benefits the species by reducing the risk of the entire population being impacted by a single large wildfire. The results of the planned regeneration study will provide important management considerations for the entire population to ensure protection of the species. Burning in adjacent stands has shown excellent regrowth of the species as expected.

Arroyo de la Cruz manzanita (*Arctostaphylos cruzensis*) is mistakenly indicated in the NDDB data as being located within and near the project area as indicated on the NDDB map (see Figure 4). This incorrect data resulting from misidentified taxonomy will be revised and the polygons will be removed by State Parks personnel.

The following plant species are listed on the CNDDDB for the project area and vicinity (see Figure 4). There is little or no potential that these would be found within the project area, due to lack of suitable habitat:

Diablo Canyon bluegrass (*Poa diabolii*) is indicated on the map but surveys did not locate this species which requires open areas to grow that are not present on the project area. Four of these species are manzanita species that are found in upland chaparral habitats and would not be expected near the project area, due to the absence of suitable habitat. These include Morro manzanita (*Arctostaphylos morroensis*), Oso manzanita (*Arctostaphylos osoensis*), Dacite manzanita (*Arctostaphylos tomentosa* ssp. *daciticola*), and Wells' manzanita (*Arctostaphylos wellsii*). The Oso manzanita and Wells' manzanita have been found in Morro Bay SP, several miles from the project.

San Luis mariposa lily (*Calochortus obispoensis*), Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*), San Luis Obispo sedge (*Carex obispoensis*), Indian knob mountainbalm (*Eriodictyon altissimum*), and most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*) would all be found in drier upland chaparral, grassland, or woodland habitats, which are not found within or near the project area. Obispo Indian paintbrush (*Castilleja densiflora* ssp. *obispoensis*) would be found in upland valley and foothill grassland, which is not located within or near the project area. This plant would not be expected in or near the project area.

Three plants occur in the coastal dunes of Montana de Oro State Park, but do not occur in the project area, which lacks dunes: beach spectaclepod (*Dithyrea maritima*), Blochman's leafy daisy (*Erigeron blochmaniae*), and San Luis Obispo monardella (*Monardella frutescens*). California sea blite (*Suaeda californica*), a federally threatened species, occurs within the intertidal zone of the Morro Bay estuary and has no potential habitat within the project area.

Several species that are associated with serpentine outcrops are also listed on the CNDDDB query. These habitats do not occur within the project area. These species are the San Luis Obispo serpentine dudleya (*Dudleya abramsii* ssp. *bettinae*) and Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*). Jones's layia (*Layia jonesii*) is also associated with clay soils and serpentine outcrops, which are not found in or near the project area. Miles's milk-vetch (*Astragalus didymocarpus* var. *milesianus*) may also be found in heavy clay soils near serpentine rock. None of these plants would be expected within the project area due to lack of suitable habitat.

Splitting yarn lichen (*Sulcaria isidiifera*) is a federally listed Species of Concern that is found in oaks and chaparral. No suitable habitat for this species is found within the project area.

WILDLIFE SPECIES

The diverse habitats within Montana de Oro State Park and adjacent PG&E lands support a variety of wildlife species. Eight vegetation types with corresponding plant communities and various plant associations occur within the park. Coastal scrub, foredunes, chaparral, broadleaf evergreen and riparian forests dominate the landscape. The vegetation types found in the vicinity of the proposed project include maritime chaparral, Bishop pine forest, oak woodland, and coastal scrub.

Fourteen sensitive or endangered wildlife species were found on the query for the Morro Bay South USGS quadrangle. Special-status wildlife species that have the potential to occur in Montana de Oro State Park near the project site are described below.

- **Morro Bay Kangaroo Rat** (*Dipodomys heermanni morrensis*) The Morro Bay kangaroo rat is only known from the coastal dune system within Montana de Oro State Park. The species has not been observed in Montana de Oro State Park since the late 1970's. This species is not expected in the project area due to the lack of suitable habitat.
- **Steelhead** (*Oncorhynchus mykiss*) The Federally threatened steelhead (*Oncorhynchus mykiss*) is known to occur in Islay and Coon Creeks. The project site is located outside of the Coon Creek riparian corridor. The species is not located within the project area itself. However, the project will occur near the riparian area, and therefore mitigation measures include creating a vegetation barrier to the creek and not burning in riparian vegetation.
- **Morro Blue Butterfly** (*Icaricia icarioides moroensis*) is a Federal Species of Concern and may be found in Central Dune Scrub habitat. The primary host for the species is silver dune lupine (*Lupinus*

chamissonis). This species is not expected in the project area due to the lack of suitable habitat and host plant.

- **California horned lizard** (*Phrynosoma coronatum frontale*) is a Federal Species of Concern and a California Species of Special Concern, and may be found in the coastal dune system, central dune scrub and coastal sage scrub. This species is not expected in the project area due to the lack of suitable habitat.
- **Two-striped garter snake** (*Thamnophis hammondi*) is a California Species of Special Concern. A melanistic version of this snake occurs in Islay Creek, and may occur in Coon Creek. This species is associated with perennial and intermittent streams that have rocky beds and dense riparian vegetation. This species is not expected near the project area due to lack of suitable habitat.
- **Southwestern pond turtle** (*Clemmys marmorata pallida*) is a Federal Species of Concern and a California Species of Special Concern. Southwestern (SW) pond turtles are normally associated with permanent ponds, lakes, and streams or permanent pools along intermittent streams. They prefer sites with dense emergent vegetation. They also utilize upland nesting sites near aquatic sites. Freshwater wetland habitats outside of the project area may provide habitat for SW pond turtles in Montana de Oro SP, but the project site does not provide suitable upland habitat. Southwestern pond turtles have not been documented to occur within Islay or Coon Creeks.
- **California red-legged frog** (*Rana aurora draytonii*) is Federally Threatened and a California Species of Special Concern. The California red-legged frog (CRLF) occurs near quiet permanent pools of streams, marshes, and ponds in coastal California. It prefers dense riparian vegetation including arroyo willow (*Salix lasiolepis*), cattails (*Typha* spp.) and bulrushes (*Scirpus* spp.). The species is not known to occur in the park.
- **Tidewater goby** (*Eucyclogobius newberryi*) is a Federally Endangered Species and California Species of Special Concern. This fish may be found in brackish water and shallow lagoon habitats, and has been observed in Chorro Creek at Morro Bay SP. This habitat would not be affected by the project.
- **Monarch butterfly** (*Danaus plexippus*). Monarch butterflies are not listed by state or federal agencies, however CDFG considers the roosting sites to be a sensitive natural resource. Monarchs migrate a great distance between Mexico and Canada, and traditionally use sites along the California coast to overwinter. No monarch roosting habitat occurs in the vicinity of the project.
- **Morro shoulderband snail** (*Helminthoglypta walkeriana*). The Morro shoulderband snail (Federally Endangered) has been found in Montana de Oro State Park. This snail has been documented to occur in the Morro Dunes Natural Preserve on the westerly side of the park entrance road. No known occurrences have been documented south of Spooner Cove. Based on the lack of suitable habitat and soil type, as well as the known range, the species is not expected to be impacted by the project.
- **Cooper's hawk** (*Accipiter cooperi*) and **Northern harrier** (*Circus cyaneus*), both California Species of Special Concern, have been observed in the park. Other species found in the park include the Federal Species of Concern and California Fully Protected **white-tailed kite** (*Elanus leucurus*) and **osprey** (*Pandion haliaetus*), a California Species of Special Concern. Other raptors known to occur at Montana de Oro SP are the red-tailed hawk (*Buteo jamaicensis*), and red-shouldered hawk (*Buteo lineatus*). These species may use the mature trees in the project area for perching or nesting; no raptor nesting activity would be occurring during the timing of the burn.

SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are regionally uncommon, unusually diverse, or of special concern to local, state, and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA.

The CNDDDB query lists Central Dune Scrub, Coastal Freshwater Marsh, Coastal Brackish Marsh, and Central Maritime chaparral as sensitive plant communities that exist within the Morro Bay South quadrangle. However, only Central Maritime chaparral occurs within the project site.

- **Central Dune Scrub.** Central coast dune scrub can be found in foredunes and on the sand spit at Montana de Oro SP. None of these areas will be affected by this project.
- **Coastal Freshwater Marsh.** Freshwater wetland and riparian vegetation that is covered under this description may be found near Islay, Hazard and Coon Creeks. These areas may be dominated by willows and palustrine emergent vegetation. This habitat will not be affected by this project.
- **Coastal Brackish Marsh.** Coastal brackish marsh, dominated by salt-tolerant plants such as saltgrass, pickleweed, and tules, may be found near Sharks Inlet in the Morro Bay estuary. This area will not be affected by project activities.
- **Central Coastal Sage Scrub.** This natural community is limited in central coastal California. It may provide habitat for a number of endemic species, including the black legless lizard, and the California horned lizard. Coastal sage scrub is found adjacent to the Spooner Ranch House and the campground. The habitat does not occur at the project site.
- **Central Maritime Chaparral** The significant portion of the project area consists of this habitat. However, the project area represents only a small fraction of the greater central maritime chaparral in the Irish Hills. The project is designed to stimulate new growth of central maritime chaparral to create a mosaic of age class communities within the Irish Hills. Fire is a historic component in the development of chaparral. In addition, regeneration of Pecho manzanita will be monitored to document the impact of fire on this species.
- **Jurisdictional Waters of the United States.** Adjacent to the project area, wetlands that meet U.S. Army Corps of Engineers (USACE) wetland criteria are found along Coon Creek. This creek corridor is strongly dominated by arroyo willow (*Salix lasiolepis*). No impacts to Coon Creek are anticipated.
- **Riparian Habitat.** Riparian habitat is found in Montana de Oro State Park along Islay, Coon and Hazard Creeks. These are also considered sensitive habitats. However, the riparian zones are outside of the project area and would not be affected by this project.

WETLANDS AND WATERS OF THE UNITED STATES

USACE defines wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of USACE jurisdictional wetlands meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology.

Riparian vegetation associated with rivers, streams, or lakes in California is also subject to regulation by the California Department of Fish and Game (CDFG). These regulations are described in Sections 1600 through

1603 of the California Fish and Game Code, and cover alterations to the natural flow, bed, channel, or bank of any river, stream, or lake. No riparian zones will be affected by this project.

The California Coastal Commission's definition of wetlands includes all "lands which may be covered periodically or permanently with shallow water" (Section 30121, Coastal Act). This definition requires the presence of only one of the three wetland attributes recognized by USACE. None of the wetland attributes are present at the project site.

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 Game or the U.S. Fish and Wildlife Service?*

Less Than Significant Impact – Project would cause mortality in a 47 year old stand of Pecho manzanita, while at the same time stimulating growth of fire dependent seeds. The stand to be burned represents approximately 1% of the total population of this species and no reduction in available habitat or change in species composition is expected. No substantial adverse effect would occur.

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?*

Less Than Significant With Mitigation Incorporated – Project will not cause a substantial adverse effect due to a vegetative buffer of 100-300 feet between the riparian vegetation and the burn site. A mosaic burn will leave remnants of vegetation, thereby reducing surface erosion.

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

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 – No direct removal, filling, hydrologic interruption, or other substantial adverse impact would occur. No equipment use is proposed within 300' of Coon Creek

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?*

Less Than Significant With Mitigation Incorporated – Impacts to migratory fish and wildlife would be transitory and consistent with the impacts of a natural wildfire. No substantial interference would occur in regards to steelhead trout. Other wildlife, such as migratory birds, would still be able to use adjacent habitat and would see new resources appear in the recovering burn plot.

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

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

No Impact – No ordinances or policies such as a local tree preservation policy exists within State Park land or has been established on private land owned by PG&E. Project is consistent with management plans of both landowners.

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 – This project is consistent with the MDO Management Plan and with PG&E’s land management policies.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Will the project:				
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

The Spooner Ranch house is situated in Montaña de Oro State Park on a bluff above the mouth of Islay Creek at Spooner Cove. Montaña de Oro State Park is located on part of what was the Pecho y Islay Land Grant that was granted to Francisco Padillo in 1843. In 1845, Captain John Wilson acquired 10,330 acres of the Pecho y Islay. Upon his death in 1861, the property was divided among his heirs, and by 1892 the northern 6,500 acres were leased to Alden Spooner II. In 1902, Spooner purchased the property, and in 1905 increased his holdings by purchasing a portion of the adjacent Bernard Coll ranch totaling approximately 8,000 acres.

According to multiple sources, San Luis Obispo County was occupied by both Salinan and Chumash tribes, possibly for the past 13,000 years. The Salinan people are thought to have occupied northern San Luis Obispo County from Paso Robles northward. Evidence indicates that the project area was occupied by the Chumash people who settled on the Channel Islands and the Central Coast region from Malibu Canyon to the Morro Bay area. The Chumash were hunter/gatherers and were heavily dependent on marine resources as well as acorns and various plants, roots, nuts, and seeds. The Chumash Indians are thought to have numbered well over 20,000 prior to the Spanish Mission period when the introduction of exotic diseases and other factors reduced this number to just over 2,000 by the 19th century. Although the extent of use by these people of the project area is not known, the presence of Coon Creek, the coastline and the topography and vegetation in the area would indicate the likelihood of the presence of cultural resources in the area. Extensive Native American and historical sites are located on the nearby coastal plain where the topography flattens out near the ocean.

An archaeological evaluation of the project area was conducted by CAL FIRE and DPR archaeologists and staff. A Confidential Archaeological Addendum (CAA) was prepared that outlines additional survey procedures and protective measures for cultural resources. No sites were found during the survey and none are known to exist within the project area.

Note: The records search conducted at the Central Coast information Center for this project is valid for a period of five years. Any future project maintenance activities after five years will require another records search. Native American contact would likely be made at that time as well.

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

No Impact – No known historical resources occur within the project site.

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

No Impact – No known archaeological resources occur within the project site. Any impact to unknown resources would be transitory and similar to the impact of a natural wildfire.

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

No Impact – No known paleontological resources occur within the project site. Any impact to unknown resources would be transitory and similar to the impact of a natural wildfire.

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

Less Than Significant With Mitigation Incorporated – Human remains are not known to be within the proposed project. The project boundary is adjacent to the coastal plain which is known to have high human use. No disturbance to any known human remains will occur as a result of the proposed project and the minimal depth of soil disturbance anticipated with the project will make disturbance of unknown human remains unlikely. No human remains or associated grave goods were encountered during the archaeological surveys completed during this Initial Study and none are expected to be encountered during project activities. Nonetheless, because of the project's location near a year-round stream and the coastal plain, the possibility exists for human remains to occur within the project area. If human remains were unearthed and not protected in accordance with procedures in State Law (see below), this could be a potentially significant impact. To prevent this impact, the following mitigation measure shall be implemented.

Mitigation Measure #2: Procedures for Inadvertent Discovery of Human Remains

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging activities in the area of the burial and notify the SLO County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of SLO County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in PRC § 5097.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

Information on Soils

See Figure 5 and Figure 6 for information on soils. The official description of the soil series that occupies the project area follows:

LOPEZ SERIES

The Lopez series consists of shallow, somewhat excessively drained soils that formed in material weathered from hard, fractured *diatomaceous shale*. Lopez soils are on narrow divides and have slopes of 9 to 100 percent. The mean annual precipitation is about 21 inches and the mean annual air temperature is about 58 degrees F.

TAXONOMIC CLASS: Loamy-skeletal, mixed, superactive, thermic Lithic Ultic Haploxerolls

TYPICAL PEDON: Lopez shaly clay loam - annual grass and forbs. (Colors are for dry soil unless otherwise stated.)

A11--0 to 8 inches; dark gray (10YR 4/1) very shaly clay loam, very dark gray (10YR 3/1) moist; strong fine and medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, medium and coarse roots; many very fine and fine interstitial pores; about 15 percent by volume angular shale fragments larger than 3/4 inch, plus 30 percent about 2 mm; neutral (pH 6.8); gradual irregular boundary. (4 to 12 inches thick)

A12--8 to 14 inches; gray (10YR 5/1) very shaly clay loam, dark grayish brown (10YR 4/2) moist; strong fine and medium granular structure; slightly hard, very friable, sticky and slightly plastic; common very fine, fine, medium and coarse roots; many very fine and fine interstitial pores; about 40 percent shale fragments larger than 3/4 inch plus about 30 percent larger than 2 mm; neutral (pH 6.6); abrupt irregular boundary. (2 to 8 inches thick)

R--14 to 20 inches; hard fractured diatomaceous (Monterey) shale. Strata tilted at about 45 degree angle with few hard outcrops exposed. Rock joints are coated with thin dark brown clay films.

RANGE IN CHARACTERISTICS: Depth to a lithic contact of shale is 6 to 20 inches, usually about 14 inches. The mean annual temperature of the soil is about 59 degrees to 65 degrees F. and usually the soil temperature is not below 47 degrees F. at any time. The soil below a depth of about 5 inches usually is dry all of the time from late April or May until November or early December and usually is moist all the rest of the year. Fragments of shale occupy 35 to 50 percent of the volume of the soil profile. The A horizon is a gray, dark gray, very dark gray, grayish brown, dark grayish brown or brown in 10YR or 2.5Y hue. Chroma is less than 3. This horizon is loam, silt loam, or clay loam. Laboratory determinations indicate more clay and greater cation

exchange capacity than suggested by field texture. Soil properties are influenced to some extent by ash in the parent material and some amorphous material in the soil. Organic matter is 2 to 10 percent. The A horizon is neutral to moderately acid, usually about pH 6.0. Base saturation is 50 to 75 percent in some or all parts and is not less than 50 percent in any part. This horizon has moderate or strong granular or subangular blocky structure. Usually the A horizon rests directly upon rock but some pedons have a C horizon a few inches thick and paler than the A horizon.

COMPETING SERIES: These are the [Crow Hill](#), [Daulton](#), [Friant](#), [Gazos](#), [Hambright](#), [Lodo](#), [Maymen](#), [Montara](#), [Santa Lucia](#), and [Tollhouse](#) series in other families. Crow Hill, Gazos, and Santa Lucia soils have a lithic or paralithic contact at depths of 24 to 40 inches. Daulton soils have a dark, hard and massive A horizon. Friant, Lodo, and Montara soils have less than 35 percent rock fragments. Hambright soils have a chroma of 2 or 3. Maymen soils have an ochric epipedon and an annual soil temperature less than 59 degrees F. Tollhouse soils have a paralithic contact at depths of less than 20 inches and have an annual soil temperature less than 59 degrees F.

GEOGRAPHIC SETTING: Lopez soils are on narrow divides and occur at elevations of 200 to 3,300 feet. Slopes range from 9 to 100 percent. The climate is dry subhumid mesothermal with cool to warm rainless but foggy summers near the coast and cool, moist winters. The mean annual precipitation is 12 to 30 inches. The average January temperature is 47 degrees to 51 degrees F., the average July temperature is 63 to 68 degrees F., and the mean annual temperature is about 58 to 62 degrees F. The annual freeze-free season is 200 to over 300 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the competing [Crow Hill](#), [Gazos](#), [Maymen](#), and [Santa Lucia](#) soils and the [Chamise](#), [Linne](#), and [Los Osos](#) soils. Chamise and Los Osos soils have an argillic horizon. Linne soils are strongly calcareous and have a paralithic contact at depths of 24 to 40 inches.

DRAINAGE AND PERMEABILITY: Somewhat excessively drained; rapid to very rapid runoff; moderate permeability.

USE AND VEGETATION: Used for range and watershed. Vegetation is mostly coastal type sagebrush with scattered live oak and sparse annual grass and forbs. Some areas have a chaparral cover.

DISTRIBUTION AND EXTENT: Lopez soils occur in the central and south-central part of the Coast Range in California. The soils are moderately extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Davis, California

SERIES ESTABLISHED: Monterey County, California, 1972.

REMARKS: The Lopez series was established to include soils that were formerly classified shallow phases of Santa Lucia and Crow Hill series.

The activity class was added to the classification in February of 2003. Competing series were not checked at that time. - ET

National Cooperative Soil Survey

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.)

No Impact – The nearest fault zone identified on this map is located along Los Osos Valley Road on the San Luis Obispo quad approximately 8 miles east of the project area. Burning surface vegetation is not expected to influence this fault zone. The roots of most of the plants burned will remain unharmed following burning and will retain the same slope-stabilizing properties.

ii) Strong seismic ground shaking?

No Impact – Burning surface vegetation is not expected to cause seismic shaking.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact – Burning surface vegetation is not expected to increase project area soils to the risk of significant slope failure. No unstable areas or soil types are known to exist. The project area contains steep slopes with moderate and high erosion potential (See Figures 5 & 6) that could increase

the risk of soil erosion; however, the project will be burned in a pattern that will create a mosaic of unburned island and strips of vegetation. The roots of most of the plants burned will remain unharmed following burning and will retain the same soil-stabilizing properties as before burning. These fire-adapted plants (primarily sprouters) will quickly recapture the areas burned reducing the risk of any significant soil movement or erosion. These sprouting trees and shrubs will begin sprouting within 1 week of burning and should fully recover the site along with grasses and forbs within 2 months of burning. No equipment use is proposed except on existing roads and ridgelines along the perimeter of the project area.

iv) Landslides?

Less Than Significant Impact – Burning surface vegetation is not expected to increase project area soils to the risk of significant slope failure such as landslides. No unstable areas or soil types are known to exist. The project area contains steep slopes with moderate and high erosion potential (See Figures 5 & 6) that could increase the risk of soil erosion; however, the project will be burned in a pattern that will create a mosaic of unburned island and strips of vegetation. The roots of most of the plants burned will remain unharmed following burning and will retain the same soil-stabilizing properties as before burning. These fire-adapted plants (primarily sprouters) will quickly recapture the areas burned reducing the risk of any significant soil movement or erosion. These sprouting trees and shrubs will begin sprouting within 1 week of burning and should fully recover the site along with grasses and forbs within 2 months of burning. No equipment use is proposed except on existing roads and ridgelines along the perimeter of the project area.

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

Less Than Significant with Mitigation Incorporated – Burning surface vegetation is not expected to increase project area soils to the risk of significant slope failure such as landslides. No unstable areas or soil types are known to exist. The project area contains steep slopes with moderate and high erosion potential (See Figures 5 & 6) that could increase the risk of soil erosion; however, the project will be burned in a pattern that will create a mosaic of unburned island and strips of vegetation. The roots of most of the plants burned will remain unharmed following burning and will retain the same soil-stabilizing properties as before burning. These fire-adapted plants (primarily sprouters) will quickly recapture the areas burned reducing the risk of any significant soil movement or erosion. These sprouting trees and shrubs will begin sprouting within 1 week of burning and should fully recover the site along with grasses and forbs within 2 months of burning. No equipment use is proposed except on existing roads and ridgelines along the perimeter of the project area. The lower half of the slope is expected to be burned at a lower intensity than the upper half due to the ignition pattern and the influence of slope on fire behavior and intensity. Ignition is only planned for the upper half of the slope so that backing fire will self-extinguish in a mosaic of strips and islands on the lower half of the slope. The burned areas of the project site will be most vulnerable to erosion immediately following burning when mineral soil will be exposed to rainfall and some soil erosion is likely due to the slope steepness. However, because of the mitigation incorporated, the planned pattern of mosaic burning and because any soil movement is expected to dissipate into unburned vegetation, significant soil erosion is not anticipated.

To reduce the risk of significant soil erosion and prevent soil movement into Coon Creek, the following mitigation measure is proposed:

Mitigation Measure #1: 100’ Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

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 – No unstable soil types or geologically unstable areas are known to be present. No evidence of significant soil instability such as slumps or old landslides have been identified.

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 – No expansive soils are known to be present.

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 site does not contain wastewater facilities of any kind.

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

Information about Greenhouse Gas Emissions (GHG)

Greenhouse gases defined by State law include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and three groups of synthetic, fluorinated gases including hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). The US EPA also recognizes these same six GHGs that were also the subject of the Kyoto Protocol. Additional GHGs recognized scientifically are water vapor (H₂O) and ozone (O₃). GHGs in order of abundance are water vapor, carbon dioxide, methane, and ozone. Water vapor (H₂O) is the dominant GHG comprising approximately 95% of the earth’s atmosphere and two-thirds of the “greenhouse effect”. H₂O, CO₂, CH₄, and O₃ occur both from natural and manmade sources, whereas the fluorinated gases are primarily produced by industrial processes.

The SLO County APCD has not yet established significance thresholds for GHG emissions from project operations. Nonetheless, GHGs (CO₂ and CH₄) from all projects subject to CEQA must still be quantified and mitigated to the extent feasible. The California Office of Planning and Research (OPR) has provided the following direction for the assessment and mitigation of GHG emissions:

- Lead agencies should make a good-faith effort (see Appendix 1), based on available information, to calculate, model, or estimate the amount of CO₂ and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities;

	Flaming	Smoldering	Total
PM 10	92	79	171
PM 2.5	78	67	145
CH 4	24	41	65
CO	195	889	1084
CO 2	53147	3620	56767
NOX	96	0	96
SO 2	30	3	33

Estimates made using FOFEM v5.9

The project area is a shrub-dominated vegetation type that generally reaches maturity at around 30 years of age. The amount of carbon sequestered increases until the point of carbon “saturation” when mature vegetation has slowed in growth or begins to decline to the point where the net volume of carbon is neutral or declining and further sequestration is not possible. The project area is dominated by mature and overmature vegetation with high levels of dead and decaying organic matter. Currently and likely for the past 10 years or more, net carbon sequestration is likely to be declining. The project will release carbon, as estimated in Figure 10, and will begin to immediately resequenter carbon at high rates as vegetation begins to grow and recapture the site until once again reaching the point of carbon “saturation” in approximately 30 years at which time the carbon “sink” capability will reach maximum and begin a slow decline.

- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful evaluation. All available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts); and,
- The lead agency must impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological or other reasons. A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is “less than significant.”

Potential significant environmental impacts from GHG emissions may result over time due to changes in global climate patterns. Scientific evidence, expert opinion and common sense seem to agree in fact that the earth’s climate is not static but extremely complex and dynamic. Warming and cooling cycles of various durations, speeds, and intensities occur constantly. The causes of climate change are not well understood and are widely debated by climatologists and meteorologists throughout the world.

CEQA Guidelines §15064(f)(5) provides the following guidance for lead agencies in their task of evaluating the significance of GHG emissions associated with a proposed project: *Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.*

Greenhouse gas emissions from understory burns

Burning of vegetation as proposed in this project will result in greenhouse gas emissions. To analyze the impacts of the emissions an understanding of the carbon cycle is required. Below is a brief explanation of the carbon cycle pertinent to the project (the cycle, in its entirety, is more complex and has other components, such as volcanic activity, ocean interactions, burning of fossil fuels, etc. which were omitted as they are not relevant to the prescribed burn projects).

*The **carbon cycle** is the biogeochemical cycle by which carbon is exchanged among the biosphere, pedosphere, geosphere, hydrosphere, and atmosphere of the Earth. It is one of the most important cycles of the earth and allows for the most abundant element to be recycled and reused throughout the biosphere and all of its organisms.*

Carbon exists in the Earth's atmosphere primarily as the gas carbon dioxide (CO₂). Although it is a small percentage of the atmosphere (approximately 0.04% on a molar basis), it plays a vital role in supporting life. Other gases containing carbon in the atmosphere are methane and chlorofluorocarbons (the latter is entirely anthropogenic). Trees convert carbon dioxide into carbohydrates during photosynthesis, releasing oxygen in the process. This process is most prolific in relatively new forests where tree growth is still rapid. The effect is strongest in deciduous forests during spring leafing out. This is visible as an annual signal in the Keeling curve of measured CO₂ concentration. Northern hemisphere spring predominates, as there is far more land in temperate latitudes in that hemisphere than in the southern.

Forests store 86% of the planet's above-ground carbon and 73% of the planet's soil carbon.

Carbon is released into the atmosphere in several ways:

- *Through the respiration performed by plants and animals. This is an exothermic reaction and it involves the breaking down of glucose (or other organic molecules) into carbon dioxide and water.*
- *Through the decay of animal and plant matter. Fungi and bacteria break down the carbon compounds in dead animals and plants and convert the carbon to carbon dioxide if oxygen is present, or methane if not.*
- *Through combustion of organic material which oxidizes the carbon it contains, producing carbon dioxide (and other things, like water vapor).*

Around 42,000 gigatonnes of carbon are present in the biosphere. Carbon is an essential part of life on Earth. It plays an important role in the structure, biochemistry, and nutrition of all living cells.

- *Autotrophs are organisms that produce their own organic compounds using carbon dioxide from the air or water in which they live. To do this they require an external source of energy. Almost all autotrophs use solar radiation to provide this, and their production process is called photosynthesis. A small number of autotrophs exploit chemical energy sources in a process called chemosynthesis. The most important autotrophs for the carbon cycle are trees in forests on land and phytoplankton in the Earth's oceans. Photosynthesis follows the reaction $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$*
- *Carbon is transferred within the biosphere as heterotrophs feed on other organisms or their parts (e.g., fruits). This includes the uptake of dead organic material (detritus) by fungi and bacteria for fermentation or decay.*
- *Most carbon leaves the biosphere through respiration. When oxygen is present, aerobic respiration occurs, which releases carbon dioxide into the surrounding air or water, following the reaction*

$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$. Otherwise, [anaerobic respiration](#) occurs and releases methane into the surrounding environment, which eventually makes its way into the atmosphere or hydrosphere (e.g., as marsh gas or [flatulence](#)).

- Burning of biomass (e.g. forest fires, wood used for heating, anything else organic) can also transfer substantial amounts of carbon to the atmosphere
- Carbon may also be circulated within the biosphere when dead organic matter (such as [peat](#)) becomes incorporated in the geosphere.

Carbon storage in the biosphere is influenced by a number of processes on different time-scales: while [net primary productivity](#) follows a [diurnal](#) and seasonal cycle, carbon can be stored up to several hundreds of years in trees (or thousands of years in long lived trees such as redwoods) and up to thousands of years in soils and oceans. Changes in those long term carbon pools (e.g. through de- or afforestation or through temperature-related changes in soil respiration) may thus affect global climate change (Wikipedia).

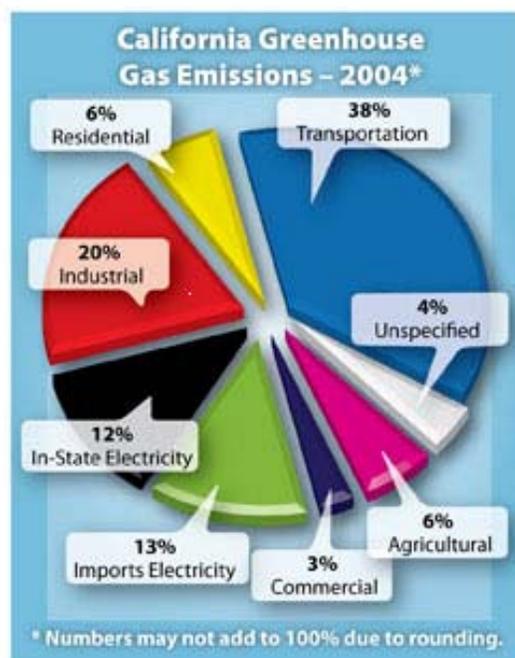
Air Resources Board GHG Inventory Work

ARB has undertaken an extensive inventory documentation and refinement exercise to develop a draft updated statewide GHG emissions inventory and corresponding documentation. This statewide GHG inventory is an aggregate, "top-down" inventory for the period 1990-2004. The Board approved a 2020 emissions limit of 427 million metric tonnes of CO₂ equivalent in December 2007. The 2020 emissions limit is equivalent to the 1990 emissions level (ARB 2010).

<http://www.climatechange.ca.gov/inventory/index.html>

In California, the annual fossil fuel burning (FFB) emissions inventory of CO₂ is the second largest in the country (362 Tg CO₂ yr⁻¹ averaged from 1990–2003). Even so, the annual averaged emissions of CO₂ from wildfires are significant (24 Tg CO₂ yr⁻¹; equivalent to 6% of the FFB emission estimates). Although the ratio of annual state-level CO₂ emissions from fires to FFB

sources is fairly low, and California does not have significant coal-fire power plant CO₂ emissions, this ratio is also subject to substantial variation. By the end of October 2003, wildfires burned more than 750,000 acres, producing the equivalent of 49% of the monthly CO₂ emitted by FFB sources for state. This occurred in more than one year that we investigated. The major wildfires in September 2006, including the Day Fire in Southern California, produced an estimated 16 Tg CO₂ for that month, equivalent to approximately 50% of estimated total monthly FFB emissions for the entire state (Wiedinmyer, C. and Jason C Neff, 2007). Far more acres are burned each year in wildfires than are burned in prescribed fires. To the extent that prescribed fire can lessen the intensity or reduce the acres burned in wildfires, prescribed fire can temporarily reduce the carbon emissions from the wildland.



Land Use Change & Forestry (Biodegradable Carbon Emissions & Sinks)		
Emissions (MMTCO2)		
Category	Data Source	1990
Sinks		
Forest Land (Sinks)		-14.245
Forest Growth	Winrock	-13.141
Rangeland Growth	Winrock	-1.104
Sinks		-14.245
Emissions		
Forest Land (Emissions)		3.261
Forest/Rangeland Fires (Combustion & Decomposition)	Winrock	2.032
Development of Forest/Rangelands (Land Use Change)	Winrock	0.021
Forest/Rangeland Other Emissions (Unspecified)	Winrock	1.208
Slash Left Behind from Harvests (Decomposition)	Winrock	0.156
Fuel Wood from Harvests (Combustion)	Winrock	1.532
Composting of Wood Waste Materials (Decomposition)	CIWMB/USEPA	0.255
Wood Waste Dumps	CIWMB	0.000
Landfilled Wood Waste (Emissions)	ARB Model	2.350
Emissions		7.555
Net CO2 Flux		-6.690

Description

The net CO2 flux for the forest sector is estimated from summing CO2 removals from the atmosphere and CO2 emissions to the atmosphere on managed lands and the wood products pool. Removals of CO2 from the atmosphere occur as a result of vegetation growth. Emissions of CO2 to the atmosphere occur as a result of a variety of land use activities. These include emissions from oxidation of timber harvest slash, fuel wood, biomass consumed in wildfires, other disturbance (land use change or unspecified), or from the decomposition of landfilled or composted wood products consumed in the state. CO2 removals and emissions by urban forests will be included pending further data. This table focuses on forested lands, therefore CO2 removals and emissions on (non)woody crop lands are not reported, pending further study.

Data Sources

Winrock: CEC (2004). Baseline Greenhouse Gas Emissions for Forest, Range, and Agricultural Lands in California. CEC PIER final report CEC-500-04-069F. Annual average forest and range land CO2 removal and emission rates for period 1994 - 2000 in Table 1-21, CEC (2004) scaled to state-wide in CEC (2006): Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. Publication CEC-600-2006-013-SF. Emissions and removals are back-cast to 1990 from 1994 using 0.1707% per year forest land area trend from 1953 to 1994, from p. 14 in Shih (1998): The Land Base of California's Forests. Fire and Resource Assessment Program, California Dept. of Forestry and Fire Protection. Emissions and removals forecasted from 2000 using 4% forest land area decline predicted for 1997 to 2050 in the Pacific Coast Region, from p. 53 in: Area Changes for Forest Cover Types in the United States, 1952 to 1997, with projections to 2050. (2004) USDA Forest Service, Pacific Northwest Research Station, publication PNW-GTR-613.

CIWMB/USEPA: California Integrated Waste Management Board SWIS waste-in-place and landfill survey data, USEPA Harvested Wood Products use data provided by Kenneth Skog (Forest Products Laboratory, USDA Forest Service, Madison, WI), scaled to state based on population.

ARB Model: From IPCC Mathematically Exact First-Order Decay Model, with CIWMB SWIS waste-in-place and landfill survey data.

http://www.arb.ca.gov/cc/inventory/pubs/reports/appendix_b_co2_flux.pdf

On average, the combined aboveground carbon storage of California forests is about 40 tons/acre (Christensen et al. 2007). In California the largest forest carbon stock pools is in soil (45 percent), followed by biomass (30 percent), and forest floor and coarse woody debris (20 percent) (Birdsey and Lewis 2002). At some point the carbon stored in the above ground portion of the plants will be released through respiration, decay or combustion. Although some of the carbon will be added to the soil most will be released to the atmosphere.

Over time the carbon that is stored in vegetation will be released as part of the normal carbon cycle. Carbon will also be sequestered overtime as new vegetation grows as long as the land remains productive. Prescribed fire is a tool to help maintain those carbon stocks over time. By reducing the probability of catastrophic wildfire prescribed fire can increase the probability of survival of the overstory trees allowing them to continue to sequester carbon. The carbon released by the prescribed fire will be resequenced by the remaining living trees and new vegetation following the burn. This has the potential to reduce the massive increase in short term emissions from wildfire and spread the emissions over a longer time period while allowing sequestration to occur in the remaining vegetation.

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 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 releases 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).

Insects and disease infestations operate on forest carbon cycles similar to wildfire, and exacerbate wildfire effects... Dense, slow growing unmanaged forest stands are most susceptible to pest attack, mortality, and rapid reduction of stored carbon (Bonnicksen, 2007). An overstocked stagnant stand does not sequester much carbon because it is not increasing the amount of biomass in the stand at a rapid rate. The stand may be decaying faster than growing, in which case it would have a net release of carbon as opposed to a net sequestration. Prescribed fire does created mortality in the suppressed understory, thus reducing tree to tree competition for water and nutrients. This increases the resilience of the remaining trees to insect and disease infestations.

Attempts to increase carbon storage in forests via prohibitions on harvesting can reduce the net benefits of carbon sequestration by the forest sector and increase the risk of loss of stored carbon via catastrophic fire or pest infestation (Skog and Nicholson 2000). Presumably, carbon loss from national forest and non-industrialized private ownerships resulted in large part from land use conversions and forest damage by insects, disease, and catastrophic fires. While their carbon stores were being depleted, these ownerships were net sources of carbon to the atmosphere unless the carbon was captured and stored in other forms. The national forests in California will become net emitters of carbon by the end of the century. For the next 4-6 decades, under a Business as Usual (BAU) trajectory, the national forests will accumulate carbon at a higher rate than carbon will be lost through disturbances such as wildfire, pest mortality and inter-tree competition. However, at some point in the mid-21st century, losses from wildfire, disease and

other disturbances will exceed growth. National Forest carbon sinks will become unstable and unsustainable, under the BAU scenario (Goines B., Nechodom M. 2009). This will also be true of unmanaged state and private timberlands, although the timescale will be different.

To counter these effects, stand management to enhance carbon sequestration requires focusing on ways to increase rates of leaf area production and maintain canopy cover. Over the long term, this requires active management of young stands with successive cycles thinning to maintain a rapid growth rate. At the stand level, the amount of carbon sequestered by young trees (**15 – 75 years**) varies between 2-6 tons of carbon per acre depending on species and site quality...young trees sequester carbon much more rapidly than older trees.

Fertilization increases leaf area production and capacity to sequester carbon (Mader 2007). Prescribed fire returns a portion of the nutrients stored in the biomass and forest litter to the soil, thereby fertilizing the remaining trees and increasing their capacity to sequester carbon. Again, a managed forest that incorporates a sequence of harvests can result in more carbon sequestered than a forest left unmanaged over time (Helms 2007a). This is because harvesting like prescribed fire reduces competition and concentrates the site growth potential into fewer stems that are healthier and more resistant to catastrophic wildfire, insects and disease.

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 CO₂ per acre depending on forest type, density, and fire intensity (Helms 2007b). According to a study by R Neil Sampson, a prescribed fire could cause 35% reduction in the emissions than 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 CO₂. 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 CO₂ emissions to the atmosphere. (Mader 2007). Unmanaged forests are at greatest risk of losing large amounts of stored carbon to the atmosphere.

This is clearly stated in excerpts from the following citations:

“Prescribed Fire as a Means of Reducing Forest Carbon Emissions in the Western United States” (Wiedinmyer 2010).

Carbon sequestration by forested ecosystems offers a potential climate change mitigation benefit. However, wildfire has the potential to reverse this benefit. In the western United States, climate change and land management practices have led to increases in wildfire intensity and size. One potential means of reducing carbon emissions from wildfire is the use of prescribed burning, which consumes less biomass and therefore releases less carbon to the atmosphere.

In the western United States, past land management activities that include grazing and fire suppression have altered the fire regimes of many dry forest types, resulting in a shift from frequent, low severity fire to infrequent, high severity fire.

Fuel reduction treatments, such as mechanical thinning and prescribed burning, can be used to reduce CO₂ 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, combusting less than 50% of the available fuel. 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.

Hurteau and North (2009) show that carbon emissions in a prescribed burn were 69% less than a wildfire in mixed conifer forest in the Sierra Nevada.

Reducing the risk of high severity fire in the dry forest types of the western U.S. requires a reduction in forest carbon stocks. Despite these reductions, carbon continues to accumulate as a result of forest growth following treatment implementation.

The result of this study suggests that prescribed burning could reduce CO₂ and other emissions from fires in dry forest types by 52-68%.

Prescribed burning is a potential way to manage CO₂ fluxes from forests in regions with high wildfire activity such as the western U.S.

These findings indicate that prescribed burning emissions on a per fire basis are considerably lower than emissions from wildfire. Furthermore, live tree mortality rates from prescribed burning are typically lower than from wildfire, and the remaining live trees continue to sequester carbon. While prescribed burning does not eliminate the occurrence of wildfire in these systems, there is evidence that treating fuels limits the severity of wildfire when it does occur because of limited fuel availability (Wiedinmyer 2010).

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 CO₂: 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 reduce 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, as well as, public and firefighter safety.

All CAL FIRE prescribed burns require approval of 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 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.

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Wikipedia, the free encyclopedia. Carbon cycle From Wikipedia, the free encyclopedia http://en.wikipedia.org/wiki/Carbon_cycle

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

Less Than Significant Impact – As discussed above, the project will directly release GHG; however, this effect is considered to be temporary, insignificant on a global scale, and neutral over time as GHG released during combustion will be re-sequestered by natural regeneration.

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 - SLOAPCD has not presently established a significance threshold limit for GHG emissions. The Legislature passed and the Governor signed AB32, The Global Warming Solutions Act of 2006. This law requires the Air Resources Board (ARB) to adopt strategies to reduce GHG emissions to baseline 1990 levels by 2020, and by 2050 to reduce emissions to 80% of 1990 levels. In December 2007, the Board approved the 2020 emission limit of 427 million metric tons of carbon dioxide equivalent (MMTCO2E) of greenhouse gases.

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

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 - No hazardous materials will be disposed of as part of this project. Fuel mixes used for ignitions will not be a significant hazard to the public, as the dispensing and control of these fuels is managed and limited to ignition personnel.

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 - No release of hazardous materials would reasonably be expected from this 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 - No school exists within one-quarter of a mile from the project. The nearest school is 4.5 miles northeast in Los Osos.

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 site does not fit the description above, nor would a hazard be created.

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 - No airport is within two miles of the project. The nearest airport is approximately 11.5 miles east in San Luis Obispo.

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 - No private airstrips exist in the vicinity of the project area.

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

Less Than Significant Impact - A Tsunami Plan has been developed for the area, but this project would not be expected to interfere with this plan or other emergency plans. The main access road (Pecho Valley Road) would remain unimpeded for emergency response and evacuation from DCNPP, and sufficient resources would be on call as backup for those assigned to the burn.

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 - Prescribed fire always carries an inherent risk of escape. However, significant hazards are mitigated by ignition plans, use of the Incident Command System, the presence of suppression personnel, the burn prescription, the timing of the burn (after significant rain), and trained personnel. The nearest urbanized area is Los Osos, 4.5 miles northeast of the project. Project is expected

to burn to the south-southwest directly towards the ocean. Only one house is located here and appropriate precautions will protect this home from damage.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in inundation by seiche, tsunami, 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 - Project would not violate water quality standards or waste discharge requirements as none are established at this location. Project will be burned in a mosaic pattern to create strips and islands of unburned vegetation. No ignition is planned for the lower half of the slope which should cause the resulting backing fire to self-extinguish well above the riparian protection corridor. The mouth of Coon Creek into the ocean is approximately ½ mile from the project and no cumulative effects to water quality are considered likely. Although the ignition pattern is planned to cause the burn to self-extinguish well above the riparian corridor, the following mitigation will be used to protect the riparian corridor and the associated riparian values along Coon Creek:

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

- 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 - No adverse impact to groundwater is reasonably anticipated from this project. A common result of prescribed burns is a temporary increase in the amount of groundwater available as the vegetation that has been consuming groundwater is temporarily reduced. This benefit is short-lived, however, as the new vegetation is expected to grow aggressively and consume similar amounts of groundwater as was occurring prior to the burn.

- 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?***

Less Than Significant Impact – A significant effect could occur if a significant area of soil from the burned slopes eroded directly into Coon Creek causing a debris dam. To avoid this, the ignition pattern planned for this unit is to ignite only the upper 1/2 of the slope to create a pattern of unburned strips and islands of vegetation. Once ignition is stopped the lower half of the hillside is expected to self-extinguish as the resulting backing fire will burn out well above the riparian corridor. We anticipate little burning on the lower 1/3 of the slope and consequently little change in the vegetation. This will mean that an intact filter strip will remain to prevent soil and burned material from moving into Coon Creek. To provide additional protection and ensure an adequate filter strip to capture any erosion, the following protection measure will be used:

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

- 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 – As described in (c) above, the ignition pattern and Mitigation #1 should prevent any measurable increase in erosion into Coon Creek. No flooding is expected as temporary runoff will likely be captured in these unburned buffer strips. Project will not substantially alter drainage or runoff resulting in flooding. Increased surface water flow will be consistent with natural processes such as a wildfire. A mosaic burn and a vegetated buffer along the riparian zone will mitigate this flow of water. This portion of Coon Creek which is only ½ mile from the mouth into the ocean is confined within a deeply incised valley that is not vulnerable to flooding in even the highest flows.

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 area drains directly into Coon Creek and the mouth into the ocean is approximately ½ mile below the project area. No stormwater drainage systems are present in this area and no polluted runoff is expected from burning natural vegetation.

f) Would the project otherwise substantially degrade water quality?

Less Than Significant Impact – This lower portion of Coon Creek just above the mouth is not used for human use and therefore the primary beneficial uses of this water are for habitat for wildlife, fish and other aquatic species. A significant effect could occur if a significant area of soil from the burned slopes eroded directly into Coon Creek causing a debris dam or excess siltation. If this were to occur the effect would likely be short term as this stream is regularly “flushed” out during high water events following large storm events. To avoid the chance of this occurring as a result of this project, the ignition pattern planned for this unit is to ignite only the upper 1/2 of the slope to create a pattern of unburned strips and islands of vegetation. Once ignition is stopped the lower half of the hillside is expected to self-extinguish as the resulting backing fire will burn out well above the riparian corridor. We anticipate little burning on the lower 1/3 of the slope and consequently little change in the vegetation. This will mean that an intact filter strip will remain to prevent soil and burned material from moving into Coon Creek. To provide additional protection and ensure an adequate filter strip to capture any erosion, the following protection measure will be used:

Mitigation Measure #1: 100’ Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve 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 is a prescribed burn not involving housing within a 100-year flood zone.

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

No Impact – The project is a prescribed burn not involving structures within a 100-year floodplain.

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?

Less Than Significant Impact – High water events along this lower portion of Coon Creek commonly occur following significant precipitation events and in wet winters. However, due to the steep topography, deeply incised channel and lack of a floodplain, flooding is not a potential impact. Human exposure to the area adjacent to the project area or further downstream is confined to the hiking trail along Coon Creek and to the Pecho Road bridge which was engineered to handle high water flows. For the reasons stated in (f) above, the project is not likely to contribute a significant increase in the amount of water that drains into Coon Creek during high water events. During rare times when water is flowing over portions of the Coon Creek trail, the trail is usually closed.

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

No Impact – The project will have no effect on the landform of the area and is entirely above the tsunami inundation zone mapped for the area.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
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 checked="" type="checkbox"/>	<input 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 – No community is established in the vicinity of the project area.

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?

Less Than Significant Impact – Project would not conflict with any plans, policies or regulations. Project is consistent with resource management objectives of the General Plan for Montana de Oro State Park and fire prevention at the PG&E Diablo Facility. A small portion of the west end of the project area is within the Coastal one (See Figure 3). Since burned vegetation immediately regrows, burning natural vegetation is not considered “development” per §30106 and therefore no Coastal Development Permit for removal of major vegetation is needed through the County LCP. The project is consistent with the objectives of the Coastal Act and SLO County Coastal Zone Land Use Ordinance.

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

No Impact – No such plans are in place covering the project area or vicinity.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<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 – No physical changes in the landscape other than burning of natural vegetation is proposed.

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 – No such site is identified within or near the project location.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 – No noise standards or policies are established for the project area or vicinity.

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

Less Than Significant Impact – Vibrations will be caused by the use of a helicopter for the purpose of aerial ignitions. However, the project area and immediate vicinity will be closed to the public during the project for safety considerations.

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 – Helicopter use will be the only source of noise other than regular vehicle use. This project will be of short duration (1-2 days) and the project area and immediate vicinity will be closed to the public during project operations.

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?

Less Than Significant Impact – As discussed in (b) and (c), helicopter use will be the only unusual source of noise during the project. This noise will last for a portion of 1 day and the project area and immediate vicinity will be closed to the public during operations.

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 – Project is not located within an airport use plan or within 2 miles of an 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 – Project is not located within the vicinity of a private airstrip.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<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 proposes no change in land use.

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

No Impact – The project proposes no change in land use.

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

No Impact – The project proposes no change in land use.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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? No impact; no new or altered facilities. One of the stated objectives of the project is fire hazard reduction. This will improve the effectiveness of fire protection resources on future wildfires.

Police protection? No impact; no new or altered facilities.

Schools? No impact; no new or altered facilities.

Parks? No impact; no new or altered facilities. Much of the project area (see Figures 2 & 3) is on State Parks land. Burning natural vegetation will have no effect of the uses of this park and will cause no physical change in trails, roads or infrastructure near the project area.

Other public facilities? No impact; no new or altered facilities.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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?

Less Than Significant Impact – Burning natural vegetation will likely generate interest from the recreating public who use this park. The primary uses of the project area are sightseeing, horseback riding, and hiking on Coon Creek Trail adjacent to the project area along Coon Creek. State Parks staff plan to create educational displays that will explain the project and educate the recreating public on the benefits of prescribed burning and what the expected long-term outcomes are. No change in the amount of use of this particular park is expected as a result of this proposed 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?

Less Than Significant Impact – No recreational facilities will be created or noticeably altered by the project. Much of the lower part of the project area and all nearby areas to the north are within MDO State Park. In the immediate vicinity of the project area are a number of hiking trails including Pt. Buchon, which passes along the west edge of the project area, and Coon Creek which is adjacent to the project area along Coon Creek. The project involves burning of the natural vegetation which will not cause a physical change in these trails and will not affect the uses of these trails except during the 1-2 days of the project burn when the area will be closed to the public. No new trails or roads or expansion of these existing facilities are proposed or will be needed as a result of this project.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Transportation/Traffic. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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, which 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 checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The proposed project will necessitate a 1 day closure of the southern end of Pecho Valley Road. For normal traffic, this road dead-ends at the Coon Creek Trailhead which is adjacent to the west end of the project. Closure is necessary as burning and helicopter use would otherwise attract many park visitors and without adequate parking near the project area, congestion and potential safety issues would be likely. Except for emergency vehicles and authorized PG&E traffic, this road will be closed at the Spooner's Cove Visitor Center. This temporary closure is not expected to cause congestion or other problems as adequate parking is available at Spooner's Cove.

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?

Less Than Significant Impact – This project will necessitate the closure of the southern end of Pecho Valley Road past Spooner's Cove and the Coon Creek Trail. This closure will last 1-2 days and is not expected to cause significant impacts to those visiting MDO Park. Closure is necessary to protect the safety of the public and avoid traffic congestion and State parks staff will be available to explain project activities to those interested.

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 – No congestion management plan is established for MDO Park.

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 – No effect on air traffic patterns is expected. Helicopter use is conducted according to standard FAA policies for this type of activity and will last for 1 day. The smoke column generated will disperse offshore and is expected to dissipate at low altitudes that will not affect normal air traffic.

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 – No physical change in landform or roads is proposed.

e) Would the project result in inadequate emergency access?

No Impact – As stated in (a) above, Pecho Valley Road will be temporarily closed to the public. However, emergency access will remain open throughout and several fire engines and other types of emergency equipment will be directly involved with project implementation.

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?

Less Than Significant Impact – As stated above, this project will necessitate the closure of the southern end of Pecho Valley Road past Spooner's Cove and the Coon Creek Trail. This closure is necessary to protect public safety by eliminating hiking, bicycling, horseback riding and sightseeing in the immediate

vicinity of the project area. This closure will last for 1-2 days and no other impacts are expected following the burn.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
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 – No wastewater treatment is associated with this project.

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 – No wastewater treatment or facilities are associated with this project.

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 – No stormwater drainage facilities are associated with this project.

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 – Fire engines will have adequate water supplies from existing water sources.

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 – No wastewater treatment is associated with this project.

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

No Impact – No solid waste disposal is associated with this project.

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

No Impact – No solid waste disposal is associated with this project.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
<small>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; <i>Sundstrom v. County of Mendocino</i>, (1988) 202 Cal.App.3d 296; <i>Leonoff v. Monterey Board of Supervisors (1990)</i>, 222 Cal.App.3d 1337; <i>Eureka Citizens for Responsible Government v. City of Eureka</i> (2007) 147 Cal.App.4th 357; <i>Protect the Historic Amador Waterways v. Amador Water Agency</i> (2004) 116 Cal.App.4th at 1109; <i>San Franciscans Upholding the Downtown Plan v. City and County of San Francisco</i> (2002) 102 Cal.App.4th 656.</small>				

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?

Less Than Significant Impact – CAL FIRE and State Parks staff have concluded that no significant environmental impact would occur to aesthetics, agriculture and forestland/timberland, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, or to utilities and service systems. As discussed in this document, all potential impacts have been determined to be less than significant or mitigations have been designed to ensure that no significant impacts should occur. Due to the known benefits of prescribed burning to the environment that simulates natural disturbance and through

prevention of catastrophic wildfire, an overall improvement in the environment is expected to result from the reintroduction of fire in the ecosystem.

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.)

Less Than Significant Impact – No cumulatively considerable impacts are anticipated. Past burns (see Figure 2) have occurred in the area and are being conducted to reintroduce fire into this fire-dependent ecosystem at a watershed scale. Of the main plant species worth considering here, and as discussed in the Project Objectives, these recent nearby burns did not involve significant stands of Pecho Manzanita, but did involve stands of Bishop pine. In areas previously burned (see Figure 10), adequate regeneration of Bishop pine is already occurring, demonstrating the natural succession that is expected following fire. No reduction in the size of the area occupied by Bishop pine over all areas burned has been observed or is expected as a result of this project. The only other potential impact considered likely is surface erosion due to temporary removal of the vegetative cover. As explained, this effect is temporary lasting until new vegetation recovers the site, which generally occurs within 2 weeks to 6 months. Project design and mitigations designed to reduce runoff will prevent significant soil erosion. This project drains into Coon Creek whereas all the other burns drain directly into the ocean. Therefore, any temporary increase in erosion is not cumulative and is not considered potentially significant. Overall, this fire-dependent ecosystem is expected to recover quickly from the short-term effects of the burn and will likely benefit in the long term as a result of the natural positive effects of fire and the reduced threat of a large damaging wildfire.



Figure 11 - Bishop pine reproduction 1 year after burn

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

Less Than Significant Impact – The main impact on human beings as a result of this project has been determined to be the short term limitations caused by the closure of Pecho Valley Road and nearby trails. These effects are necessitated in order to protect public safety. These impacts are considered less than significant due to the short-term duration of 1-2 days during burning operations. The other potential impact from the human perspective was discussed in the Aesthetics section. It was determined that the temporary change caused by burning natural vegetation is subjective and because this effect is temporary, lasting until the site has been recovered by new vegetation, no significant adverse aesthetic impacts are likely. Although some may not like the appearance of burned vegetation, the effect is a matter of opinion that is not permanent and therefore not likely to be significant.

Appendix A

Mitigation Monitoring and Reporting Plan (MMRP) for the Coon Creek Vegetation Management Project (VMP) Initial Study/Mitigated Negative Declaration San Luis Obispo County, California

In accordance with CEQA Guidelines Section 15074(d), when adopting a mitigated negative declaration, the lead agency will adopt a Mitigation Monitoring and Reporting Plan (MMRP) that ensures compliance with mitigation measures required for project approval. The California Department of Forestry and Fire Protection (CAL FIRE) is the lead agency for the above-listed project and has developed this MMRP as a part of the final Initial Study/Mitigated Negative Declaration (IS/MND) supporting the project. This MMRP lists the mitigation measures developed in the IS/MND which were designed to reduce environmental impacts to a less-than-significant level. This MMRP also identifies the party responsible for implementing the measure, defines when the mitigation measure must be implemented, and which party or public agency is responsible for ensuring compliance with the measure.

Potentially Significant Effects and Mitigation Measures

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

Mitigation Measure #1: 100' Watercourse Protection Zone

An undisturbed vegetated buffer of not less than 100 feet wide is established along Coon Creek and will be maintained to prevent impacts to biological resources within the riparian corridor and preserve water quality.

Schedule: During active burning operations.

Responsible Party: CAL FIRE shall be responsible to carry-out this mitigation measure, and shall make sure these specific provisions are followed.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #2: Procedures for Inadvertent Discovery of Human Remains

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging activities in the area of the burial and notify the SLO County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner’s findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of SLO County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in PRC § 5097.

Schedule: During any ground-disturbing preparation activities and active burning operations.

Responsible Party: CAL FIRE and State Parks archaeologists shall be responsible to carry-out this mitigation measure, and shall make sure these specific provisions are followed.

Verification of Compliance:

Monitoring Party: CAL FIRE

Monitoring Party: State Parks

Initials: _____

Initials: _____

Date: _____

Date: _____

LIST AND DEFINITION OF ACRONYMS AND SYMBOLS USED IN THIS DOCUMENT**Acronyms**

AB	Assembly Bill
APCD	Air Pollution Control District
APE	Area of Potential Effect
AQAP	Air Quality Attainment Plan
ARB	Air Resources Board
CA	California
CAA	Clean Air Act
CAL FIRE	California Department of Forestry and Fire Protection
CAP	Clean Air Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCIC	Central Coast Information Center, UCSB
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Protection (changed to CAL FIRE in 2007)
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFFS	Cayucos Forest Fire Station
CH ₄	Methane
CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Data Base
CO ₂	Carbon Dioxide
CNG	Compressed Natural Gas
dBA	decibel
DBH	Diameter at Breast Height
DCNPP	Diablo Canyon Nuclear Power Plant
DPM	Diesel Particulate Matter
E	East
<i>et seq.</i>	<i>et sequens</i> (Latin) (it means “and the following”)
<i>et al.</i>	<i>et alii</i> (Latin) (it means “and others”)
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
F	Fahrenheit
FFS	Forest Fire Station
ft.	Feet
GHG	Greenhouse Gas
IAP	Incident Action Plan
ICS	Incident Command System
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
LCP	Local Coastal Program
MDBM	Mount Diablo Base Meridian
MDO	Montaña de Oro State Park
MND	Mitigated Negative Declaration
MMRP	Mitigation, Monitoring, and Reporting Plan
N	North

N/A	Not Applicable
n.d.	no date
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NDDB	Natural Diversity Data Base
NOAA	National Oceanic and Atmospheric Administration
NW	Northwest
NOI	Notice of Intent (to adopt a negative declaration or mitigated negative declaration)
PFIRS	Prescribed Fire Information and Reporting System
PM	Particulate Matter
PM ₁₀	Particulate Matter less than 10 microns in diameter
P.O.	Post Office
PRC	Public Resources Code
PSI	Pounds per Square Inch
RPF	Registered Professional Forester
RWQCB	Regional Water Quality Control Board
S	South
SCH	State Clearinghouse
SLO	San Luis Obispo County, California
SLOAPCD	San Luis Obispo County Air Pollution Control District
SLOCCZLUO	San Luis Obispo County Coastal Zone Land Use Ordinance
USFS	United States Forest Service
USGS	United States Geological Survey
VMP	Vegetation Management Program
W	West

Symbols

§	Section
#	Number
%	Percent
°	Degrees

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