

December 4, 2012

NOTICE OF PREPARATION AND PUBLIC SCOPING MEETING

To: State Clearinghouse
Responsible Agencies
Trustee Agencies
County Clerks
Interested individuals and organizations
Federal Agencies

Subject: Notice of Preparation and Public Scoping Meeting for the Oceano Dunes State Vehicular Recreation Area Dust Control Project Environmental Impact Report

The California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division, Oceano Dunes District, 340 James Way, Ste. 270, Pismo Beach, CA 93449, is the Lead Agency for the Oceano Dunes State Vehicular Recreation Area (Oceano Dunes SVRA) Dust Control Project Environmental Impact Report (EIR). The OHMVR Division would also be the Applicant for a Coastal Development Permit that may be required for the project.

Project Title: Oceano Dunes SVRA Dust Control Project EIR

Project Applicant: California Department of Parks and Recreation
Off-Highway Motor Vehicle Division

Project Location: Southwest San Luis Obispo County; Northwest Santa Barbara County

Project Description: A description of the Dust Control Project, including its location and probable environmental effects, is provided in the attached Initial Study for the project.

The purpose of this Notice of Preparation and Public Scoping Meeting (NOP) is to request comments on the scope and content of the environmental review the OHMVR Division will conduct on its Dust Control Project from responsible and trustee agencies, federal agencies, and any other person or organization concerned with the environmental effects of the project.

Pursuant to CEQA Guidelines §15082 (b), you have 30 days from the date of receipt of this NOP to respond. Please send your comments by the earliest possible date, but no later than 5 pm January 4, 2013. Please send your responses to Mr. Ronnie Glick, Senior Environmental Scientist, at the address listed above or to OHVInfo@parks.ca.gov (Enter "Oceano Dunes SVRA Dust Control Project NOP" in the 'Subject' line. Agency responses should include the name of a contact person at the agency.

The OHMVR Division encourages all interested individuals, organizations, and agencies to attend the scoping meeting for the Dust Control Project EIR on:

Wednesday, December 19, 2012

Grover Beach, CA 93445

6 pm – 8 pm

Ramona Garden Park Center
993 Ramona Avenue
Grover Beach, CA 93433

Additional project information is available on the OHMVR Division Website:
www.ohv.parks.ca.gov/ohv-ceqa-notices

CEQA Guidelines §15168(a), permits a lead agency to prepare a program EIR on a series of actions that can be categorized as one large project and are related either: 1) geographically, 2) as logical parts in the chain of contemplated actions, 3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or 4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. The Oceano Dunes SVRA Dust Control Project represents a logical series of actions that are connected, would occur in approximately the same geographic area, and would result in generally similar environmental effects that can be mitigated in similar ways. Accordingly, the OHMVR Division is preparing a Program EIR for the project.

Signature: 

Date: 11/29/12

Title: Environmental Program Manager

**Oceano Dunes State Vehicular Recreation Area
Dust Control Project
Initial Study**

November 2012



**State of California
Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division**

Oceano Dunes State Vehicular Recreation Area
Dust Control Project
Initial Study

November 2012

Prepared for:

State of California
Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division



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**OCEANO DUNES STATE VEHICULAR RECREATION AREA
DUST CONTROL PROJECT
INITIAL STUDY**

TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS..... 1

CHAPTER 1 INTRODUCTION 1

 1.1 Introduction 1

 1.2 Regulatory Guidance 1

 1.3 Lead Agency Contact Information..... 2

 1.4 Purpose and Document Organization..... 2

CHAPTER 2 PROJECT DESCRIPTION 5

 2.1 Regional Setting..... 5

 2.2 Background Information On The Project’s Regional Geologic and Meteorological Setting 5

 2.2.1 Sand Creep and Saltation 7

 2.3 Background Information On SLO County APCD Rule 1001 – Coastal Dunes Dust Control Requirements..... 8

 2.3.1 Oceano Dunes SVRA and Rule 1001 9

 2.4 Background Information On Existing Dust Control-Related Activities..... 10

 2.4.1 Existing Activities Incorporated Into the Proposed Project..... 10

 2.5 Project Objectives 13

 2.6 Project Components 14

 2.6.1 PM10 Monitoring Program 14

 2.6.2 Dust Control Program 23

 2.6.3 Track-Out Control Program 28

 2.7 Project Area Descriptions 28

 2.7.1 San Luis Obispo County Project Areas 29

 2.7.2 Santa Barbara County Project Areas 32

 2.8 Project Installation and Maintenance 33

 2.9 Project Schedule 35

 2.10 Environmental Protection Measures Incorporated Into the Project..... 36

 2.11 Project Approvals..... 36

CHAPTER 3 ENVIRONMENTAL CHECKLIST AND RESPONSES..... 39

 3.1 Aesthetics 42

 3.2 Agriculture and Forest Resources 44

 3.3 Air Quality 46

 3.4 Biological Resources 48

 3.5 Cultural Resources 53

 3.6 Geology and Soils..... 54

 3.7 Greenhouse Gas Emissions 57

 3.8 Hazards and Hazardous Materials..... 59

 3.9 Hydrology and Water Quality 62

3.10 Land Use and Planning.....	65
3.11 Mineral Resources	67
3.12 Noise.....	68
3.13 Population and Housing.....	70
3.14 Public Services	71
3.15 Recreation.....	73
3.16 Transportation/Traffic.....	75
3.17 Utilities and Service Systems.....	77
3.18 Mandatory Findings of Significance	79
CHAPTER 4 REFERENCES	81
CHAPTER 5 REPORT PREPARATION.....	83

LIST OF TABLES

Table 2-1 Rule 1001 Compliance Requirements	9
Table 2-2 Recent Restoration Activities at Oceano Dunes SVRA	13
Table 2-3 Co-Located Equipment Example (Phase 1 New Monitoring Sites)	17
Table 2-4 Monitoring Program Land Occupancy	18
Table 2-5 Preliminary Estimate of Control Measure Land Occupancy	25
Table 2-6 Summary of Project Area Characteristics.....	29
Table 2-7 Monitoring Equipment Maintenance Requirements.....	34
Table 2-8 Potential Project Permits and Approvals	36
Table 3-1 Recreational Uses by Park Unit in the Project Boundaries.....	73

LIST OF FIGURES

Figure 2-1 Regional Project Setting	6
Figure 2-2 Oceano Dunes SVRA Wind Patterns.	7
Figure 2-3 Sand Transport Mechanisms.....	7
Figure 2-4 Rule 1001 Coastal Dune Vehicle Activity and Control Site Areas	11
Figure 2-5 Existing Monitoring Stations and Dust Control Related Management Actions	12
Figure 2-6 Phase 1 Monitoring Locations	16
Figure 2-7 Conceptual Layouts of Monitoring Sites	19
Figure 2-8 Meteorological and Sand Flux Monitoring Equipment	21
Figure 2-9 APP and E-BAM Devices	22
Figure 2-10 Example FEM Monitor with Shelter and 10-Meter Tall Lattice Tower.....	23
Figure 2-11 Re-vegetation Projects	27
Figure 2-12 Artificial Roughness Dust Control Measures	27
Figure 2-13 Wind fencing at Pier Avenue and Strand Way	27
Figure 2-14 Project Areas	30

APPENDICES

- Appendix A1 – Special-Status Plant Species with the Potential to Occur in the Project Area
- Appendix A2 – Special-Status Animal Species with the Potential to Occur in the Project Area

List of Acronyms and Abbreviations

AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
APP	Ambient Particulate Profiler
ARB	California Air Resources Board
BAM	Beta Attenuation Monitor
BSNE	Big Spring Number Eight
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CDVAA	Coastal Dune Vehicle Activity Area
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CFR	Code of Federal Regulations
CGS	California Geological Survey
cm	centimeter
CRPR	California Rare Plant Ranked
CSC	Cox Sand Catcher
E-BAM	Environmental Beta Attenuation Mass Monitor
EIR	Environmental Impact Report
FEM	Federal Equivalent Method
GHG	Greenhouse Gases(s)
IS	Initial Study
LCP	Local Coastal Program
m	Meter
MND	Mitigated Negative Declaration
mph	Miles per Hour
MSL	Mean Sea Level
MSSP	Monitoring Site Selection Plan
ND	Negative Declaration
OHMVR	Off-Highway Motor Vehicle Recreation
OHV	Off-Highway Motor Vehicle
ppm	Parts per Million
PM	Particulate Matter
PM10	Particulate Matter with an Aerodynamic Diameter of 10 Micrometers or Less
PMRP	Particulate Matter Reduction Plan

PVC	Polyvinyl Chloride
RWQCB	Regional Water Quality Control Board
s	Second
SLO	San Luis Obispo
SR	State Route
SVRA	State Vehicular Recreation Area
TEOM	Tapered Element Oscillating Microbalance Monitor
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

The Off-Highway Motor Vehicle Recreation (OHMVR) Division of the California Department of Parks and Recreation (CDPR) has prepared this Initial Study (IS) to evaluate the potential environmental effects of its proposed Oceano Dunes State Vehicular Recreation Area (Oceano Dunes SVRA) Dust Control Project (the project), which consist of the installation, operation, and maintenance of meteorological, sand flux (i.e., sand movement), and particulate matter (PM) monitoring equipment and dust and track-out control measures primarily in and within the vicinity of Pismo State Beach and Oceano Dunes SVRA, in San Luis Obispo (SLO) County, CA but also potentially in and within the vicinity of Rancho Guadalupe Dunes County Park, in Santa Barbara County, CA. Pismo State Beach, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park are located on California's central coast within the coastal zone, are bordered by private and public lands, and provide public access to beaches, including off-highway motor vehicle (OHV) recreation in Oceano Dunes SVRA.

The proposed equipment and control measures are intended to provide information on the dynamics of dust generation at Pismo State Beach and Oceano Dunes SVRA, to help limit high levels of suspended PM with an aerodynamic diameter of 10 micrometers or less (PM10) on the Nipomo Mesa, in SLO County, and also to comply with SLO County Air Pollution Control District (ACPD) Rule 1001, Coastal Dunes Dust Control Requirements, which requires the OHMVR Division, as operator of Oceano Dunes SVRA, to develop a Particulate Matter Reduction Plan (PMRP) to minimize emissions of PM10 from the area under its control. The OHMVR Division's PMRP is still under development and is subject to review and approval by the SLO County APCD. Pursuant to section F.1.f of Rule 1001, the OHMVR Division must obtain SLO County APCD Air Pollution Control Officer (APCO) approval of the Oceano Dunes PMRP by July 31, 2013.

1.2 REGULATORY GUIDANCE

The California Environmental Quality Act (CEQA; Public Resources Code § 21000 et seq.) and the CEQA Guidelines (14 CCR §15000 et seq.) establish the OHMVR Division as the lead agency for the project. The lead agency is defined in CEQA Guidelines section 15367 as "the public agency which has the principal responsibility for carrying out or approving a project." The lead agency decides whether a Negative Declaration (ND), Mitigated Negative Declaration (MND), or Environmental Impact Report (EIR) is required for the project and is responsible for preparing the appropriate environmental review document.

According to CEQA Guidelines Section 15063 (a), a lead agency shall conduct an IS to determine if the project may have a significant effect on the environment and, according to CEQA Guidelines Section 15063 (b), if the lead agency determines that there is substantial evidence that any aspect of the project may cause a significant effect on the environment, the lead agency shall prepare an EIR for the project.

This IS has been prepared by the OHMVR Division of CDPR in accordance with CEQA and the CEQA Guidelines. As described in Chapter 3, Environmental Checklist and Responses, the Dust Control Project may result in:

- *A potentially significant impact* on the environment in the following resource areas: Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous

Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Public Services, Recreation, Transportation/Traffic, and Utilities and Service Systems. Accordingly, the EIR will evaluate the project's potential impacts on these resource areas.

- *A less than significant impact* on the environment in the following resources areas: Mineral Resources. As described in the IS, however, the EIR will evaluate the project's potential Mineral Resource impacts in greater detail.
- *No impact* on Population and Housing. Accordingly, the EIR will not evaluate the project's potential impacts on population and housing.

In accordance with CEQA, the OHMVR Division is issuing a Notice of Preparation of a Draft EIR for the project that will evaluate the project potential to impact the resource areas listed above.

Furthermore, CEQA Guidelines §15168(a), permits a lead agency to prepare a program EIR on a series of actions that can be categorized as one large project and are related either: 1) geographically, 2) as logical parts in the chain of contemplated actions, 3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or 4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. The Oceano Dunes SVRA Dust Control Project represents a logical series of actions that are connected, would occur in approximately the same geographic area, and would result in generally similar environmental effects that can be mitigated in similar ways. Accordingly, the OHMVR Division is preparing a Program EIR for the project.

1.3 LEAD AGENCY CONTACT INFORMATION

The OHMVR Division is the CEQA lead agency for the project. The contact person for the lead agency regarding the project and questions or comments regarding the NOP and IS should be submitted to:

Mr. Ronnie Glick
California Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449
OHVInfo@parks.ca.gov (Enter "Oceano Dunes SVRA Dust Control Project NOP" in the 'Subject' line)

1.4 PURPOSE AND DOCUMENT ORGANIZATION

In accordance with CEQA Guidelines section 15063 (c), the purposes of this IS are to:

- 1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or a ND or MND.
- 2) Assist in the preparation of the Dust Control Project EIR, by:
 - a. Focusing the EIR on the effects determined to be potentially significant.
 - b. Identifying the effects determined not to be significant.
 - c. Explaining the reasons for determining that potentially significant effects would not significant.

- d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
- 3) Facilitate environmental assessment early in the design of the Dust Control Project.

This document is organized as follows:

- *Chapter 1, Introduction*, provides an introduction to the project and describes the purpose and organization of this document.
- *Chapter 2, Project Description*, describes the project and its location, objectives, components, and other characteristics.
- *Chapter 3, Environmental Checklist and Responses*, contains the Environmental Checklist that identifies the significance of potential environmental impacts (by environmental issue) and provides a brief discussion of each impact resulting from implementation of the proposed project. This chapter also contains the Mandatory Findings of Significance.
- *Chapter 4, References* identifies the sources used in the preparation of this IS and provides a list of acronyms used in the document.
- *Chapter 5, Report Preparation*, provides a list of those involved in the preparation of this document.

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CHAPTER 2 PROJECT DESCRIPTION

This chapter provides an overview of the project and describes the project's regional setting, relevant background information, objectives, components, area, installation and maintenance requirements, and schedule as well as the environmental protection measures the OHMVR Division will incorporate into the project and the permits and approvals the project may require.

2.1 REGIONAL SETTING

The OHMVR Division proposes to install, operate, and maintain meteorological, sand flux (i.e., sand movement), and PM monitoring equipment and dust and vehicle track-out control measures primarily in and within the vicinity of Pismo State Beach and Oceano Dunes SVRA, in SLO County, CA. The OHMVR Division may install, maintain, and operate monitoring equipment in and within the vicinity of Rancho Guadalupe Dunes County Park, in Santa Barbara County, CA.

Pismo State Beach and Oceano Dunes SVRA are located on California's Central Coast, approximately 12 miles south of the City of SLO. Pismo State Beach and Oceano Dunes SVRA are west of State Route (SR) 1 and U.S. 101 and adjacent to the "Five Cities" area of Arroyo Grande, Grover Beach, Oceano, Pismo Beach, and Shell Beach. Other nearby cities and communities include Halycon (1.5 miles east), Nipomo (1 mile east), and Guadalupe (3 miles south). Rancho Guadalupe Dunes County Park is also located on the Central Coast, in northwestern Santa Barbara County, approximately three miles north of Point Sal. Nearby communities include Guadalupe (4 miles east) and Santa Maria (12 miles east).

Figure 2-1 depicts the proposed project's regional geographic setting. All of the proposed monitoring equipment and control measures would be located no more than two miles from the Pacific Ocean, on lands located in the California Coastal Zone as established by the California Coastal Act of 1976.

2.2 BACKGROUND INFORMATION ON THE PROJECT'S REGIONAL GEOLOGIC AND METEOROLOGICAL SETTING

Pismo State Beach, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park are located in the Guadalupe-Nipomo Dunes Complex, an approximately 18,000-acre, 18-mile long coastal dune landscape running from Pismo Beach in southwestern SLO County to Point Sal in northwestern Santa Barbara County. The Guadalupe-Nipomo Dunes Complex consists of several distinct dune sheets, including the Callender Dunes sheet (in SLO County), the Guadalupe Dunes sheet (in SLO County and Santa Barbara County), and the Mussel Rock Dunes sheet (in Santa Barbara County). According to the California Geological Survey (CGS), Pismo State Beach and Oceano Dunes SVRA are located in the youngest, most active area of the Callender dune sheet complex where aeolian (wind) transport of sand is ongoing and dunes are actively migrating inland several feet per year (CGS 2007). The Oceano Dunes SVRA in particular contains large coastal sand dunes that are exposed to frequent and strong winds that blow generally from the northwest towards the southeast, especially during the springtime (March to June). Figure 2-2 depicts the annual and springtime wind patterns measured at the OHMVR Division's S1 meteorological tower, located in the center of Oceano Dunes SVRA (See 2.4.1 below for a description of the S1 tower) (OHMVR Division 2012).



- Dust Control EIR Project Boundary
- County Lines
- Highways
- Urban Areas
- Major Roads
- National Forest Land
- Other Public Park Land

Figure 2-1 Regional Setting

Oceano Dunes SVRA Dust Control Project IS

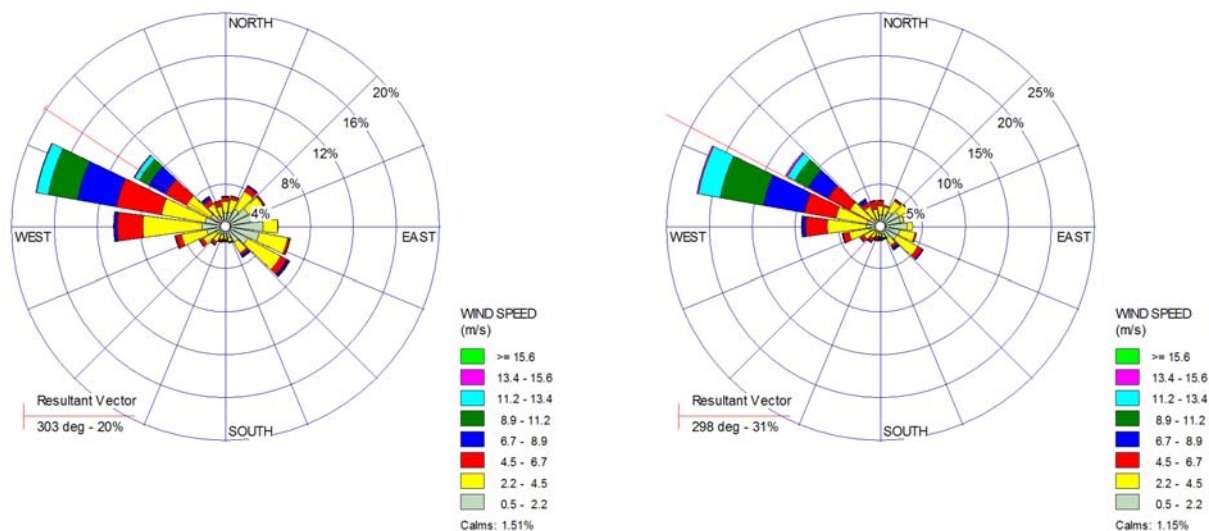


Figure 2-2 Oceano Dunes SVRA Wind Patterns. Annual (Left) and March to June (Right) wind patterns. Data are from the S1 meteorological tower in Oceano Dunes SVRA for the time period January 1, 2011 through August 30, 2012. Note: One meter per second (m/s) equals approximately 2.2 miles per hour (mph).

The Air Quality and Geology and Soils section of the EIR will provide more detailed information on the meteorological and geologic settings of the Guadalupe-Nipomo Dunes Complex and Pismo State Beach, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park.

2.2.1 Sand Creep and Saltation

The strong prevailing winds depicted in Figure 2-2 pass over Oceano Dunes SVRA and exert a force on the dunes that causes particles to move along the ground surface. This movement can take the form of sand creep, in which sand grains are pushed along the ground surface, or saltation, in which sand grains are lifted by the wind, carried a short distance, and then fall back down to the ground surface. These processes can cause some particles to become suspended in the air and carried away downwind. Figure 2-3 depicts these sand transport mechanisms.

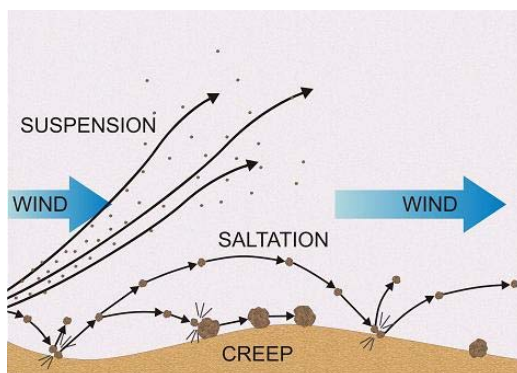


Figure 2-3 Sand Transport Mechanisms. Wind results in sand creep or saltation and the suspension of fine particles. Image Source: Jaison 2012.

Due to the saltation process, the sand sheets that comprise the Guadalupe-Nipomo Dunes Complex are ground level sources of dust. Several factors directly influence saltation and dust generation for such sources, including but not limited to land cover (i.e., open sand versus vegetation), topography, and wind direction and wind speed.

2.3 BACKGROUND INFORMATION ON SLO COUNTY APCD RULE 1001 – COASTAL DUNES DUST CONTROL REQUIREMENTS

The SLO County APCD has published two reports that examined saltation and the high levels of PM₁₀ the APCD has measured on the Nipomo Mesa. The first study, the Nipomo Mesa Particulate Study 2007 (Phase 1 Study), was designed to delineate the nature and extent of the high levels of particulate matter concentrations observed by the SLO County APCD during air quality monitoring (SLO APCD 2007). The Phase 1 Study concluded that the single largest contributor to the high levels of particulate matter concentrations is the northwesterly winds that entrain crustal particles upwind from the Mesa and transport them to the Mesa. The study also attempted to evaluate the potential impacts from OHV activities at Oceano Dunes SVRA; however, data were inconclusive and the APCD recommended further study of the issue.

The second, subsequent study, the South County Phase 2 Particulate Matter Study (Phase 2 Study), was designed to determine if OHV activity at Oceano Dunes SVRA played a role in the high particulate matter concentrations measured on the Nipomo Mesa (SLO APCD 2010). The study reported several major findings, including but not limited to:

- The airborne particulate matter impacting the Nipomo Mesa on high episode days predominantly consists of fine material transported to the Mesa from upwind areas under high wind conditions.
- The primary source of high PM levels measured on the Nipomo Mesa is the open sand sheets in the dune areas of the coast.
- The open sand sheets subject to OHV activity on the SVRA emit significantly greater amounts of particulates than the undisturbed sand sheets at the study control sites under the same wind conditions.

The Phase 2 Study further concluded OHV activities on the dunes cause de-vegetation, destabilization of dune structure and destruction of a natural crust on the dune surface, which in turn increase the ability of winds to entrain dust particles from the dunes and carry them to the Mesa, and that this is the indirect effect of OHV activity, which is the primary cause of the high PM levels measured on the Nipomo Mesa during episode days.

In November 2011, the SLO County APCD adopted Rule 1001, Coastal Dunes Dust Control Requirements, which requires the operator of a coastal dune vehicle activity area (CDVAA) greater than 100 acres in size to prepare and implement a PMRP to minimize emissions of PM₁₀ from the area under its control. Rule 1001 defines the term CDVAA as “any area within 1.5 miles of the mean high tide line where public access to coastal dunes is allowed for vehicle activity.”

As defined by Rule 1001, an integral component of a PMRP is the siting and operation of APCO-approved federal equivalent method (FEM) PM₁₀ monitors that measure the 24-hour average PM₁₀ concentrations directly downwind of areas where vehicle activity is (i.e., a CDVAA) and is not (i.e., a Control Site) permitted. Section C.2. of Rule 1001 states that a PMRP shall contain measures to meet the performance requirement contained in Section C.3. of Rule 1001, which is:

“The [OHMVR Division] shall ensure that if the 24-hr average PM10 concentration at the CDVAA Monitor is more than 20% above the 24-hr average concentration at the Control Site Monitor, the 24-hr average PM10 concentration at the CDVAA Monitor shall not exceed 55 µg/m³.”

Section C.2. of Rule 1001 also states that a PMRP shall include:

“a. An APCO-approved PM10 monitoring network containing at least one CDVAA Monitor and one Control Site Monitor.

b. A description of all PM10 control measures that will be implemented to reduce PM10 emissions to comply with this rule, including the expected emission reduction effectiveness and implementation timeline for each measure.

c. A Track-Out Prevention Program that does not allow track-out of sand to extend 25 feet or more in length onto paved public roads and that requires track-out to be removed from pavement in accordance to an APCO-approved method and schedule.”

Rule 1001 implicitly recognizes the challenge in siting and operating comparable CDVAA and CSA monitors by first requiring preparation of a Monitoring Site Selection Plan (MSSP) and implementation of a short-term Temporary Baseline Monitoring Program before implementing a long-term PMRP monitoring program.

2.3.1 Oceano Dunes SVRA and Rule 1001

The part of Oceano Dunes SVRA (and Pismo State Beach) where vehicle activity is permitted is a CDVAA as defined by Rule 1001. The OHMVR Division, as operator of Oceano Dunes SVRA, must therefore develop certain plans and undertake specific actions to comply with Rule 1001. Table 2-1 chronologically lists the requirements of Rule 1001 to which the OHMVR Division, as operator of Oceano Dunes SVRA, is subject.

Requirement	Timeline	Compliance Status
Submit Draft MSSP	February 28, 2012	Conditionally Approved ^(A)
Submit Draft PMRP	May 31, 2012	In Progress ^(B)
Submit permit applications for PMRP projects	November 30, 2012	In Progress ^(C)
Begin Temporary Baseline Monitoring Program	February 28, 2013 ^(D)	--
Receive environmental/land use approval for PMRP projects	May 31, 2013	In Progress ^(C)
Begin PMRP Monitoring Program, apply for Permit to Operate	July 31, 2013	--
Apply Performance Standards to PMRP Monitoring Program	May 31, 2015	--

(A) The OHMVR Division's MSSP describes the scientific approach, technical methods, criteria, and timeline to identify, evaluate, select, and obtain SLO County APCO-approval of CDVAA and CSA monitor sites for use in the temporary baseline and PMRP monitoring programs. The SLO County APCO conditionally approved the OHMVR Division's MSSP May 22, 2012.

- (B) The OHMVR Division submitted a draft PMRP on May 31, 2012 and a revised Draft PMRP on September 7, 2012. The SLO County APCO has not approved the OHMVR Division's PMRP.
- (C) See Section 2.11 for a list of permits and approvals required for the Dust Control Project.
- (D) Temporary baseline monitoring cannot begin until the OHMVR Division has received all necessary permits and approvals for such monitoring.

Rule 1001 considers a Control Site to be "a coastal dune area comparable to the CDVAA but where vehicle activity has been prohibited." The parts of Pismo State Beach and Oceano Dunes SVRA that are not open to vehicle recreation, as well as other surrounding coastal dune areas where vehicle activity is not permitted, are a Control Site as defined by Rule 1001. Figure 2-4 shows the CDVAA and Control Site areas in and within the vicinity of the proposed project.

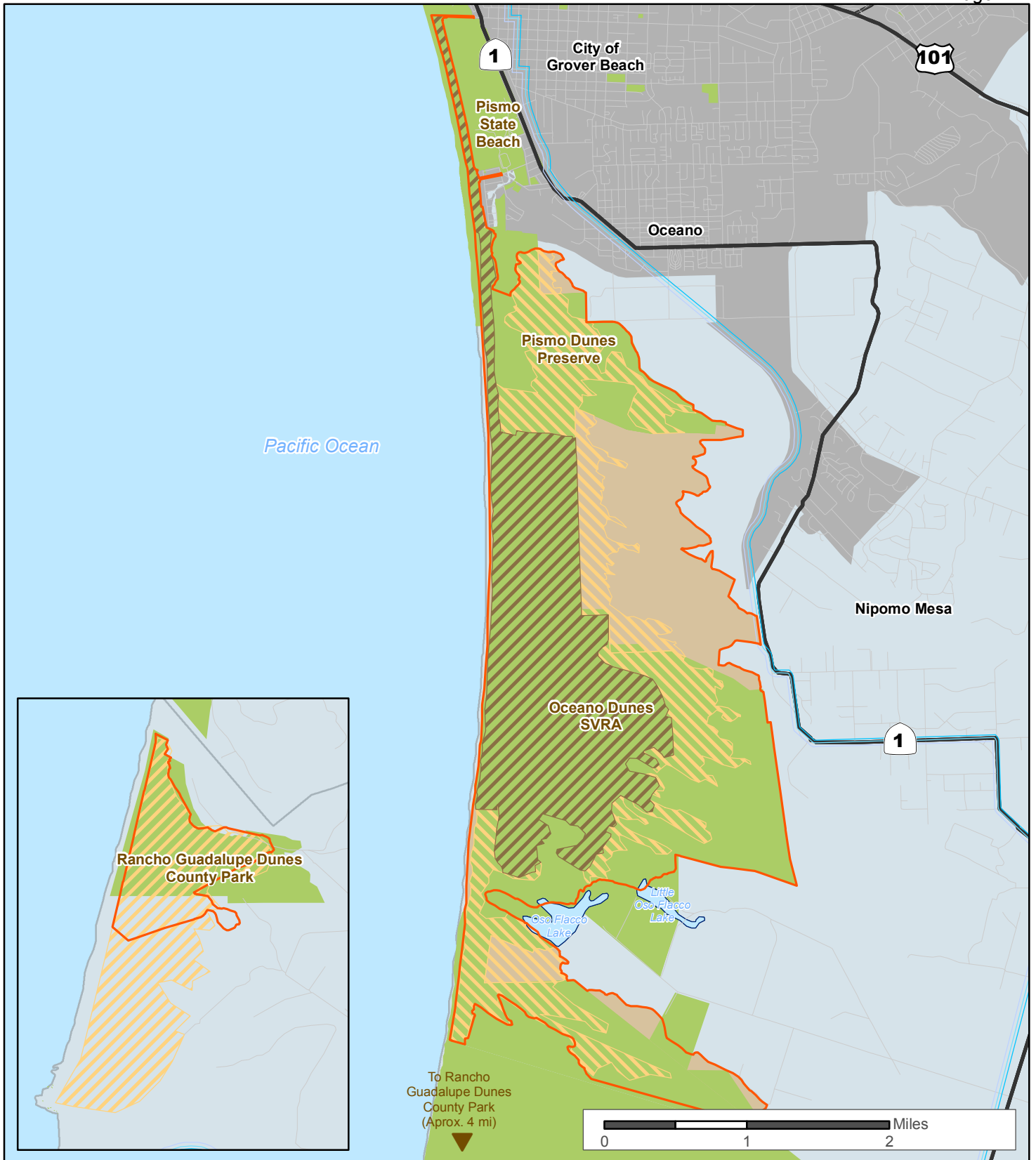
2.4 BACKGROUND INFORMATION ON EXISTING DUST CONTROL-RELATED ACTIVITIES

The SLO County APCD and the OHMVR Division both maintain existing monitoring stations in and within the vicinity of Pismo State Beach and Oceano Dunes SVRA. In addition, as part of its normal park-management operations, the OHMVR Division regularly plants vegetation to restore and protect Oceano Dunes SVRA's resources and installs wind fencing to control track-out of sand onto Grand Avenue, Pier Avenue, and Strand Way. Figure 2-5 provides an overview of existing dust control-related monitoring stations and OHMVR Division management activities.

2.4.1 Existing Activities Incorporated Into the Proposed Project

The OHMVR Division currently undertakes the following dust-control related activities that will be incorporated into the proposed project and the Oceano Dunes SVRA PMRP:

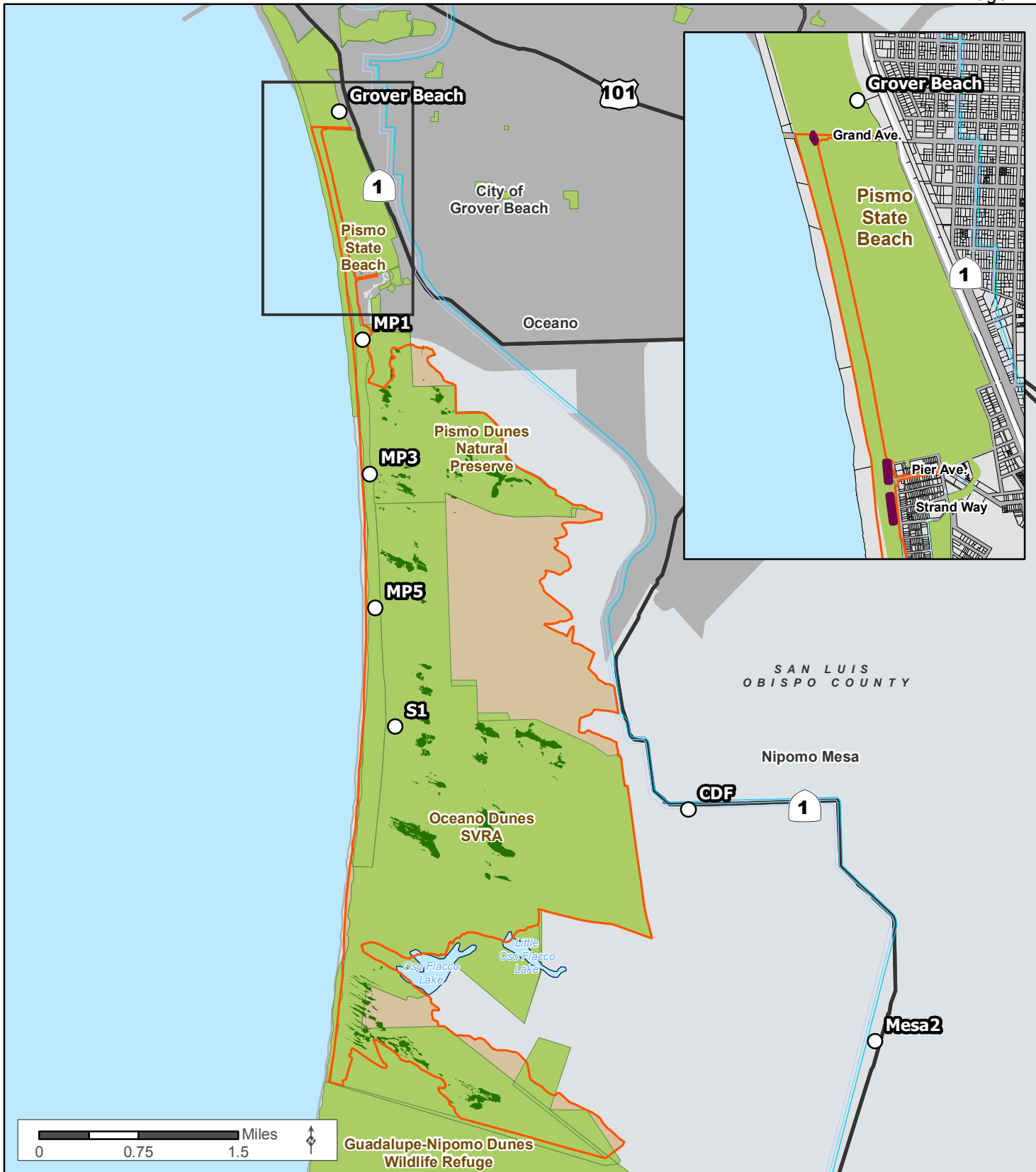
- Meteorological monitoring at the S1 tower and marker posts one, three, and five. These monitors are located within part of Pismo State Beach and Oceano Dunes SVRA that is open to vehicle activity (see Figure 2-5). The S1 tower consists of a 10-meter tall lattice tower with attached air temperature, sand flux, relative humidity, wind direction, and wind speed monitoring equipment. The marker post monitoring sites consist of wind direction and wind speed monitoring equipment mounted on Oceano Dunes SVRA's approximately seven-meter tall marker posts, which are provided for visitor orientation purposes.
- Re-vegetation and restoration projects that are designed to protect and enhance the habitat characteristics of the vegetation islands located within Oceano Dunes SVRA or to protect sensitive habitat areas or critical park infrastructure.
- Wind fencing at Grand Avenue (in Grover Beach), Pier Avenue (in Oceano), and Strand Way (in Oceano). The installation of this fencing (approximately 1,700 total linear feet) occurs each year from approximately March to July in locations immediately upwind of Grand Avenue, Pier Avenue, and Strand Way (see Figure 2-5).
- Street sweeping on Grand Avenue and Pier Avenue. The OHMVR Division currently sweeps Grand Avenue and Pier Avenue two to three times a week with a small street sweeper.



Source: CPAD, San Luis Obispo County, California State Parks, CalTrans, TRA

- Highways
- Coastal Zone Boundary
- Private Land (within Project Boundary)
- Public Park Lands
- Urban Areas
- Dust Control Project Boundary
- Coastal Dune Vehicle Activity Area
- Control Site Area

Figure 2-4 Rule 1001 Coastal Dune Vehicle Activity and Control Site Areas



- Existing Monitoring Stations
- Wind Fencing Areas
- Dust Control Project Boundary
- Coastal Zone Boundary
- Private Land (within Project Boundary)
- Public Park Lands
- Vegetation Islands

Figure 2-5 Existing Monitoring Stations and Dust Control Related Management Actions

The S1 tower is installed with concurrence from SLO County Planning and was included in a permit application for five total wind towers in and around Oceano Dunes SVRA (SLO County Coastal Development Permit DRC2010-0003 and Coastal Commission Permit A-3-SLO-11-021). That permit application is currently under appeal to the Coastal Commission and there is no timeline for a public hearing. The marker post monitors did not require a permit because these monitors were affixed to existing structures at Pismo State Beach. The OHMVR Division's primary goal with these existing monitoring and dust and track-out control activities is to provide information on the dynamics of dust generation at Pismo State Beach and Oceano Dunes SVRA and to reduce sand movement onto public roads (i.e., Grand Avenue and Pier Avenue) and private residences (i.e., along Strand Way). As such, these activities would be incorporated into the PMRP and are therefore within the scope of the proposed project.

The OHMVR Division has actively restored foredune and dune scrub habitats within Oceano Dunes SVRA since the early 1990's. In the past six years, the OHMVR Division has restored approximately 70 acres of dune habitat, or approximately 12 acres per year, as shown in Table 2-2 (see also Figure 2-5 for vegetation island locations).

Restoration Area	Re-vegetated Acreage
Barbeque Flats Island	2
Pipeline Island	5
Maidenform Area	8
Conoco Phillips Access Road	12
Boy Scout Island	14
40 Acre Wood site, near Oso Flaco Lake	28
Total Re-vegetated Acreage	69

In a typical year, the OHMVR Division propagates and installs more than 20,000 native dune plants. Locally collected native plants are best suited to the harsh environments of Oceano Dunes SVRA. The OHMVR Division does not consider the use of non-native plant species to be appropriate or consistent with Department of Parks and Recreation resource management objectives and policies.

These activities are part of the ongoing management of Oceano Dunes SVRA and will reduce sand transport and downwind PM10 by covering open sand areas with vegetation and reducing the amount of wind that reaches open sand surfaces in and within the vicinity of the re-vegetated areas. As such, these activities would be incorporated into the PMRP and are therefore within the CEQA scope of the proposed project. Existing and planned re-vegetation projects, however, have and would continue to be performed in a manner consistent with Oceano Dunes SVRA's Coastal Development Permit 4-82-300-A5 and would not require a new or amended coastal development permit.

2.5 PROJECT OBJECTIVES

The OHMVR Division's objective is to inform the scientific understanding of the dynamics of dust generation at Pismo Dunes State Beach and Oceano Dunes SVRA and implement effective dust and track-out control measures. The OHMVR Division has identified the following preliminary objectives for the Dust Control Project:

1. To implement meteorological, sand flux, and PM10 monitoring and dust and track-out control measures in accordance with SLO County APCD Rule 1001.
2. To integrate Rule 1001 requirements into the long-term management of Oceano Dunes SVRA for ecologically balanced and sustained motorized recreational use.
3. To implement and meet the goals and objectives of the OHMVR Division's 2009 Strategic Plan.

The EIR will update these objectives as necessary and describe the goals and objectives of the OHMVR Division's 2009 Strategic Plan that are relevant to the project.

2.6 PROJECT COMPONENTS

The project consists of the following components:

- A PM10 Monitoring Program consisting of the phased deployment of meteorological, sand flux, and PM10 monitoring equipment at specific sites within the project area, some of which are currently unknown.
- A Dust Control Program consisting of the installation of natural and artificial materials and structures within Oceano Dunes SVRA, as well as meteorological and sand flux monitoring equipment to measure dust control effectiveness.
- A Track-Out Control Program consisting of artificial structures and mobile street sweeping operations near or on Grand Avenue in Grover Beach, Pier Avenue in Oceano, and Strand Way in Oceano.

These components are described in more detail below.

2.6.1 PM10 Monitoring Program

The proposed monitoring program would consist of temporary and intermittent as well as continuous monitoring activities. The OHMVR Division would implement the monitoring program in phases; the OHMVR Division would select specific sites where meteorological, sand flux, and PM10 monitoring equipment would be installed prior to the beginning of each monitoring phase.

The OHMVR Division would install, operate, and maintain up to three kinds of equipment at each proposed monitoring site:

- *Meteorological monitoring equipment* to measure meteorological conditions such as air temperature, relative humidity, wind direction, and wind speed.
- *Sand flux monitoring equipment* to measure the amount of sand moving at or very near the ground surface caused by wind.
- *PM10 monitoring equipment* to measure the amount of PM10 suspended in the air between the ground surface and approximately five to 10 meters above ground level.

The proposed phasing, site layout, and equipment to be used in the OHMVR Division's monitoring program is discussed below.

Monitoring Program Phases

Phase one monitoring would begin in the late fall or winter of 2013, conclude in approximately July 2015, and consist of an array of up to five temporary monitoring transects containing 16 total temporary monitoring sites, as well as the OHMVR Division's four existing meteorological

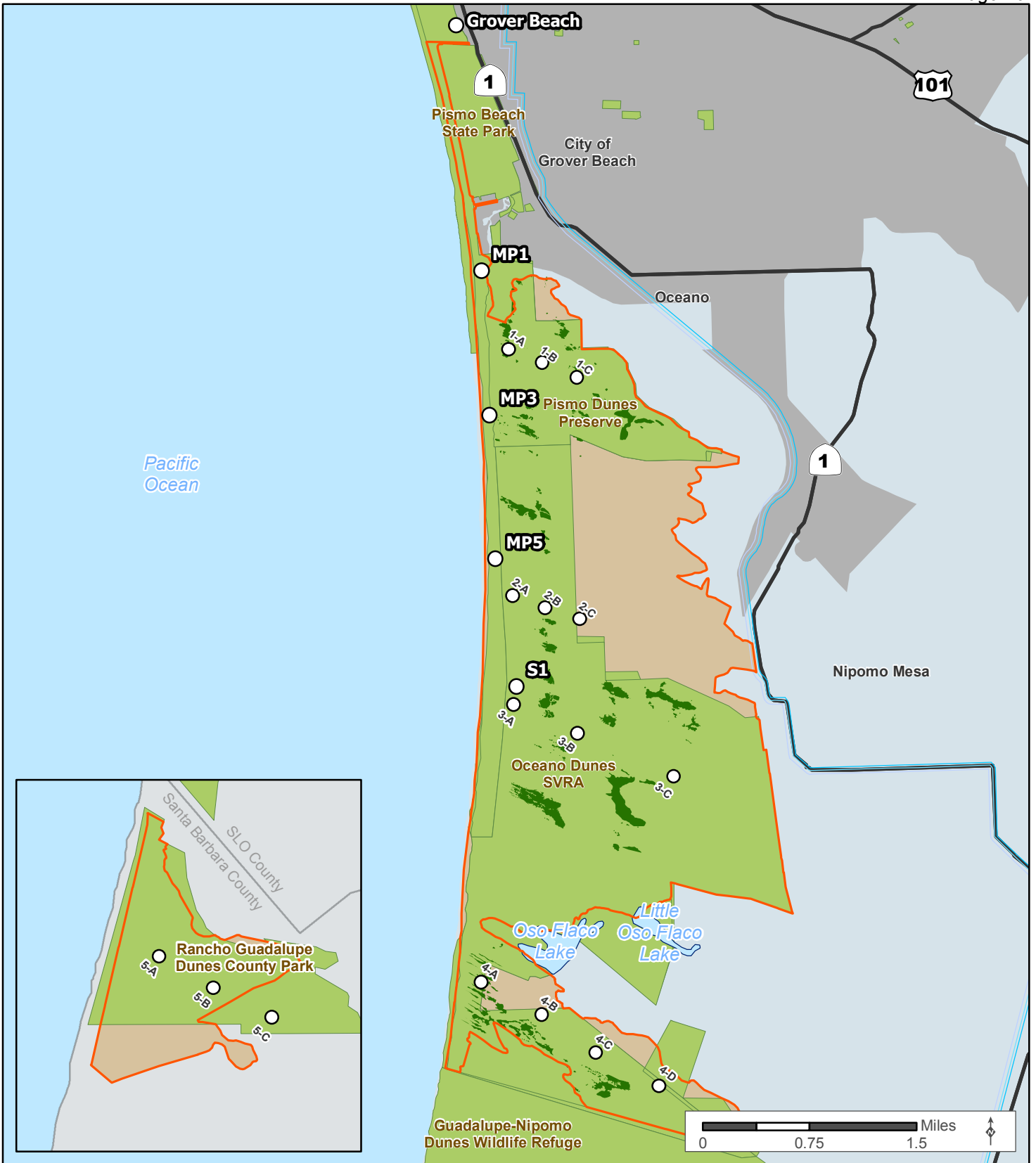
monitors at S1 and marker posts one, three, and five (20 sites total). Figure 2-6 shows the OHMVR Division's phase one monitoring transects and monitoring sites.

The OHMVR Division would orient both the monitoring transects and the individual monitoring sites toward the prevailing wind direction (approximately 300 degrees). Each transect would consist of three or four individual monitoring sites spaced approximately one-quarter mile (1,320 feet) to one-half mile (2,600 feet) apart, and each monitoring site would be located in open sand areas where vehicle activity is and is not permitted, including the Pismo Dunes Natural Preserve (a sub-unit of Pismo State Beach), Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park. The OHMVR Division anticipates that four of the five initial temporary monitoring transects would be stationary; one transect may be semi-stationary, operating in one area for several weeks or months before being moved north or south to operate in another area for several weeks or months.

Phase two monitoring could begin as soon as the summer or fall of 2014 (but would most likely begin in the summer of 2015), be continuous for the life of the project, and consist of up to three fixed monitoring sites. The OHMVR Division has not yet selected its phase two monitoring sites and does not anticipate selecting final sites until the completion of at least one year of the phase one monitoring described above. The phase two monitoring sites would be intended to satisfy Rule 1001 requirements for a PMRP monitoring program containing at least one CDVAA monitor and one Control Site monitor. Although not anticipated, the potential exists that the monitoring sites initially selected for phase two monitoring may not yield the information required by Rule 1001. In this case, the OHMVR Division would have to select new phase two monitoring sites.

The OHMVR Division is in the initial stages of identifying potential phase two monitoring sites and considers the phase one monitoring described above an integral component of the phase two monitoring site selection process. Although the OHMVR Division has not identified the precise location of any permanent monitoring site, there are several factors that will guide the permanent monitoring site selection process:

- In accordance with Rule 1001, CDVAA and Control Site monitors must be located "directly downwind" of coastal dune areas where vehicle riding activity is and is not permitted. Thus, by definition, the phase two monitoring sites must be located downwind (i.e., generally southeast) of the large, contiguous sand dune areas in the Pismo Dunes Natural Preserve, Oceano Dunes SVRA, and/or Rancho Guadalupe Dunes County Park. In addition, these monitors must be away from other sources of pollutants that could bias or interfere with the monitoring effort, such as agricultural activities, state highways, and stationary sources of pollutants.
- In accordance with Rule 1001, the OHMVR Division has prepared a Monitoring Site Selection Plan that describes the technical methods the OHMVR Division will use to select and receive APCO approval of phase two CDVAA and Control Site monitoring sites, including preliminary characteristics the OHMVR Division will consider when selecting CDVAA and Control Site monitoring sites that are comparable. These characteristics include factors such as the land use, land management, and topography upwind of potential monitoring sites and estimated wind direction and wind speed at the potential phase two monitoring sites.



- Dust Control EIR Project Boundary
- Coastal Zone Boundary
- Vegetation Islands
- Public Park Lands
- Private Land (within Project Boundary)
- Urban Areas
- Phase 1 Monitoring Location (not shown to scale)

Figure 2-6 Phase 1 Monitoring Locations

Oceano Dunes SVRA Dust Control Project IS

- Title 40 of the Code of Federal Regulations (CFR), Appendix E to Part 58, contains the specific probe and monitoring path siting criteria applicable to ambient air quality monitors (Ambient Air Quality Surveillance 2011). The California Air Resources Board's (ARB) Air Monitoring Quality Assurance Manual, Volume II, also contains siting criteria for BAM PM10 monitors (ARB 2000). The OHMVR Division would adhere to these siting criteria as much as possible when selecting phase two monitoring sites. The CFR and ARB siting criteria that are most likely to affect the selection of a permanent monitoring site are:
 - Spacing from obstructions: Monitors must be two meters from walls, 10 meters from the driplines of trees, and away from obstacles (a monitor is considered unobstructed if an imaginary line is extended 30 degrees up, rotated 360 degrees, and does not intersect any obstruction within 30 m).
 - Unrestricted air flows: There must be unrestricted air flows in an arc of at least 270 degrees and no significant obstruction between the pollutant source and the monitor (even though other spacing obstruction criteria are met).
- The selection of permanent monitoring sites would occur in accordance with any mitigation measures or conditions of approval imposed on the project as part of the OHMVR Division's CEQA review or other land use agency's environmental review of the project.

Phase three monitoring would begin sometime after July 2015, be temporary and intermittent throughout the life of the project, and consist of up to two temporary monitoring transects and ten monitoring sites. Phase three monitoring would be used to continue site dust control measures. These sites could remain in place for up to one year.

Monitoring Site Layouts

The OHMVR Division would co-locate equipment at most monitoring sites, meaning that a combination of meteorological, sand flux, and PM monitoring instruments would be located at most monitoring sites; some sites (mostly the existing S1 and marker post sites) would consist of meteorological monitoring equipment only. For example, the OHMVR Division would co-locate equipment at 15 of the 16 proposed phase one monitoring sites (not including the existing monitoring at S1 and marker posts 1, 3, and 5) as shown in Table 2-3 (see also Figure 2-6).

Table 2-3 Co-Located Equipment Example (Phase 1 New Monitoring Sites)													
Transect	Site A	Site B	Site C	Site D									
1	A, M, SF	A, M, SF	A, E, M*, SF, SP	--									
2	A, M, SF	A, M, SF	A, E, M, SF, SP	--									
3	A, M, SF	A, E, M, SF, SP	A, E, M*, SF, SP, T	--									
4	A, M, SF	A, E, M* SF, SP	A, M, SF	M*									
5	A, M, SF	A, M, SF	A, E, M*, SF, SP	--									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Table Legend^(A)</td> <td style="width: 33%;">M = Meteorological devices</td> <td style="width: 33%;">SF = Sand flux equipment</td> </tr> <tr> <td>A = APP device</td> <td>M* = Meteorological devices on 10-meter tall lattice tower</td> <td>SP = Solar panels</td> </tr> <tr> <td>E = E-BAM monitor</td> <td></td> <td>T = TEOM monitor (w/ shelter)</td> </tr> </table>					Table Legend^(A)	M = Meteorological devices	SF = Sand flux equipment	A = APP device	M* = Meteorological devices on 10-meter tall lattice tower	SP = Solar panels	E = E-BAM monitor		T = TEOM monitor (w/ shelter)
Table Legend^(A)	M = Meteorological devices	SF = Sand flux equipment											
A = APP device	M* = Meteorological devices on 10-meter tall lattice tower	SP = Solar panels											
E = E-BAM monitor		T = TEOM monitor (w/ shelter)											

(A) Please refer to the "Meteorological, Sand Flux, and PM10 Monitoring Equipment Types" discussion below for a description of the proposed monitoring equipment.

The area that each monitoring site would occupy would vary according to the type of equipment installed, mounting structure used, and power required to operate the equipment (see below). In

general, sites that have equipment mounted on two- or four-meter tall tripods or poles would require less area and sites that have a 10-meter tall lattice tower and/or that require a solar panel array would occupy more area. Figure 2-7 shows the conceptual layouts for the proposed monitoring sites, which would likely consist of circles with radii of approximately 35, 50, 65, or 85 feet.

Table 2-4 summarizes the different layouts that could be used during each phase of monitoring and the total amount of land that would be occupied by the monitoring activities.

Phase	Conceptual Monitoring Layout						Total Area (Acres) ^(A)
	Type I	Type II	Type III	Type IV	Type V	Type VI	
1	5 ^(B)	9	2	3	-	1	2.5
2	-	-	-	-	3	-	1.0
3	-	3	3	3	-	1	1.9

(A) Total is approximate and rounded to the nearest tenth.

(B) Marker posts one, three, and five are mounted on existing structures and would not be enclosed by a fence and would not contribute significantly to the area occupied by phase 1 monitors (<5 sq ft total).

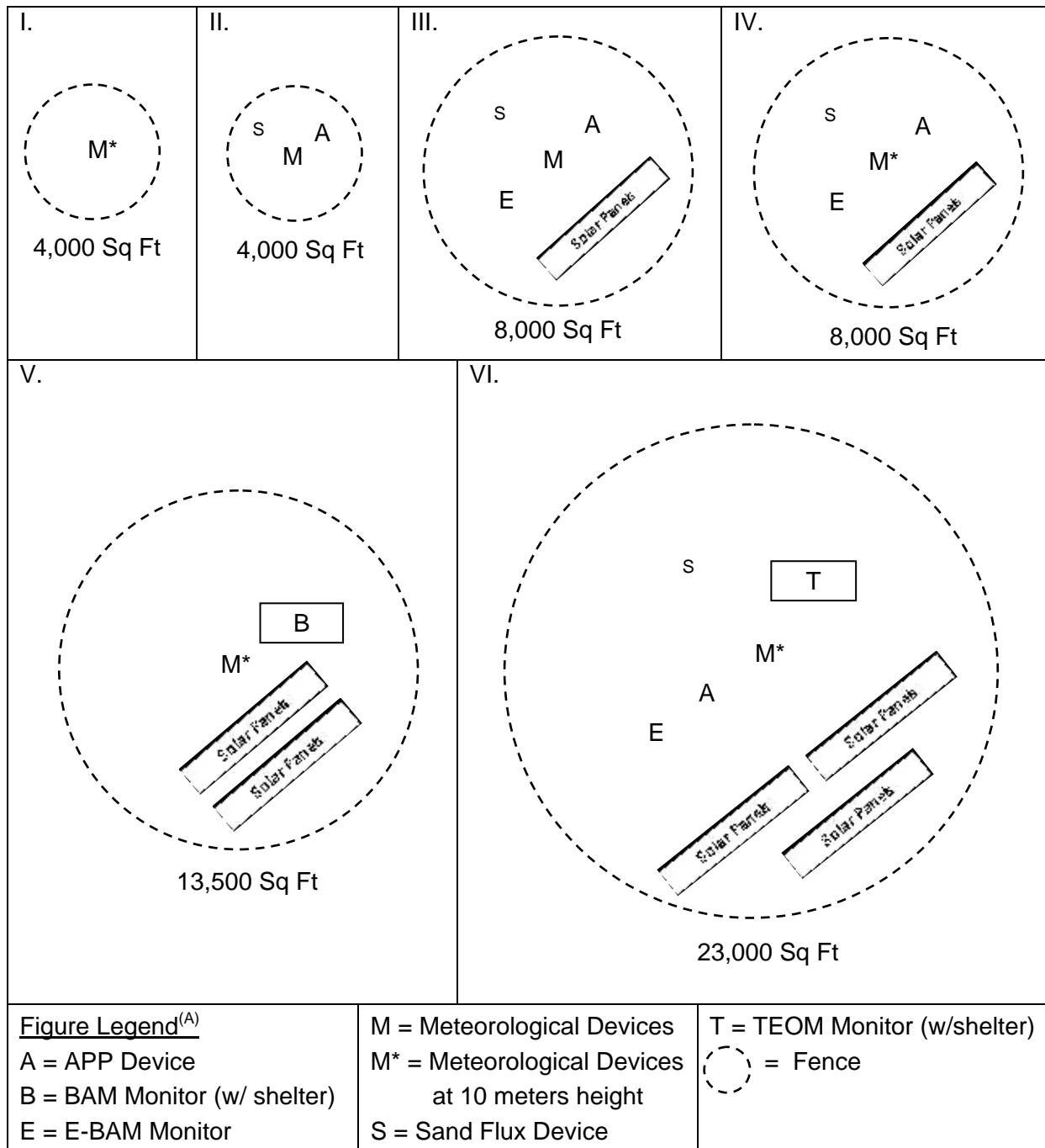
As shown in Table 2-4, the monitoring program would occupy no more than 2.5 acres of land during any one phase; if phases 1 and 2 overlap the maximum amount of land that could be occupied by the monitoring program would be 3.5 acres.

Meteorological, Sand Flux, and PM10 Monitoring Equipment Types

The OHMVR Division's monitoring program would involve the installation, operation, and maintenance of the following equipment at the monitoring locations discussed above. The exact equipment installed is subject to change as new information or technologies become available; however, the OHMVR Division does not anticipate that the installation, operation, and maintenance requirements associated with monitoring equipment, nor the area that this equipment would occupy, would be substantially different than described in this document.

Meteorological Monitoring Equipment

Meteorological monitoring equipment would consist of air temperature, relative humidity, wind direction, and horizontal wind speed instruments. Air temperature and relative humidity instruments would be small, approximately one-inch in diameter and one foot long. Wind speed and wind direction instruments would also be small, consisting of a fixed mount vane and propeller anemometer. The OHMVR Division would install the meteorological monitoring equipment on tripods, poles, or lattice towers at heights ranging between 2 meters to 10 meters above ground surface. The temporary meteorological monitoring equipment would electronically store data and would be connected to a small data logger via data cables. The instruments would be powered by a 12-volt battery and one small solar panel. Figure 2-8 shows the type of meteorological monitoring equipment that the OHMVR Division would install.



(A) Please refer to the "Meteorological, Sand Flux, and PM10 Monitoring Equipment Types" discussion below for a description of the proposed monitoring equipment.

Figure 2-7 Conceptual Layouts of Monitoring Sites, Type I-IV. Notes: Figure not to scale. The use of solar panels increases the size of the monitoring site. Solar panels require battery back-up. Generators or fuel cells may be used instead of solar panels.

Sand Flux Monitoring Equipment

Sand flux monitoring equipment would consist of the following types of instruments.

Cox Sand Catcher

The Cox Sand Catcher (CSC) is a small, cylindrical instrument, approximately two inches in diameter and two feet long, which consists of an inner and outer polyvinyl chloride (PVC) tube with a lid. The instrument is installed directly into the ground and set to operate at a height of 15 centimeters (cm) above the ground surface. Saltating sand particles move along the ground surface and fall into the instrument. CSCs have no electrical components, require no power supply, and would not be connected to a data logger. Figure 2-8 shows the sand catcher.

Custom Product's Big Spring Number Eight (BSNE) Dust Sampler

Custom Product's Big Spring Number Eight (BSNE) sampler is a small, wedge-shaped instrument, approximately 30 inches long, which consists of a metal pan and screens. Saltating sand particles entrained in the air pass into the sampler opening, where it settles out into the sampler pan. A screen across the top of the pan permits air to exit the sampler. The OHMVR Division would install BSNE samplers on poles or rods at heights ranging from 0.5 to 2.0 meters above ground surface. BSNE dust samplers have no electrical components, require no power supply, and would not be connected to a data logger. Figure 2-8 shows the dust sampler.

Sensit Eroding Mass Flux Field Sensor (Sensit)

The Sensit is a small and slim instrument, approximately 20 inches long by 2.5 inches in diameter, which measures the amount of wind-induced mass erosion occurring in an area. The instrument is installed directly into the ground and set to operate at a height of 15 centimeters (approximately seven inches) above the ground surface. Saltating sand particles move along the surface and impact the instruments sensor, which registers the amount of particles impacting the instrument. The Sensit electronically collects and stores data and would be connected to a data logger via a data cable. The Sensit can be powered by a 12-volt battery and one small solar panel. Figure 2-8 shows the Sensit.

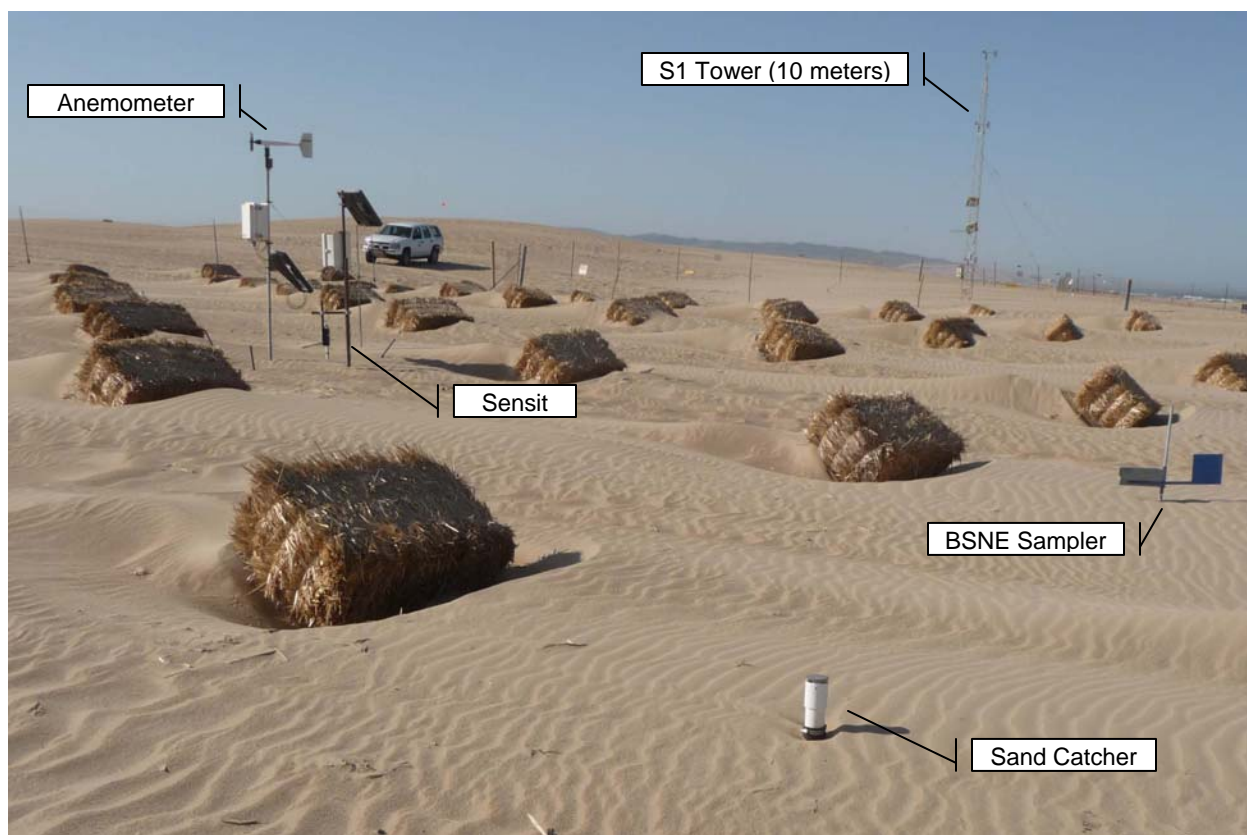


Figure 2-8 Meteorological and Sand Flux Monitoring Equipment. *Foreground: Cox sand catcher (in white). Left: Two-meter tall, pole mounted anemometer with data logger (white box) and solar panel. To the right of anemometer at ground level is a Sensit eroding mass sensor; Right: BSNE sampler; Background: 10 meter-tall S1 meteorological tower.*

PM10 Monitoring Equipment

PM10 monitoring equipment would consist of the following types of instruments.

Met One Instruments Ambient Particulate Profiler (APP)

The APP is small, slim, and cylindrical, approximately two feet long by four inches wide. The APP uses light scatter technology to detect, size, and count the amount of aerosol particulate matter in an air stream. An internal pump draws air through an inlet tube heater and into the sensor, where it passes through a laser beam. PM entrained in the air scatters the light from the laser beam and the sensor measures both the number of particles that scatter light and the amount of light scattered.

The OHMVR Division would install APP devices on poles or rods at heights up to four meters above ground surface. The APP electronically collects and stores data and would be connected to a data logger via a data cable. The device can be powered by a 12-volt battery and a small solar panel. Figure 2-9 shows the APP instrument.

Met One Instruments Environmental Beta Attenuation Mass Monitor (E-BAM)

The E-BAM is small and square, approximately 16 inches long by 14 inches wide by eight inches deep. The E-BAM uses beta ray attenuation technology to measure ambient PM10

concentrations. A carbon isotope (C14) emits a constant source of beta particles (electrons) that are detected and counted by a scintillation detector. An internal pump draws air through an inlet tube heater and into the sensor, where it passes through filter tape. Particulate matter entrained in the air is deposited on the filter tape and subsequently attenuates (decrease) the amount of beta particles detected by the scintillation detector. The change in beta particles measured is used to determine the mass of the PM on the filter tape and the volumetric concentration of PM10 in the ambient air.

The OHMVR Division would install E-BAMs on poles or rods at heights up to four meters above ground surface. The E-BAM electronically collects and stores data via internal systems. The device can be powered by a series of 12-volt batteries and three solar panels approximately four feet long by six feet wide. Figure 2-9 shows the E-BAM.



Figure 2-9 APP and E-BAM Devices. Left: APP. Right: E-BAM

Tapered Element Oscillating Microbalance (TEOM) Monitor

The TEOM is a United States Environmental Protection Agency- (U.S. EPA) designated FEM for measuring ambient concentrations of PM10. The TEOM is a gravimetric instrument that draws ambient air through a filter that is continuously weighed to calculate the amount of PM10 deposited on the filter. The TEOM is housed in a small, weather-proof shelter approximately 6 feet long by 6 feet wide by 8 feet tall. The OHMVR Division would mount this housing on a trailer or install it directly onto a stabilized surface. The TEOM can be powered by a series of batteries and a solar panel array, a fuel cell, or a generator. If feasible, the OHMVR Division may extend electric utility service to the TEOM monitor (this would depend on the monitor's proximity to utility lines). Figure 2-10 shows an example FEM monitor with shelter.

Met One Instruments Beta Attenuation Monitor (BAM)

The BAM is a U.S. EPA-designated FEM monitor for measuring ambient PM10 concentrations. The instrument operates using the same beta-attenuation principle as described for the E-BAM in Section 2.6.1 above. Unlike the E-BAM (and similar to the TEOM), however, the BAM is housed in a small, weather-proof shelter approximately 6 feet long by 6 feet wide by 8 feet tall. The OHMVR Division would install this shelter on a trailer or other flat, secure surface. The BAM requires an alternating current source of power, which can be provided by utility hook-up or generator or fuel cell or solar panel array with power converter. If feasible, the OHMVR Division may extend electric utility service to the BAM monitors (this would depend on the monitor's proximity to utility lines) Figure 2-10 shows an example FEM monitor with shelter.



Figure 2-10 Example FEM Monitor with Shelter and 10-Meter Tall Lattice Tower.

2.6.2 Dust Control Program

The proposed dust control program would consist of natural and artificial dust control measures that would physically cover the ground surface and/or break the flow of wind across the landscape, thereby reducing the amount of shear stress the wind exerts on the ground surface and the potential for sand transport and dust generation. The OHMVR Division would select specific sites where dust control measures would be installed prior to October 30 of each calendar year.

The OHMVR Division would install, operate, and maintain two different kinds of dust control measures:

- *Re-vegetation measures* would consist of planting of sterile annual grasses, seeds, and seedlings, either in open sand areas or in areas adjacent to existing vegetation.
- *Artificial roughness measures* would consist of the placement artificial materials and structures on or in open sand areas. The OHMVR Division is considering using straw bales, woodchip berms, and low-porosity wind fences as artificial roughness dust control measures.

The proposed phasing, layout, and dust control measures to be used in the OHMVR Division's Dust Control Program is discussed below.

Program Phasing

The proposed dust control measures consist of semi-permanent (e.g., straw bales and woodchip berms) and permanent (e.g., vegetation) materials and structures that would be located within Oceano Dunes SVRA and generally upwind of the Nipomo Mesa. The OHMVR Division could begin installing dust control measures as soon as winter 2013, although winter 2014 is more likely, and would continue to install control measures each year thereafter in accordance with Rule 1001 compliance targets. Initially, the OHMVR division may elect to install more artificial roughness measures than vegetation. Artificial roughness measures are easier to deploy and do not require years to become established and reach peak control effectiveness. Artificial roughness measures do, however, require regular maintenance and replenishment of materials. Vegetation projects at Oceano Dunes SVRA are very labor intensive. As discussed in Section 2.4.1 Oceano Dunes SVRA has averaged 12 acres of re-vegetation over the last six years. The OHMVR Division estimates that at maximum an additional 20 acres of open sand areas may be able to re-vegetated in a single year for dust control purposes (this re-vegetation would be in addition to projects performed in a manner consistent with Oceano Dunes SVRA's Coastal Development Permit 4-82-300-A5). Thus, approximately 32 acres of re-vegetation may cumulatively occur per year at Oceano Dunes SVRA with the proposed project.

Preliminary Estimate of Control Measure Acreage

Rule 1001 establishes a performance standard that is based on the PM10 concentrations measured downwind of the part of Oceano Dunes SVRA where vehicle activity is permitted and the parts of coastal dunes areas (including Oceano Dunes SVRA) where vehicle activity is not permitted. As discussed in Section 2.6.1 above, the OHMVR Division does not anticipate conducting its phase 2 monitoring locations until summer 2014 at the earliest. The magnitude of the control measures necessary to achieve Rule 1001 compliance targets, therefore, is unknown at this time.

The OHMVR Division is, however, undertaking a dispersion modeling analysis to provide an initial, relative examination and understanding of the contribution of CDVAA and Control Site areas on downwind PM10 concentrations and the potential level of control measures needed to achieve a performance standard. This initial modeling is being performed using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and meteorological data primarily measured at the OHMVR Division's S1 meteorological tower. For the purposes of this initial modeling analysis, the OHMVR Division has assumed that meteorology is uniform throughout Oceano Dunes SVRA and that CDVAA and Control Site areas emit PM10 emissions at the same rate under the same meteorological conditions. Table 2-5 summarizes the OHMVR Division's preliminary estimate of the amount, in acres, of control measures that may necessary to achieve a specific PM10 reduction target downwind of Oceano Dunes SVRA.

Table 2-5 Preliminary Estimate of Control Measure Land Occupancy				
Reduction Target	Control Measure Effectiveness			
	25 %	50 %	75 %	90 %
10 % Reduction in PM10	155 Acres	78 Acres	53 Acres	42 Acres
25 % Reduction in PM10	2,146 Acres	190 Acres	129 Acres	101 Acres
50 % Reduction in PM10	NA	2,146 Acres	325 Acres	200 Acres
75 % Reduction in PM10	NA	NA	2,146 Acres	508 Acres
90 % Reduction in PM10	NA	NA	NA	937 Acres
95 % Reduction in PM10	NA	NA	NA	2,146 Acres

Notes: "NA" denotes the PM10 reduction target could not be met at the given control measure effectiveness.

The results presented in Table 2-5 were derived using the modeled, 24-hour average PM10 concentrations at the 1st through 5th highest receptor points. These receptors are generally located 300 to 900 feet downwind of the nearest open sand areas, potentially within the general vicinity where the OHMVR Division may install phase two monitors (i.e., a CDVAA monitor). The use of these receptors, therefore, provides a reasonable preliminary approximation of the potential amount of control measures associated with the proposed project.

As stated above, the OHMVR Division is in the initial stages of the dispersion modeling analysis. The EIR will provide additional information and documentation on this analysis and present any changes or other refinements made to the preliminary results presented above.

Dust Control Measure Locations

The OHMVR Division anticipates that the selection of specific dust control measure locations would depend on the following factors:

- *Monitoring program results.* The OHMVR Division would use the data collected as part of its phase one monitoring program to identify the area or areas where the greatest amount of saltation and dust generation is occurring. This would enable the OHMVR Division to 1) prioritize areas for implementing control measures and 2) tailor the control measure to provide the greatest possible emission reduction given the technical specifications, environmental permitting requirements, and costs associated with the measure.
- *Permanent monitoring sites.* Rule 1001 does not establish a specific dust control reduction target. Rather, the amount of PM10 reductions necessary to comply with the rule is dependent on the difference between the concentrations measured at phase two monitoring sites.
- *Environmental constraints.* Oceano Dunes SVRA supports special-status plant and animal species and other sensitive resources that must be considered when locating dust control measures. These resources are described further in Section 4.4, Biological Resources, and Section 4.5, Cultural Resources, and Section 4.8, Hydrology and Water Quality.
- *OHV Recreation.* The OHMVR Division has a legislative mandate to implement and administer a program to manage and enhance OHV recreation uses and motorized off-highway access to non-motorized recreation (Public Resources Code Sections 5090.01 et seq.). The OHMVR Division's legislative mandate recognizes that the indiscriminate and uncontrolled use of OHVs may have a deleterious impact on the environment, wildlife, and plants and declares that effectively managed areas and adequate facilities

for OHV use and conservation and enforcement are essential for ecologically balanced recreation. Public Resource Code Section 5090.35 identifies the protection of public safety, the appropriate utilization of lands, and conservation of land resources as areas of highest priority in the management of an SVRA. Compliance with Rule 1001 and implementation of PMRP dust control measures will necessarily involve careful evaluation of how to best provide adequate, ecologically balanced, and sustained long-term motorized and non-motorized recreation at Oceano Dunes SVRA.

Dust Control Measure Details

The OHMVR Division would design vegetation projects to match the plant community composition that exists at comparable reference sites and would obtain seeds and plants materials from local genetic stock within Oceano Dunes SVRA. The OHMVR Division anticipates that vegetation projects could cover between 50 – 75 % of the area under control and reach a height of 3 – 5 feet at full growth. Figure 2-11 shows an example of a re-vegetation project at approximately 1 year and at 15 years.

Straw bale dust control areas would consist of approximately 4-foot-long by 1.5-foot-high by 2-foot-wide straw bales spaced approximately 5 to 20 feet apart, depending on the control effectiveness established for the treatment area. Woodchip berm dust control areas would consist of approximately 3- to 8-foot-high berms or mounds of wood chips that would be spaced approximately 30 to 80 feet apart depending on the height of the berm. The OHMVR Division would orient these projects to be perpendicular to the prevailing wind direction in the treatment area in order to maximize the reduction in sand movement from these projects. In addition, the OHMVR Division would install three or four meteorological and sand flux monitors at each dust control measure location to ensure the measures were achieving their design reduction effectiveness. One monitor would be installed upwind of the treatment area, one or two monitors would be installed within the center of the treatment area, and one monitor would be installed at the back of the treatment area. Figure 2-12 shows straw bales installed at Oceano Dunes SVRA in 2011 and a wood chip berm installed at Owens Lake in Inyo County, California.

Wind fencing is a specific form of artificial roughness that is regularly used at Oceano Dunes SVRA. Each year, during the springtime, Oceano Dunes SVRA staff installs and maintains wind fencing in the dune areas immediately upwind of Grand Avenue, Pier Avenue, and Strand Way. Staff installs the fencing perpendicular to the prevailing wind condition to slow the movement of sand. The fence breaks up the flow of air across the sand and causes sand to drop out on the lee, or downwind side of the fence. The OHMVR Division installs approximately 240 feet of fencing near Grand Avenue (three rows each approximately 80 feet long), 560 feet of fencing near Pier Avenue (seven rows each approximately 80 feet long), and approximately 960 feet of fencing upwind of Strand Way (12 rows each approximately 80 feet long). This activity would continue under the proposed project. Figure 2-13 shows wind fencing at Pier Avenue and Strand Way.



Figure 2-11 Re-vegetation Projects. *Left: Re-vegetation at approximately one year. Right: Established re-vegetation project at approximately 15 years.*



Figure 2-12 Artificial Roughness Dust Control Measures. *Left: Straw bales at Oceano Dunes SVRA. Right: Wood chip berm at Owens Lake (Image Source: Farber et al. 2010).*



Figure 2-13 Wind fencing at Pier Avenue and Strand Way. *Left: Wind fencing at Pier Avenue and Strand Way; Right: Sand accumulation at wind fence on Strand Way.*

2.6.3 Track-Out Control Program

The proposed track-out control program would consist of the installation of physical structures to control vehicle track-out onto public roadways and street sweeping operations to remove sand that is deposited onto public roadways.

The OHMVR Division would incorporate its existing street sweeping operations on Grand Avenue in Grover Beach and Pier Avenue in Oceano into the proposed project and continue to perform this activity. Two to three times per week, Oceano Dunes SVRA staff sweep portions of the Pier Avenue entrance with a small CDPR-owned sweeper. This area extends approximately 100 feet from the Pier Avenue Entrance Station to the ramp leading to the beach. Since 2011, the OHMVR Division has contracted with a private party to regularly sweep Pier Avenue two times per week. This sweeping occurs along approximately 1,000 linear feet of Pier Avenue from Air Park Drive to the Pier Avenue Entrance Station. This street sweeping complements efforts by SLO County to sweep the entire length of Pier Avenue from SR 1 to the Pier Avenue Entrance Station; SLO County operates this street sweeping program using funds from the OHMVR Division. Similarly, two to three times per week, the OHMVR Division sweeps a 550-foot length of Grand Avenue using an existing CDPR-owned sweeper. This street sweeping effort would continue during the term of the PMRP, although schedules are subject to change based on the availability of equipment, staff, and funding to implement private contracts.

Physical track-out control structures would include technologies such as gravel pads, grizzlies, rumble strips, or wheel wash systems. These structures would be installed at the top of sand ramps leading to Grand Avenue and Pier Avenue to remove sand from vehicles before it reaches public streets. Potential track-out control structures would need to be able to accommodate the high levels of sand that blows up from the beach area as well as thousands of vehicles of varying size and type (e.g., cars, trucks, trailers, etc.) per day. The OHMVR Division would install these physical structures by Spring 2015.

2.7 PROJECT AREA DESCRIPTIONS

This section describes the different areas where the OHMVR Division may install the program components discussed above. In general, the proposed project would primarily be located in public park lands in SLO County, from Grand Avenue in Grover Beach to the southern boundary of Oceano Dunes SVRA; however, the OHMVR Division is also considering installing equipment in and within the vicinity of Rancho Guadalupe Dunes County Park in Santa Barbara County, which is approximately four miles south of Oceano Dunes SVRA.

The OHMVR Division could install the proposed project components in the following areas:

- Pismo State Beach (south of Grand Avenue to Oceano Dunes SVRA) – Phase one and phase three meteorological monitoring (marker post monitoring only); wind fencing; track-out control structures and street sweeping.
- Pismo Dunes Natural Preserve – Phase one and phase three meteorological, sand flux, and PM10 monitoring.
- Oceano Dunes SVRA – Phase one thru phase three monitoring, dust control measures.
- Rancho Guadalupe Dunes County Park – Phase one thru phase three monitoring.
- Private Lands in SLO County – Phase two monitoring.
- Private Lands in Santa Barbara County – Phase one thru three monitoring.

Table 2-6 summarizes the key characteristics of the proposed project areas. These areas are described below and shown in Figure 2-14. The installation of project components in the above

areas is subject to permitting constraints and landowner authorizations. The OHMVR Division would not install project components in unauthorized areas.

Table 2-6 Summary of Project Area Characteristics				
Area	Proposed Components	Project Area ^(A)	Max Component Area ^(B)	Primary Land Owner / Management Entity
<i>SLO County</i>				
Pismo State Beach	Phase 1 and 3 monitors Wind fencing; Track-out structures Street Sweeping	320 acres	Monitors: < 5 sq ft ^(C) Wind fencing: 1.5 acres Track-out: 1 acre Sweep length: 300 feet	Oceano Dunes District
Grand Avenue	Street Sweeping		Sweep length: 1,350 feet	City of Grover Beach
Pier Avenue	Street Sweeping		Sweep length: 2,400 feet	SLO County
Pismo Dunes Natural Preserve	Phase 1 thru 3 monitors	650 acres	Monitors: 1 acre	Oceano Dunes District
Oceano Dunes SVRA	Phase 1 thru 3 monitors; Dust control measures	3,060 acres	Monitors: 3 acres Dust control: 2,146 acres	Oceano Dunes District
Private Lands	Phase 2 monitors	1,230 acres	Monitors: 1 acre	Private Landowners
<i>Santa Barbara County</i>				
Rancho Guadalupe Dunes County Park	Phase 1 thru 3 monitors	380 acres	Monitors: 1 acre	Santa Barbara County
Private Lands	Phase 1 thru 3 monitors	135 acres	Monitors: 1 acre	Private Landowners

(A) Project Area refers to the total land area covered by the scope of the proposed project.

(B) Max Component Area refers the maximum land area that would be physically occupied by the project components.

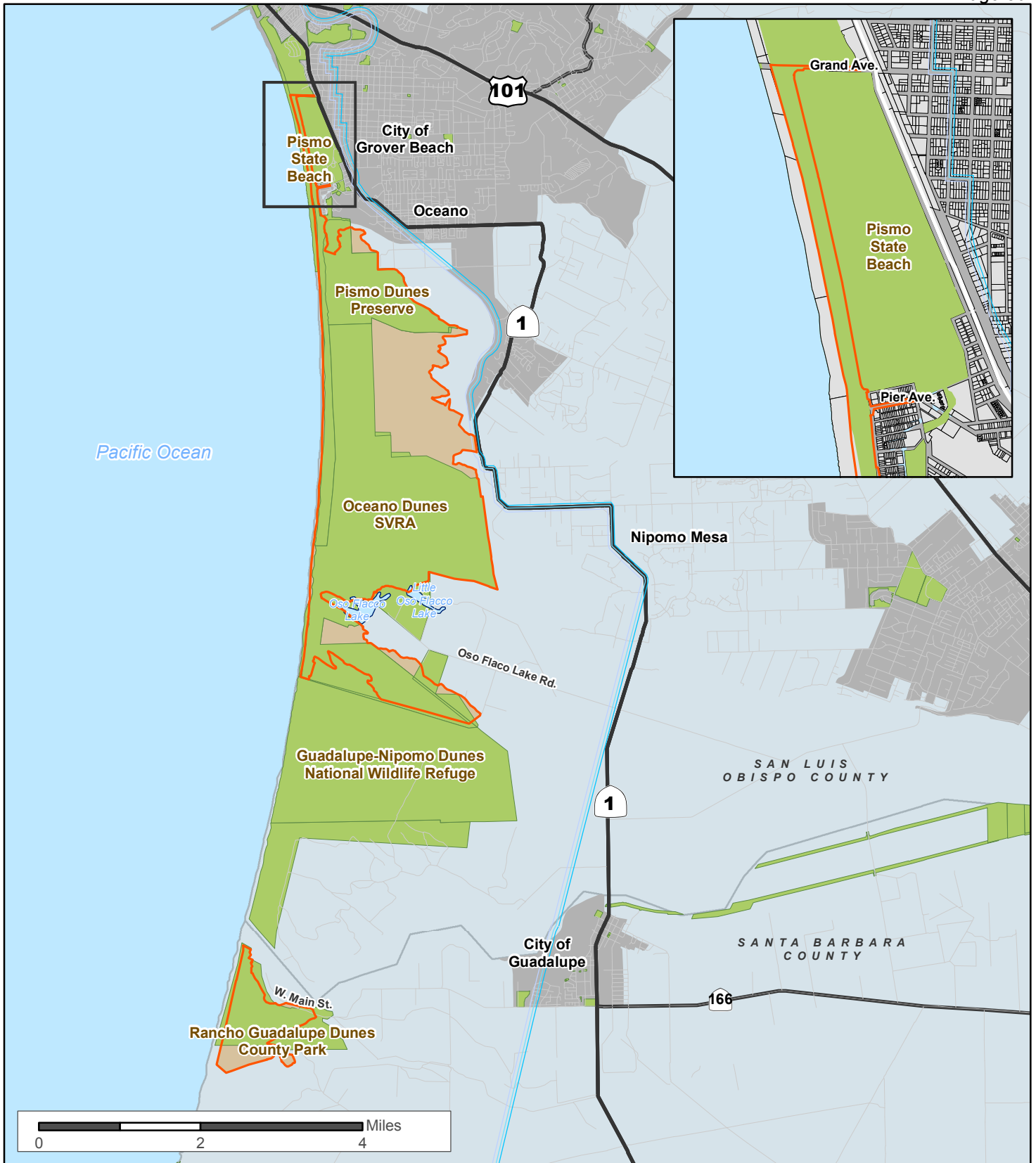
(C) Pismo State Beach Phase one and three monitors would be located on existing marker posts.

2.7.1 San Luis Obispo County Project Areas

The proposed project area within SLO County generally includes public and private lands as described below.

Pismo State Beach

Pismo State Beach is located adjacent to the cities of Pismo Beach and Grover Beach and the community of Oceano. Pismo State Beach is bordered on the north by the unincorporated city of Shell Beach, on the south by the Pismo Dunes Natural Preserve (a sub-unit of Pismo State Beach) and Oceano Dunes SVRA, on the east by the cities of Pismo Beach, Grover Beach, and the community of Oceano, and on the west by the Pacific Ocean. Pismo State Beach is accessible from the City of Pismo Beach and from Grand Avenue in Grover Beach and Pier Avenue in Oceano



Source: CPAD, San Luis Obispo County, Santa Barbara County, City of Grover Beach, California State Parks, CalTrans

- Highways
- ▭ Dust Control Project Boundary
- Coastal Zone Boundary
- ▭ Public Park Lands
- ▭ Private Land (within Project Boundary)
- ▭ Urban Areas

Figure 2-14 Project Areas

Oceanos Dunes SVRA Dust Control Project IS

Pismo State Beach provides recreational opportunities including but not limited to hiking, swimming, fishing, clam digging, and wildlife viewing. In addition to non-motorized recreation, Pismo State Beach provides access to Oceano Dunes SVRA via sand ramps at Grand Avenue in Grover Beach and Pier Avenue in Oceano. For orientation purposes, marker posts are placed along the beach at half-mile intervals starting near the mouth of Arroyo Grande Creek, which is just south of Post 1. The area north of Post 2 is designated as a day use only area and predominately used by people who want to drive their street-legal vehicles on the beach and enjoy day use beach activities such as picnicking, sunning, fishing, and wading. The area south of Post 2 allows camping and OHV use and is predominately used by OHV enthusiasts.

The proposed project area covers the portion of Pismo State Beach from Grand Avenue south to Oceano Dunes SVRA. This area is approximately 320 acres in size and consists entirely of mostly flat, bare sand beach areas or vegetated dunes that are considered environmentally sensitive habitat under the Grover Beach and SLO County local coastal plans (LCP). Lands within this area are zoned as: Coastal Open Space and Coastal Planned Commercial (City of Grover Beach) and Recreation (SLO County); lands within this area are designated for use as: Open Space/Resource Conservation (City of Grover Beach LCP) and Recreation (SLO County LCP).

Pismo Dunes Natural Preserve

Pismo Dunes Natural Preserve is located adjacent to Pismo State Beach and the community of Oceano. Pismo Dunes Natural Preserve is a sub-unit of Pismo State Beach and is bordered on the north by Arroyo Grande Creek and the community of Oceano, on the south by Oceano Dunes SVRA, on the east by private agricultural, recreational, and residential lands, and on the west by the seaward toe of a foredune system that is stabilized with invasive, exotic European beach grass (*Ammophila arenaria*) and ice plant (*Carpobrotus* spp.) and is thus unusually high in comparison to other foredunes in Oceano Dunes SVRA that are stabilized with native vegetation. Pismo Dunes Natural Preserve is accessible through Pismo State Beach, Oceano Dunes SVRA, and through public and private trails and entrances located on the eastern boundary of the preserve. Pismo Dunes Natural Preserve provides recreational opportunities similar to Pismo State Beach. California Public Resources Code (PRC) §5001.8, however, prohibits use of motor vehicles in state-designated natural preserves, except in cases of emergency or approved resource management projects.

The proposed project area includes approximately 650 acres in the Pismo Dunes Natural Preserve. This area consists of open sand and vegetated dunes that are considered environmentally sensitive habitat under the SLO County LCP. Lands within this area are zoned by SLO County and designated by the SLO County General Plan as Recreation.

Oceano Dunes SVRA

Oceano Dunes SVRA is generally located south of the City of Grover Beach and the community of Oceano. Oceano Dunes SVRA is bordered on the north by Pismo State Beach and the Pismo Dunes Natural Preserve, on the south by the Guadalupe-Nipomo Dunes National Wildlife Refuge, on the east by private agricultural, industrial, and recreational lands, and on the west by Pismo State Beach and the Pacific Ocean. Oceano Dunes SVRA is accessible via sand ramps in Pismo State Beach at Grand Avenue (in Grover Beach) and Pier Avenue (in Oceano) as well as via a public entrance located on Oso Flaco Lake Road.

Oceano Dunes SVRA provides both vehicular and non-vehicular recreation opportunities and consists of an OHV recreation area, restrooms, a day use area, and hiking trails. Non-vehicular

recreation is permitted throughout the majority of the park but usually occurs within those areas of the park that are not open to OHV recreation, such as the Pismo State Beach / Oceano Dunes SVRA day use area between Grand Avenue and marker post two or the approximately 800-acre Oso Flaco Lake Area in the southern portion of Oceano Dunes SVRA. There are no designated campsites, but the park does not allow more than 1,000 registered camping vehicles a day to camp within the beach and dune areas.

As discussed above, Oceano Dunes SVRA is contiguous with Pismo State Beach and the OHMVR Division collectively manages the portion of Pismo State Beach open to motorized vehicles (the portion south of Grand Avenue) and Oceano Dunes SVRA together. Between Pismo State Beach and Oceano Dunes SVRA, approximately 1,500 acres of land are managed for OHV recreation. From March 1 to September 30th of each year, this area is reduced to 1,250 acres in size due to the installation of fencing to protect the western snowy plover, a federally listed species, and California least tern, a state and federally listed species.

The area open to OHV recreation is bounded by a fence and consists of open sand and vegetation islands. Other ecosystems within Oceano Dunes SVRA include dune lakes, freshwater stream, coastal lagoon, wetlands, fore and back dunes, dune scrub vegetation, and riparian habitat.

The proposed project area includes approximately 3,060 acres in Oceano Dunes SVRA. This area consists of open sand and vegetated dunes that are considered environmentally sensitive habitat under the SLO County LCP. Lands within this area are zoned by SLO County and designated by the SLO County General Plan as Recreation.

Private Lands in SLO County

The proposed project area includes three privately-owned land areas in SLO County. The first area is south of the community of Oceano and near the northeast corner of the Pismo Dunes Natural Preserve. This area is approximately 35 acres in size and consists of private open space and recreational lands. The area is accessible via SR 1 and private access roads as well as through the Pismo Dunes Natural Preserve trails.

The second area is south of the community of Oceano and west of the Nipomo Mesa and is approximately 970 acres in size. The area consists of private agricultural, open space, and recreational lands and includes open sand and dune lake ecosystems. The area is accessible via SR 1 and private access roads as well as through the Pismo Dunes Natural Preserve trails.

The third area is south of Oso Flaco Lake and is approximately 225 acres in size. The area consists of private agriculture and recreational lands and includes open sand and foredune/dune scrub ecosystems. The area is accessible via Oso Flaco Lake Road and Guadalupe-Nipomo National Wildlife Refuge and Oceano Dunes SVRA trail systems.

All three areas are considered environmentally sensitive habitat under the SLO County LCP and are zoned by SLO County and designated by the SLO County General Plan as Open Space or Recreation.

2.7.2 Santa Barbara County Project Areas

The proposed project area within Santa Barbara County includes public and private lands as described below.

Rancho Guadalupe Dunes County Park

Rancho Guadalupe Dunes County Park is bordered on the north by private open space lands and the Santa Maria River, on the south and east by private open space and agricultural preserve lands, and on the west by the Pacific Ocean. From Guadalupe, West Main Street provides access to the park entrance and parking lot. Rancho Guadalupe Dunes County Park provides non-vehicular coastal recreation opportunities only; however, an active sand mining operation exists within and adjacent to the park. Similar to Oceano Dunes SVRA, recreational access is restricted during the breeding season for the California least tern and western snowy plover (March 1 – September 30).

The proposed project area includes approximately 380 acres in Rancho Guadalupe Dunes County Park. This area primarily consists of open sand and vegetated dunes and is considered environmentally sensitive habitat under the Santa Barbara County LCP. Lands within this area are zoned by Santa Barbara County and designated by the Santa Barbara County LCP as Open Space and Recreation.

Private Lands in Santa Barbara County

The project area contains privately-owned lands in Santa Barbara County. These lands are bordered on the north by Rancho Guadalupe County Park, on the south and east by private open space and agricultural preserve lands, and on the west by the Pacific Ocean. The lands consist of open sand dunes and dune scrub vegetation and are considered environmentally sensitive habitat under the Santa Barbara County LCP. There is no public access to these private lands. This portion of the project area is approximately 135 acres in size and consists of land zoned by Santa Barbara County and designated by the Santa Barbara County LCP as Open Space or Recreation.

2.8 PROJECT INSTALLATION AND MAINTENANCE

This section describes the installation and maintenance requirements for the proposed project components.

Monitoring Equipment Installation and Maintenance

The proposed meteorological, sand flux, and PM10 monitoring equipment is intended to be installed and operated at or near the ground surface. The OHMVR Division would install the proposed sand catchers and eroding mass sensors directly into the ground (approximately one to two feet below ground surface) and would mount the meteorological monitoring equipment, BSNE samplers, non FEM PM10 monitoring equipment (APP and E-BAM devices) directly onto 2- or 4-meter tall tripods or poles or 10-meter tall lattice towers. The OHMVR Division would place or manually drive the tripods and poles on or into the ground surface and use guy wires attached to anchor rods to secure the tripods and poles to the ground. To install a lattice tower, the OHMVR Division would first anchor the tower to an approximately 6-foot long by 6-foot wide steel plate, then excavate a shallow pit (approximately 2 feet deep) using a small loader or tractor, place the steel plate and tower base in the pit, and backfill the pit. The lattice tower would be further secured with guy wires and anchor rods. The OHMVR Division would install the proposed BAM and TEOM PM10 monitors in a small, weather-proof shelter, approximately 6-foot long by 6-foot wide by 8-foot tall, and mount the shelter on a trailer or slightly elevated platform on a stable surface. Solar panels and other power supplies would similarly be anchored to the ground. The OHMVR Division would use four-wheel-drive trucks or other utility vehicles to access and deliver equipment to the monitoring sites.

The proposed monitoring program would not result in soil import or export operations and would not result in vegetation clearing for phase one or phase three activities; minor amounts of vegetation removal may be necessary to install phase two monitors depending on the final location of these monitors (up to one acre maximum).

The proposed monitoring equipment is self-operating; however, regular maintenance is required. Table 2-7 summarizes the type and frequency of maintenance for each proposed equipment type.

Equipment Type	Maintenance Requirement	Frequency
Meteorological	Calibrate / audit instruments	Twice a year
Sand Catcher	Collect samples; calibrate instrument	Daily
Dust Sampler	Collect samples	Daily
Sensit	Calibrate instrument	Daily
APP	Calibrate / audit instrument	Every three to six months
E-BAM	General Upkeep Replace components Calibrate /audit instrument	Weekly Every two weeks Twice a year
BAM/TEOM	General Upkeep Replace components Calibrate /audit instrument	Weekly Every two weeks Twice a year

As Table 2-7 shows, nearly every monitoring site would require approximately daily access by OHMVR Division staff to collect sand samples and adjust the height of the proposed sand flux monitoring equipment. Less frequent access by trained, qualified personnel would also be necessary to perform equipment audits, replace equipment components, etc. The OHMVR Division would access temporary monitoring sites via existing access roads and routes of travel. There are few designated roads and trails within Pismo State Beach and Oceano Dunes SVRA, so access would be via existing routes of travel that the OHMVR Division maintains to access remote areas of the park. Access paths are and would be chosen to minimize impacts to native vegetation.

Similar to installation, equipment removal would occur mostly by hand; the OHMVR Division would use construction equipment to remove the lattice towers and TEOM shelter.

Dust Control Measure Installation and Maintenance

The proposed re-vegetation activities would involve the installation of certified weed free straw to slow the movement of sand. The straw is either applied mechanically with a straw blower or by hand; when heavy equipment can access the area, the straw is mechanically punched into the sand surface with a large rolling device called a sheep foot. The treatment areas are then broadcast with fertilizer, sterile annual grass, and native seeds and plants. The straw and annual grasses are intended to break up the flow of wind on the sand surface and to reduce sand movement on and into container plants and native seedlings. Restoration activities typically require four months of work to install straw, spread seed and install container stock. Depending on weather, projects will typically take between two and four years to become fully established and provide sufficient vegetative cover to stabilize the sand. Some low dispersal or slower growing plants may be installed to augment early pioneering species. The OHMVR Division would monitor re-vegetation projects with surveying and photo monitoring to ensure

new projects become established and meet their design control efficiency. The OHMVR Division would re-support establishment of new projects by laying additional ground cover or planting additional seedlings as necessary during the first two to four years after planting. Once established, vegetation projects would not require further maintenance activities. If invasive exotic vegetation becomes established, the success of vegetation projects would be compromised. Follow up weed treatment (by hand, machine or herbicide) would be necessary to prevent loss of native dune plants.

The proposed artificial roughness measures would require delivery and installation of the materials. The OHMVR Division would transport the straw bales, mulch, sand fencing, and other artificial roughness elements to the dust control project area via a flatbed truck or using heavy equipment to transport trailers. OHMVR Division staff would manually place the straw bales on the ground surface; however, installation of the 3- to 8-foot-high mulch berms would require the use of a loader, backhoe, or other construction equipment. The proposed sand fencing at Strand Way, Pier Avenue and Grand Avenue would be installed annually; OHMVR Division staff would stretch metal and plastic fence material across wooden peeler poles in small 80-foot sections. The poles would be manually driven into the ground. Artificial roughness projects would require routine maintenance to remove the sand that would accumulate in or near the berm, sand fence, or other roughness element. This could be required up every two weeks for smaller projects such as sand fencing and up to once per month for projects involving straw bales or woodchip berms. The OHMVR Division would maintain wind fences by removing the accumulated sand and transporting it to the upwind side of the fence. Similarly, the OHMVR Division would maintain straw bales and artificial berms by rolling the berm material forward with a front loader or other construction equipment onto the sand that has accumulated on the upwind side of the berm. Straw bales and woodchip berms may need to be replenished every three to six months.

The proposed dust control would not result in soil import or export operations; however, a substantial amount of sand could be moved with heavy equipment during the maintenance phases of these projects. Single maintenance events could result in the movement of up to 400 cubic yards of sand. Dust control projects would not result in vegetation clearing.

Track-Out Control Measure Installation and Maintenance

The proposed track-out control measures could require temporary disturbance to paved areas to install surface structures such as gravel pads or rumble strips. If a wheel washer system is installed, the OHMVR Division may need to excavate within or adjacent to the road to install drainage and water collection systems. These activities would require heavy-duty construction equipment and minor amounts of grading. Sand accumulated by physical track-out control structures may need to be removed daily during the peak day use periods. The OHMVR Division would transport this sand back into beach areas above the mean high tide line. If transport of sand back to the beach is not permitted, material collected in track-out devices would be transported to the nearest landfill.

2.9 PROJECT SCHEDULE

If the project is approved, the OHMVR Division anticipates that the proposed monitoring program activities could begin as soon as fall or winter 2013, followed by the installation of dust and track-out control measures beginning in 2014.

2.10 ENVIRONMENTAL PROTECTION MEASURES INCORPORATED INTO THE PROJECT

The OHMVR Division incorporates environmental protection measures into its operations at Pismo State Beach and Oceano Dunes SVRA. These measures are intended to minimize or avoid potential impacts on natural resources such as water, soil, vegetation, and wildlife from park management actions. The EIR would identify the specific environmental protection measures that the OHMVR Division would incorporate into the proposed Dust Control Project.

2.11 PROJECT APPROVALS

The OHMVR Division is both the proponent and lead agency for the project. The project involves the installation of monitoring equipment and control measures in the Coastal Zone as defined by the California Coastal Act of 1976 and may require a Coastal Development Permit. The proposed project is within the jurisdiction of the City of Grover Beach, San Luis Obispo County, and Santa Barbara County certified Local Coastal Program. These agencies would ordinarily be responsible agencies under CEQA. The California Coastal Commission, however, will retain coastal development permit jurisdiction for the proposed project because the OHMVR Division, the City of Grover Beach, San Luis Obispo County, Santa Barbara County, and the Coastal Commission have all consented to consolidate the coastal permit action; this consolidation is contingent upon the fact that public participation is not substantially impaired by this consolidation. Thus, the Coastal Commission would be a Responsible agency under CEQA. The SLO County APCD is also a responsible agency under CEQA.

The proposed project is not expected to result in any construction or maintenance work in public rights of way under the jurisdiction of the City of Grover Beach, SLO County, and Santa Barbara County and is therefore not likely to require an encroachment permit from these agencies. Similarly, the OHMVR Division would incorporate environmental protection and potentially other measures to reduce or avoid potential impacts to wetlands and protected plant and wildlife species and does not anticipate the need to obtain permits or approvals from the California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers, or U.S. Fish and Wildlife Service (USFWS).

Table 2-8 lists the potential approvals that the project could require. The EIR will provide additional information on the need for the OHMVR Division to obtain these approvals for the project.

Table 2-8 Potential Project Permits and Approvals	
Agency	Potential Permit / Approval
California Coastal Commission	Master Coastal Development Permit
City of Grover Beach Public Works Department	Encroachment permit for work within public right of way
SLO County / Santa Barbara County Public Works Department	Grading permits for monitoring sites on private lands
	Encroachment permits for work within public rights-of-ways
SLO County APCD	Approval of PMRP
CDFG	Streambed Alteration Agreement, if bed and bank of streams are impacted by the Project. Incidental take permit if "take" of a state-listed species is expected to occur.
U.S. Army Corps of Engineers / Central Coast RWQCB	If jurisdictional wetlands or other waters of the U.S. are impacted by the Project, a Section 404 Permit and 401

Table 2-8 Potential Project Permits and Approvals	
Agency	Potential Permit / Approval
	certification would be required
USFWS	Incidental take permit if “take” of a listed Endangered Species Act species is expected to occur.

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CHAPTER 3 ENVIRONMENTAL CHECKLIST AND RESPONSES**PROJECT INFORMATION**

- 1. Project Title:** Oceano Dunes SVRA Dust Control Project.
- 2. Lead Agency Name & Address:** CDPR, OHMVR Division
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449
- 3. Contact Person & Phone Number:** Ronnie Glick, Senior Environmental Scientist, OHMVR Division, Oceano Dunes District, (805) 773-7170.
- 4. Project Location:** SLO County: Pismo State Beach, Oceano Dunes SVRA, and vicinity; Santa Barbara County: Rancho Guadalupe Dunes County Park and vicinity.
- 5. Project Sponsor Name & Address:** Ronnie Glick, Senior Environmental Scientist, OHMVR Division, Oceano Dunes District, 340 James Way, Suite 270, Pismo Beach, CA 93449.
- 6. General Plan Designation:** The project generally consists of lands designated coastal recreation or open space by the local land use jurisdictions.
- 7. Zoning:** The project generally consists of lands zoned agriculture or coastal recreation and open space by the local land use jurisdictions.
- 8. Description of Project:** Installation, operation and maintenance of monitoring equipment and control measures. See Chapter 2, Project Description.
- 9. Surrounding Land Uses & Setting:** The project would take place in and within the vicinity of public park lands that are surrounded by private agricultural and open space lands.
- 10. Approval Required from Other Public Agencies:** California Coastal Commission, SLO County APCD.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a "Potentially Significant Impact" if mitigation measures are not implemented as indicated by the checklist on the following pages. Note measures contained in this chapter can avoid or minimize all impacts to less than significant levels.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agricultural 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 checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input checked="" type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input checked="" type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> None | | |

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 original scope of the proposed project could have had a significant effect on the environment, there will not be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. 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 or its functional equivalent will be prepared.

I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the impacts not sufficiently addressed in previous documents.

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required.


 Christopher Huitt, Environmental Program Manager
 Off-Highway Motor Vehicle Recreation Division
 November 29, 2012
 Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration (CEQA Guidelines § 15063(c)(3)(D)). References to an earlier analysis should:
 - a) Identify the earlier analysis and state where it is available for review.
 - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
 - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
 - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
 - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

3.1 AESTHETICS

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

The San Luis Obispo County Project Area is located in the southwest portion of San Luis Obispo County. This area is generally bordered by the beach communities of Pismo Beach, Grover Beach and Oceano to the north, agricultural land, and the Nipomo Mesa to the east, Guadalupe Nipomo Dunes National Wildlife Refuge and agricultural land to the south, and the Pacific Ocean on the west. Other prominent land uses in the area include the Oceano County Airport, a general aviation airport located between Oceano and the Pismo Dunes Natural Preserve and the Conoco Phillips oil field and Santa Maria refinery located east of the Oceano Dunes SVRA.

The Santa Barbara County project area is located in the northeast portion of Santa Barbara County. This area is generally bordered by the Santa Maria River and rural land to the north, open space and agriculture to the east and south, and the Pacific Ocean to the west. The small city of Guadalupe is located about four miles east of Rancho Guadalupe Dunes County Park.

Agriculture is and has historically been the major land use in and within the vicinity of the project area. Adjacent coastal residential development is typified by older beach cottage type, one- to two-story residential homes. Newer development is larger and taller and is changing the neighborhood character from small scale, low density, beach residential to a more urban character.

Sensitive viewers are individuals or groups of individuals who would be affected by changes to the aesthetics of the surrounding area. The project could potentially affect the following groups of sensitive viewers: recreationists at Pismo State Beach, Pismo Dunes Natural Preserve, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park. Motorists on primary access routes to these areas are also sensitive viewers. These routes Grand Avenue in Grover Beach, Pier Avenue in Oceano, SR 1, Oso Flaco Lake Road between SR 1 and the Oso Flaco Lake Natural Area entrance station, and West Main Street in Guadalupe leading to Rancho Guadalupe Dunes County Park.

Public views from urban and rural residential areas can also be sensitive. The project area is visible from limited residential areas in Oceano and Pismo Beach, Guadalupe and from residences along the western portion of the Nipomo Mesa.

Would the proposed project:

a. Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. The project involves the installation of meteorological, sand flux, and PM10 monitoring equipment and dust and track-out control measures in and within the vicinity of Pismo State Beach, Oceano Dunes SVRA, and potentially Rancho Guadalupe Dunes County Park. The proposed equipment and control measures would be visible from inside the project and could be visible from outside the project area. The EIR will consider whether the proposed project would have a substantial adverse effect on a scenic vista and will include pictures or diagrams of the proposed equipment and control measures in its analysis.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. None of the proposed equipment and control measures would result in the removal of any trees, rock outcroppings, or historic buildings within view of a state scenic highway. The nearest officially designated state scenic highway is a segment of SR 1 located north of the City of San Luis Obispo, more than 10 miles from the project area (Caltrans 2012).

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The project involves the installation of temporary and permanent monitoring equipment and dust and track-out control measures in and within the vicinity of Pismo State Beach, Oceano Dunes SVRA, and potentially Rancho Guadalupe Dunes County Park. The proposed equipment and control measures would be visible from inside the project area and could be visible from outside the project area and may not be consistent with the visual character or quality of these areas. The EIR will consider whether the proposed project would substantially degrade the visual character or quality of the project area and its surroundings. The EIR will include pictures or diagrams of the proposed equipment and control measures in its analysis.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The proposed project may involve the installation of low wattage exterior lighting, solar panels, and reflective surfaces. The EIR will evaluate the project's potential to create light or glare that would affect day and nighttime views from sensitive viewpoints.

3.2 AGRICULTURE AND FOREST RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

The proposed project area contains lands categorized as Agriculture by SLO County. These lands generally include the eastern portion of the Pismo Dunes Natural Preserve and the dune lakes region that is south of the Dune Preserve and east of Oceano Dunes SVRA. The OHMVR Division leases some Oceano Dunes SVRA land immediately southeast of Oso Flaco Lake to local agricultural operations; however, these leased lands are not within the proposed project area. The portion of the project located in Santa Barbara County is not located on agricultural lands; however, agricultural lands exist east of Rancho Guadalupe Dunes County Park.

Would the proposed 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?**

No Impact. The proposed project would not be located on prime farmland, unique farmland, or farmland of statewide importance mapped pursuant to the California Department of Conservation's Farmland Mapping and Monitoring Program (CDC 2011, SLO County 2007).

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Potentially Significant Impact. The proposed project area contains public private lands categorized as Agriculture by SLO County; however, these areas do not appear to be engaged in active agricultural operations. The EIR will identify parcels within the project area that are under Williamson Act contract and will evaluate the potential for the project to conflict with lands zoned agriculture.

c. Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland (as defined by Government Code section 51104(g))?

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact (Responses c and d). The proposed project would not conflict with existing zoning for or result in the loss of forest or timber resources because the project area does not contain forest or timber land (Cal Fire 2003).

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?

Potentially Significant Impact. The project area contains public and private lands zoned agriculture by SLO County. These areas do not appear to be engaged in active agricultural operations; however, the EIR will evaluate the potential for the project to result in changes to these lands.

3.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed project is located on the SLO and Santa Barbara County coast, within the South Central Coast Air Basin, an area of non-attainment for state ozone, fine particulate matter (PM2.5), and suspended particulate matter (PM10) air quality standards (ARB 2012). The SLO County APCD and the Santa Barbara County APCD are responsible for maintaining air quality and regulating emissions of air pollutants within SLO County and Santa Barbara County, respectively.

Would the proposed project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project is expected to result in a long-term air quality benefit associated with a reduction in PM10. The OHMVR Division does not anticipate the project will conflict with or obstruct implementation of any applicable air quality plan. The EIR, however, will assess whether project activities could conflict with any applicable air quality plan developed by the SLO County or Santa Barbara County APCD.

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)?

Potentially Significant Impact (Responses b and c). The proposed project would result in short-term emissions during the installation of monitoring equipment and control

measures. These installation activities would occur over a period of years, and would not require significant off-road or other equipment usage; most installation would occur by hand. Operation and maintenance of the monitoring equipment and control measures would require minor but periodic vehicle trips and maintenance activities involving the use of off-road construction equipment (e.g. a backhoe to remove sand accumulated in control measure locations). As the project is expected to result in a long-term air quality benefit associated with a reduction in PM10, the OHMVR Division does not anticipate the project will individually or cumulatively violate an air quality standard or contribute to an existing or project air quality violation. The EIR, however, will evaluate the proposed project's potential short- and long-term emissions by quantifying these emissions (using the Urban Emission Estimator Model, California Emission Estimator Model, or other model recommended for use by the SLO County or Santa Barbara County APCD) and comparing them to applicable CEQA thresholds maintained by the SLO County and Santa Barbara County APCD. If necessary, the EIR will identify mitigation measures or best management practices to reduce the magnitude of air quality impacts, such as construction dust control measures. The EIR will also consider the combined short- and long-term emissions impacts from the proposed project and other recent past, present, and reasonably foreseeable future projects.

d. Expose sensitive receptors to substantial pollutant concentrations?

e. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact (Responses d and e). Short- and long-term emissions from the project would occur intermittently and would be spread out over a number of years and would be unlikely to expose sensitive receptors to substantial pollutant concentrations or objectionable odors from activities associated with installing, operating, and maintaining monitoring equipment and dust control measures. As the project is expected to result in a long-term air quality benefit associated with a reduction in PM10, the OHMVR Division does not anticipate the project will result in substantial pollutant concentrations or create objectionable odors. The EIR, however, will identify sensitive air quality receptors and assess whether project activities could expose these receptors to substantial pollutant concentrations or objectionable odors.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

The OHMVR Division is in the process of vegetation mapping at the Oceano Dunes SVRA and portions of Pismo State Beach according to *A California Manual of Vegetation, 2nd Edition* (MCV2, Sawyer et al. 2009); a biological subcontractor to the OHMVR Division mapped the Santa Barbara County project area according to this same classification system. The predominant vegetation alliances in the project areas are briefly described below. It is also important to note that large portions of the project area are occupied by unvegetated beach or sand dunes.

Silver dune lupine-mock heather scrub Shrubland Alliance

This type of shrub land is the predominant vegetation alliance in the back dunes in and within the vicinity of Pismo State Beach, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County

Park. It is dominated by silver dune lupine (*Lupinus chamissonis*) and/or mock heather (*Ericameria ericoides*). Other common native shrub and herbaceous species included lizard tail (*Eriophyllum staechadifolium*), California croton (*Croton californicus*), seacliff buckwheat (*Eriogonum parvifolium*), California broom (*Acmispon scoparius* var. *scoparius*), California aster (*Corethrogyne filaginifolia*), yarrow (*Achillea millefolium*), cudweed (*Psuedognaphalium* sp.), Monterey Indian paintbrush (*Castilleja latifolia* ssp. *latifolia*) and southern California dudleya (*Dudleya lanceolata*). Rare plants in this community include Blochman's leafy daisy (*Erigeron blochmaniae*) California Rare Plant Ranked (CRPR) 1B2, crisp monardella (*Monardella crispera*) on CRPR 1B.2, ocean bluff milk vetch (*Astragalus nuttallii* var. *nuttallii*) CRPR 4.2, Blochman's groundsel (*Senecio blochmaniae*) CRPR 4.2, and suffrutescent wallflower (*Erysimum suffrutescens*) CRPR 4.2. Although listed by the California Natural Diversity Database (CNDDB) as CRPR species and on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, these species are locally common.

Arroyo Willow Thickets and Wax Myrtle Scrub Shrubland Alliances

These two alliance types, one dominated by Arroyo willow (*Salix lasiolepis*) and the other by wax myrtle (*Morella californica*), usually occur together as patches in amongst the silver dune lupine-mock heather alliance in the back dunes. Other native plants associated with these alliance types include poison oak (*Toxicodendron diversilobum*), spreading gooseberry (*Ribes divaricatum*), blue elderberry (*Sambucus nigra* ssp. *canadensis*), coast twinberry (*Lonicera involucrata* var. *ledebourii*), California blackberry (*Rubus ursinus*), and coyote brush (*Baccharis pilularis*).

Dune Mat Herbaceous Alliance

This alliance is the predominant vegetation type in the foredunes in and within the vicinity of Pismo State Beach, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park. It is characterized by yellow sand verbena (*Abronia latifolia*), beach bur (*Ambrosia chamissonis*) and other non-woody dune plants. Other common herbaceous plants in this alliance type include searocket (*Cakile maritima*), beach evening primrose (*Camissoniopsis cheiranthifolia*) and Pacific silverweed (*Potentilla anserina* var. *pacifica*). Special-status species in this vegetation type include the state threatened surf thistle (*Cirsium rhotophilum*), the state threatened include beach spectaclepod (*Dithyrea maritima*), red sand verbena (*Abronia maritima*) CRPR 4.2, and dunedelion (*Malacothrix incana*) CRPR 4.3.

Non-native Invasive Alliances

There are some areas dominated by non-native invasive plants including areas dominated by European beach grass, ice plant taxa (*Carpobrotus edulis*, *C. chilensis* and/or *Conicosia pugioniformis*) or perennial veldt grass (*Ehrharta calycina*), each of which corresponds to a different alliance. The European beach grass stands occur mostly on the western edge of the back dunes, the ice plant mats occur in patches in both the fore dunes and back dunes, and the perennial veldt grass stands occur in the back dunes in the understory of the silver dune lupine-mock heather alliance or in bare areas in between this shrub dominated alliance.

Other Minor Alliances

In addition to the vegetation alliances described above, which cover the majority of the vegetated portions of the project area, there are numerous minor alliances that cover small areas. These minor alliances include sensitive wetland vegetation types dominated by cattails (*Typha* spp.), tules (*Schoenoplectus* spp.), rushes (*Juncus* spp.), sedges (*Carex* spp.),

pickleweed (*Sarcocornia pacifica*), salt grass (*Distichlis spicata*) or other wetland plants. These minor alliances will be described in more detail in the EIR, with particular emphasis on the sensitive wetland alliances.

Would the proposed project:

- a. **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Potentially Significant Impact. Most project components would be located in open sand or paved areas that are adjacent or close to vegetation that provides habitat for native wildlife. The proposed project could impact special-status plants if monitoring equipment or control measures are placed where special-status plant or animal populations occur. Please refer to Appendices A1 and A2 for a complete listing of special-status plants and animals with the potential to occur in the project area.

The SLO County project area is known to support six federally and/or state listed plant species, including: marsh sandwort (*Arenaria paludicola*, federally and state endangered), surf thistle (state threatened), La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*, federally endangered and state threatened), beach spectaclepod (state threatened), Nipomo Mesa lupine (*Lupinus nipomensis*, federally and state endangered) and Gambel's watercress (*Nasturtium gambelii*, federally endangered and state threatened); surf thistle, La Graciosa thistle and beach spectaclepod also occur or are likely to occur in the Santa Barbara County project area. In addition, the federally endangered Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*) has a low potential to occur in the SLO County project area, and the federally endangered and state candidate Gaviota tarplant (*Deinandra increscens* ssp. *villosa*) has a low chance of occurring in the Santa Barbara County project area. Twenty-six other CRPR plants also occur or have the potential to occur in one or both of the project areas.

The proposed project could impact ground nesting birds if monitoring equipment or other project features are placed on or near nesting areas. The federally threatened western snowy plover (*Charadrius alexandrinus* ssp. *nivosus*) and the federally and state endangered California least tern (*Sternula antillarum browni*) nest in the SLO County project area annually; the western snowy plover also nests at the Santa Barbara County project area annually and the California least tern has been recorded nesting in the Santa Barbara County project area in the past. The snowy plover is present in both project areas year-round while the least tern is only present during the nesting season. One other special-status species known to nest in the SLO County project area, the Northern harrier (*Circus cyaneus*), also nests on the ground. The Northern harrier is a California Species of Special Concern.

If installation of monitoring equipment or other project features requires removal of vegetation, other nesting birds could be impacted. Special-status birds known to or likely to nest in vegetation in one or both of project areas include Allen's hummingbird (*Selasphorus sasin*, USFWS Bird of Conservation Concern), Nuttall's woodpecker (*Picoides nuttallii*, USFWS Bird of Conservation Concern), loggerhead shrike (*Lanius ludovicianus*, California Species of Special Concern and USFWS Bird of Conservation Concern) and yellow warbler (*Setophaga petechia*, California Species of Special Concern and USFWS Bird of Conservation Concern). Raptors such as Cooper's hawk (*Accipiter cooperii*) and red-tailed hawk (*Buteo jamaicensis*) as well as a variety of other common bird species also likely nest in the project areas. All native birds and their nests are protected by the Migratory Bird Treaty Act and California Fish and Game Code.

The proposed project could impact special-status burrowing animals if monitoring equipment or other project features are placed on or near burrows. Three special-status animal species that occupy burrows some or all of the time are known to occur in the SLO County project area: California red-legged frog (*Rana draytonii*, federally threatened and California Species of Special Concern), burrowing owl (*Athene cunicularia*, California Species of Special Concern and USFWS Bird of Conservation Concern) and American badger (*Taxidea taxus*, California Species of Special Concern).

Although other special-status animal species occur in the project areas, the project is unlikely to impact them because they occur in habitats that are unlikely to be impacted or because they are in the project areas only occasionally. Such species include fish, amphibians and other aquatic species and migratory or vagrant bird species. Bat roosting habitat is also unlikely to be impacted since removal of trees or other roosting structures would not occur. These special-status species will not be addressed in detail in the EIR, as they are unlikely to be impacted.

The EIR will identify and describe in detail with text descriptions and maps the habitats present at and within the vicinity of the project area and the special-status species likely to be impacted by the installation, operation, and maintenance of the proposed monitoring equipment and control measures. Where possible, the EIR will identify the specific impacts likely to occur from the project, such as installing temporary monitoring sites and track-out control measures, and the mitigation measures necessary to avoid or reduce adverse effects on special-status plants and species. Since the OHMVR Division has not selected the location of the permanent monitoring sites nor the final amount and location of dust control measures, a project-specific impact analysis cannot occur for these actions. Thus, the EIR will describe the range of potential locations and impacts associated with these project components and identify programmatic measures and performance standards that the OHMVR Division would undertake in the future to avoid or reduce impacts from future actions associated with the project.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Potentially Significant Impact. The proposed project could impact riparian habitat in the unlikely event that monitoring equipment is placed near creeks (control measures would be located in bare sand areas) such as Oso Flaco Creek or Arroyo Grande Creek. There is no riparian habitat in the Santa Barbara County project area, though the Santa Maria River is just outside the project area. None of the proposed phase one PM10 monitoring locations are in riparian habitat and proposed dust control measures would not impact riparian habitat; if no phase two and three monitoring equipment are not placed in or near riparian habitat, then riparian habitat will not be impacted. The EIR will evaluate the project's potential impacts to riparian habitat and, if necessary, identify mitigation measures to ensure temporary and permanent monitoring equipment and control measures do not result in a substantial adverse effect on riparian habitat.

The proposed project could impact sensitive coastal dune habitat. "Central dune scrub" and "central foredunes" are listed by the CNDDDB as sensitive habitats. The EIR will evaluate the project's potential impacts to coastal dune vegetation and, if necessary, identify mitigation measures to ensure temporary and permanent monitoring equipment and control measures do not result in a substantial adverse effect to coastal dune habitat.

- 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?**

Potentially Significant Impact. The proposed project could impact wetland habitat if monitoring equipment or other project features are placed near wetlands. In the SLO County project area, wetlands occur around Oso Flaco Lake, Little Oso Flaco Lake, the Dune Lakes complex, Pismo Lake and in low lying areas underneath or near willow stands. There are no wetlands in the Santa Barbara County project area. None of the proposed phase one monitoring locations are in or adjacent to wetlands and proposed dust control measures would not impact wetlands; if phase two and three monitoring equipment is not placed in or near wetlands then wetlands habitat will not be impacted. The EIR will evaluate the project's potential impacts to protected wetlands and, if necessary, identify mitigation measures to ensure temporary and permanent monitoring equipment and control measures do not result in a substantial adverse effect on protected wetlands.

- 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?**

Less Than Significant Impact. The proposed project is unlikely to interfere with wildlife movement. The creeks in the project area act as migratory corridors for some fish species, and numerous migratory birds pass through both project areas. However, the project would not impact the creeks or hinder migrating birds. The movement of resident wildlife is also unlikely to be impacted. Thus, potential impacts to wildlife movement will not be addressed in detail in the EIR.

- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Potentially Significant Impact. The proposed project would not result in tree removal and would not conflict with any tree preservation policy or ordinance. The proposed project could conflict with local policies or ordinances protecting biological resources if sensitive species or habitats are impacted (see responses to a-c above). The project areas are under the jurisdiction of numerous regional and local plans that have policies protecting biological resources. The EIR will evaluate whether the project would result in potential conflicts with local policies or ordinances protecting biological resources.

- 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?**

No Impact. The OHMVR Division is currently developing an HCP that includes most of the CDPR-owned lands, but the HCP has not been completed or approved by the trustee agencies. Similarly, Santa Barbara County is preparing an HCP that includes Rancho Guadalupe Dunes County Park and surrounding lands but which is not yet completed. The OHMVR Division does not anticipate that these HCPs will be adopted prior to undertaking the proposed Dust Control Project. The project, therefore, would not conflict with an adopted HCP. If possible, the EIR will provide an update on and present other information related to these plans (e.g., plan areas, covered activities, etc) for information purposes only.

3.5 CULTURAL RESOURCES

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

There are 42 recorded archaeological sites in Oceano Dunes SVRA. The prehistoric sites located within the park that have been determined to be significant historical resources are fully protected with hard fencing that is in place throughout the year. These sites have been successfully closed to vehicular recreation for many years.

Would the proposed project:

- a. **Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**
- b. **Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**
- c. **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**
- d. **Disturb any human remains, including those interred outside of formal cemeteries?**

Potentially Significant Impact (Responses a – d). The OHMVR Division conducted a cultural resource inventory of the Oceano Dunes District in 2009 – 2010. The OHMVR Division would site temporary monitoring locations away from known historical, archaeological, and paleontological resource; however, the OHMVR Division has not indentified the final locations for permanent monitoring sites or dust control measures. The project would not significantly modify existing topography; however, the potential for the project to encounter previously unidentified historical, archaeological, and paleontological resources exists. The EIR will describe the project’s potential impact to these resources and identify measures to ensure the project does not result in significant impacts to historical, archaeological, and paleontological resources. The EIR will address whether the project would directly or indirectly destroy a unique geologic resources in the Geology and Soils section.

3.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project site is not located on any known active earthquake fault traces. In addition, the site is not within an Alquist-Priolo earthquake fault zone. The closest active fault is the San Luis Range Fault, located approximately 1.4 miles to the northeast. The Los Oso Fault zone is approximately 10 miles north of the project area near the City of San Luis Obispo (SLO County 2012). Significant liquefaction and lateral spreading occurred in Oceano during the 2003 San Simeon earthquake, where the closest fault rupture surface was located approximately 40 miles north of Oceano, and two major liquefaction-induced lateral spread sites are present within approximately 0.5 miles of the Pier Avenue entrance to Oceano Dunes SVRA (Geocon 2009). Elevations in the project area range from approximately mean sea level (MSL) to approximately 200 feet above MSL. Natural Resource Conservation Service soils mapping data indicates the

majority of Pismo State Beach, Pismo Dunes Natural Preserve, Oceano Dunes SVRA, and Rancho Guadalupe Dunes County Park consist of two soil map units: Beaches and Dune. According to the NRCS, both of these soil units are comprised of 97.9 to 98.9% windblown sand greater than 50 microns in size (CGS 2011). Soil and geologic conditions predominantly consist of recent sand dune/alluvial deposits overlying interbedded older sand dune and estuarine deposits. The primary soil unit in the vicinity of lower Pismo Lake and Meadow and Carpenter Creeks is Merimel silty clay loam (SLO County 2012). The silty clay loam consists of deep, somewhat poorly drained soils that are formed in alluvium from weathered sedimentary rock. It is found on flood plains, alluvial fans, and in valleys. It is characterized as having very slow to slow runoff and moderately slow permeability with some areas subject to occasional flooding. Natural vegetation typically associated with Merimel soils include annual grasses, forbs, and water tolerant plants. It is identified as a hydric soil (Geocon 2009).

Would the proposed 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?**
 - ii. **Strong seismic ground shaking?**
 - iii. **Seismic-related ground failure, including liquefaction?**
 - iv. **Landslides?**
- b. **Result in substantial soil erosion or the loss of topsoil?**
- c. **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**
- d. **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**
- e. **Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

Less Than Significant Impact (Responses a – e). The project area is generally located within the Guadalupe-Nipomo Dunes Complex and specifically located within a portion of the complex that is actively migrating inland. The project area is not located within an Alquist-Priolo Earthquake fault zone but is located within a seismically active area. Project components, therefore, could be subject to seismic ground shaking and other seismic-related hazards. The proposed project, however, would not involve the use or installation of buildings or other structures for human occupancy and would not affect the topography or natural geologic process that have led to the formation of the Guadalupe-Nipomo Dunes Complex. Most equipment installation would occur by hand, although the OHMVR Division would use construction equipment to install 10-meter-tall lattice towers and, if necessary, other supporting infrastructure such as a small weather-proof shelter or track out control measures. The OHMVR

Division does not expect significant grading, excavation, and soil hauling would occur as a result of the project. This project would, however, include the regular grading of sand that accumulates in the artificial roughness dust control measures. Grading could occur on average once per month or five times per year for these projects and remove approximately 400 cubic yards of material. All sand removed from the artificial roughness control measures will be deposited above the mean high tide line and outside jurisdictional areas of the United States Army Corps of Engineers and CDFG. The OHMVR Division would balance all material on site so there will be no import or export of soil, however, sand may be moved laterally up or down the beach. The EIR will assess this potential for the project to result in or be exposed to geologic and soils impacts.

f. Directly or Indirectly destroy a unique geologic feature?

Potentially Significant Impact. The proposed dust control measures could occupy up to hundreds or thousands of acres of the Guadalupe-Nipomo Dunes Complex. The EIR will evaluate the potential for the project to directly or indirectly destroy this unique geologic feature.

3.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions or greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Gases that trap heat in the atmosphere and affect regulation of the Earth’s temperature are known as greenhouse gases (GHG). Common GHG include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF₆). Human (anthropogenic) production of GHGs has increased steadily since pre-industrial times and atmospheric CO₂ concentrations have increased from a pre-industrial value of 280 part per million (ppm) to 390 ppm in 2010 (NOAA 2012). In 2006, the California State Legislature adopted the California *Global Warming Solutions Act of 2006*, Assembly Bill (AB) 32, which required the California Air Resources Board (ARB) to: 1) determine 1990 statewide GHG emissions, 2) approve a 2020 statewide GHG limit that is equal to the 1990 emissions level, 3) adopt a mandatory GHG reporting rule for significant GHG emission sources, 4) adopt a Scoping Plan to achieve the 2020 statewide GHG emissions limit, and 5) adopt regulations to achieve the maximum technologically feasible and cost-effective reductions. In 2011, the San Luis Obispo County Board of Supervisors adopted the EnergyWise Plan, which outlines the County’s approach to reducing municipal and community-wide GHG emissions to 15% below baseline 2006 levels by establishing goals, measures, and actions (SLO County 2011). This plan includes emissions from off-road equipment and transportation in its GHG inventories and reduction goals.

Discussion

Would the proposed project:

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

Potentially Significant Impact. As described in Section 3.4, Air Quality, the proposed project would result in minor installation, operation, and maintenance activities that would generate GHG emissions from gasoline and diesel fuel combustion for equipment use and vehicle trips. The EIR will evaluate the proposed project’s potential short- and long-term GHG emissions by quantifying these emissions (using the Urban Emissions Model, California Emission Estimator Model, or other model recommended for use by the SLO County or Santa Barbara County APCD) and comparing them to applicable CEQA thresholds maintained by the SLO County and Santa Barbara County APCD. If necessary, the EIR will identify mitigation measures or best management practices to reduce the magnitude of air quality impacts, such as the use of solar panels instead of a generator.

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

Less Than Significant Impact. The OHMVR Division does not anticipate that project activities would conflict with an applicable plan, policy, or regulation adopted for the purposes of greenhouse gases. The SLO County EnergyWise Plan does not contain any measures or actions for directly limiting or reducing greenhouse gas emissions from project-related activities and includes off-road equipment and vehicle trips in its baseline (2006) and forecasted (2020) land use and transportation GHG emissions estimates and reduction goals. The EIR will evaluate in greater detail the project's potential to conflict with a local, state, or federal plan, policy, or regulation adopted for the purpose of reducing GHG.

3.8 HAZARDS AND HAZARDOUS MATERIALS

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

The proposed project would involve the installation of meteorological, sand flux, and PM10 monitoring equipment as well dust and track-out control measures. Propane-powered generators or fuel cells may be use to power the proposed monitoring equipment, and the OHMVR Division would use off-road equipment to install and maintain some of the proposed components.

Would the proposed project:

- a. **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**
- b. **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Potentially Significant Impact (Responses a and b). Project-related trips would consist of staff trips and material (e.g., monitoring equipment, straw bales) deliveries and most project components do not have the potential to be considered hazardous. The proposed BAM monitor contains minor amounts of radioactive Carbon14 and would be maintained and disposed of in accordance with manufacturer's requirements and applicable regulations. The OHMVR Division may use batteries and/or propane-powered generators and solar panels to power monitoring equipment. The EIR will evaluate the potential for the transport, use, disposal, and accidental release of these materials to create a significant hazard to the public or the environment.

- c. **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or hazardous waste within one-quarter mile of an existing or proposed school?**

Less Than Significant Impact. There are no schools within one-quarter mile of the project area. The closest school to the project area is Lopez High School which is located approximately 0.35 miles east of the project area.

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

No Impact. The project area does not contain any hazardous material sites compiled pursuant to Government Code Section 65962.2 (the Cortese List) (Envirostor 2012).

- 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?**

Less Than Significant Impact. A part of the Pismo State Beach and Oceano Dunes SVRA project area from approximately 0.25 miles north of Pier Avenue to marker post three is located within the airport land use plan area for Oceano County Airport. The proposed project would not result in a safety hazard for people residing or working in this area because it would not interfere with airplane approach and departure or other airport operations.

- 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. There are no private airstrips in the vicinity of the project area.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The installation of track-out control structures at Grand Avenue and Pier Avenue could temporarily alter ingress and egress at the park and the EIR will evaluate the potential for the project to interfere with emergency response and evacuation plans during this time.

h. Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?

Less Than Significant Impact. The majority of the proposed project components would be located in open sand areas that are not at risk from wildfires. Phase two monitors could be located on lands that have a moderate to high fire severity hazard, however, the project the installation of up to three monitors in these lands would not create a significant risk of loss, injury, or death involving wildfires.

3.9 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 would result in substantial erosion or siltation on- or off-site?	<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 flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The SLO County project area falls within the Oceano and Nipomo Mesa Hydrologic-Subareas (HSA). The Oceano HSA drains 82.6 square miles of Arroyo Grande Creek, its tributaries, and much of the Dunes Lakes complex. The Nipomo Mesa HSA contains 27.5 square miles and is primarily comprised of Black Lake Canyon and Black Lake. Black Lake is the southern-most lake in the Dunes Lakes complex and is the only lake that drains south to the Nipomo Mesa HSA. Other lakes within the SLO County project area include Oso Flaco Lake, Little Oso Flaco Lake, Jack Lake, Lettuce Lake, Willow Lake, Pipeline Lake, Celery Lake, Big Twin Lake, White Lake and Mud Lake. Oso Flaco Creek drains the southern portion of the project area.

The Santa Barbara County project area is in the Santa Maria River Watershed; the Santa Maria River is immediately north of the project area. The Santa Maria River and its tributaries create a drainage area of 1,881 square miles, which attains a maximum elevation of approximately 8,700 feet above msl. Mountain and foothill areas account for 82 percent of the surface area, with valley areas accounting for the remaining 18 percent. The mainstem of the Santa Maria River measures about 18 miles.

Would the proposed project:

a. Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. The installation of monitoring equipment and control measures and the maintenance of control measures would require the use of construction equipment containing fuels and fluids that could leak and enter a water body. The EIR will evaluate the potential for this impact to occur and if necessary identify measures to avoid or reduce this potentially significant impact.

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

Less Than Significant Impact. The project does not involve cut or fill activities that could change the direction or rate of groundwater flow, does not involve the installation of wells to extract groundwater, and does not propose to extract groundwater. The project, therefore, would not substantially deplete groundwater supplies.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

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

Less Than Significant Impact (Responses c and d). The proposed project would not substantially alter the existing drainage pattern of the project areas, and would not result in substantial erosion, siltation or flooding on- or off-site. The project would not alter the course of a stream or a river, result in cut or fill or involve a substantial increase in impervious surface area.

- e. **Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?**
- f. **Otherwise substantially degrade water quality?**

Less than Significant Impact (Responses e and f). The project would not include any new pavement and new impervious surface areas would be limited to small air quality monitoring shelters. The EIR will evaluate the potential for the proposed track-out control program to result in a new source polluted runoff.

- g. **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**
- h. **Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**
- i. **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

No Impact (Responses g – i). The project does not involve construction of residential or any other inhabited structure and the proposed monitoring and dust control measures would not be barrier and would not impede or redirect flood flows. In addition, the project would not expose people or structures to a significant risk of loss or injury or death involving flooding. The project does not include construction of housing, offices or other inhabited structures that would be exposed to significant risk of loss involving flooding.

- j. **Result in inundation by seiche, tsunami, or mudflow?**

Less Than Significant Impact. The project area could be subject to inundation by tsunamis due to their proximity to the Pacific Ocean. The SLO County project area could also be at risk of inundation by seiche due to its proximity to Oceano Lagoon and other lakes. The project areas are not at risk of inundation by mudflow. The project would not put the public at risk of harm from seiche or tsunami and would not interfere with either SLO County or Santa Barbara County Tsunami Response Plans in effect in the project area.

3.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

The project areas are located within the coastal zone of San Luis Obispo and Santa Barbara Counties.

Applicable land use jurisdictions and plans in the San Luis Obispo County Project Area include, but are not limited to, the San Luis Obispo County General Plan, San Luis Obispo County Local Coastal Program and Coastal Plan Policies, San Luis Obispo County Coastal Zone Land Use Ordinance, San Luis Bay Coastal Area Plan, South County Coastal Area Plan, Grover Beach Local Coastal Plan, Oceano County Airport Land Use Plan, Pismo State Beach and Pismo Dunes State Vehicular Recreation Area General Development Plan and Resources Management Plan, Santa Barbara County General Plan and Coastal Land Use Plan, and Rancho Guadalupe Dunes County Park Final Master Plan.

The portion of the project area located within San Luis Obispo County includes lands classified as Agriculture, Open Space, and Recreation and includes Pismo State Beach, Pismo Dunes Natural Preserve, Oceano Dunes SVRA, and private farmland and undeveloped open space lands. The portion of the project area located within Santa Barbara County includes lands classified as Open Space and Agriculture and includes Rancho Guadalupe Dunes County Park and private farmland and undeveloped open space lands.

Would the proposed project:

a. Physically divide an established community?

No Impact. The project area is adjacent to, but does not contain, established communities. The project has no linear components that would divide a nearby established community, such as Pismo Beach, Oceano, or Guadalupe. Track-out control measures on Pier Avenue and Grand Avenue would not serve as a physical impediment to movement and therefore would not physically divide Grover Beach or Oceano.

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

Potentially Significant Impacts. The installation of the proposed project components could conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the project. The EIR will review applicable policies, plans, and regulations, including Local Coastal Programs, and identify any conflicts resulting from the proposed project.

- c. Conflict with any applicable habitat conservation plan or natural community conservation plan?**

No Impact. The project area is not currently covered by a habitat conservation plan or natural community conservation plan. The OHMVR Division is currently developing an HCP that includes most of the CDPR-owned lands, but the HCP has not been completed or approved by the trustee agencies. Similarly, Santa Barbara County is preparing an HCP that includes Rancho Guadalupe Dunes County Park and surrounding lands but which is not yet completed. The OHMVR Division does not anticipate that these HCPs will be adopted prior to undertaking the proposed Dust Control Project. The project, therefore, would not conflict with an adopted HCP. If possible, the EIR will provide an update on and present other information related to these plans (e.g., plan areas, covered activities, etc) for information purposes only.

3.11 MINERAL RESOURCES

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

A private company, Gordon Sand, operates an industrial sand mining facility within a portion of Rancho Guadalupe Dunes County Park.

Would the proposed project:

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**
- b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

Less Than Significant Impact (Responses a and b). The OHMVR Division would not interfere with industrial sand mining operations at or in the vicinity of Rancho Guadalupe Dunes County Park. The EIR will describe in more detail how the OHMVR Division would not interfere with this operation.

3.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Noise sources within the project area include human speech, domestic animals, vehicles, and wind. The daytime noise environment within the project area is typical of a public park setting ranging from 50 to 70 dBA, depending on the level and nature of the public activities taking place. Noise levels would be lower on private, unincorporated lands where public recreation is not permitted. The project would result in short-term, intermittent daytime equipment noise during project installation and maintenance activities that could produce maximum noise levels up to 85 or 90 dBA at 50 feet.

Table 3-1 of the SLO County General Plan Noise Element establishes maximum allowable noise exposure standards for transportation noise sources of 60 and 70 dBA Ldn for residential and outdoor sports and recreation land uses, respectively (SLO County 1992). The Santa Barbara County Comprehensive Plan Noise Element recommends use of a 65 dBA Ldn standard for residences and places of public assembly (Santa Barbara County 2009).

Would the proposed project:

- a. Expose persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

- b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?**
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**
- d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Potentially Significant Impact (Responses a – d). With the exception of Grand Avenue and Pier Avenue, all noise-generating equipment operation would occur at least 1,000 feet away from sensitive receptor locations outside the park. Park visitors as well as residential receptors located adjacent to Grand Avenue and Pier Avenue would be exposed to short-term construction noise during installation of the proposed monitors, dust control measures, and track-out control measures. This short-term equipment operation would occur intermittently (i.e., several hours during the daytime) for up to several days during equipment installation and up to one to two times per week for dust control measure maintenance purposes; equipment operation could occur for up to one month in the vicinity of Grand Avenue and Pier Avenue. In addition, receptors near Grand Avenue and Pier Avenue could be exposed to periodic noise from rumble strips, wheel washers, or other track-out control devices. The EIR will evaluate the potential for the project's intermittent operations to exceed applicable SLO County or Santa Barbara County standards (60 dBA Ldn) and, if necessary, identify measures to reduce or avoid substantial permanent or temporary increases in ambient noise levels or excessive ground borne vibration as a result of the project.

- 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. A part of the Pismo State Beach and Oceano Dunes SVRA project area from approximately 0.25 miles north of Pier Avenue to marker post three is located within the airport land use plan area for Oceano County Airport. The proposed project, however, would not increase or otherwise affect the amount of people exposed to noise from Oceano County Airport operations.

- 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. There are no private air strips within the vicinity of the project.

3.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 housing, 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"/>

The project area is adjacent to populated areas including the cities of Grover Beach and Guadalupe and the community of Oceano.

Would the proposed 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)?**
- b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**
- c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

No Impact (Responses a – c). The proposed project involves the installation, operation, and maintenance of temporary and permanent monitoring equipment and dust control measures primarily in public park lands. These activities would not induce substantial population growth or displace substantial numbers of existing housing or people. The project’s impacts on population and housing will not be addressed further in the EIR for the project since there is no potential for the project to impact population and housing.

3.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the proposed project:

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

- i. Fire protection?**
- ii. Police protection?**
- iii. Schools?**
- iv. Parks?**
- v. Other public facilities?**

No Impact (Responses i, ii, iii, and v). The installation, operation, and maintenance of the proposed monitoring equipment and dust control measures would not result in an increased need for fire or police protection services in the project area nor affect any schools or other public facilities.

Potentially Significant Impact (Response iv). The proposed monitoring and track-out control components could occupy a fraction of the recreational acreage within the project area (three acres out of approximately 4,400 total acres of public park lands) and would not have a significant effect on park facilities. The proposed dust control measures, however, may occupy

large amounts of land in the project area (hundreds to thousands of acres, see Section 2.6.2) and could therefore indirectly cause a shift in visitor use patterns. The EIR will consider whether the proposed project would result in an increase in the use of other parks such that substantial deterioration of the facility would occur or be accelerated.

3.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Recreational use within the project area varies according to the specific park unit. Table 3-1 below shows popular recreational activities at the various park units within the project area.

Park Unit	Recreational Uses
Pismo State Beach	Street legal vehicle use, hiking, swimming, surf fishing, wildlife viewing, and digging for the famous Pismo clam.
Pismo Dunes Natural Preserve	Equestrian, hiking, wildlife viewing
Oceano Dunes SVRA	Street legal vehicle use, off-highway vehicle use, hiking, swimming wildlife viewing, camping.
Rancho Guadalupe Dunes County Park	Hiking, swimming, surf fishing, wildlife viewing.

Would the proposed project:

- 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?**

Potentially Significant Impact. The proposed monitoring and track-out control components could occupy a fraction of the recreational acreage within the project area (three acres out of approximately 4,400 total acres of public park lands) and would not have a significant effect on park facilities. The proposed dust control measures, however, may occupy large amounts of land in the project area (hundreds to thousands of acres, see Section 2.6.2) and could therefore indirectly cause a shift in visitor use patterns. The EIR will consider whether the proposed project would indirectly result in an increase in the use of other parks such that substantial deterioration of the facility would occur or be accelerated.

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

No Impact. The project does not include nor would it directly facilitate any new recreational facilities or activities. As discussed under response a. above, the EIR will consider whether the proposed project would indirectly result in an increase in the use of other parks such that substantial deterioration of the facility would occur or be accelerated.

3.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regional access to the project area is provided by SR 1 and US 101. Local access to the project area is provided by Grand Avenue in Grover Beach, Pier Avenue in Oceano, Oso Flaco Lake Road (SLO County road) and West Main Street (Santa Barbara County road).

Would the proposed 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?**

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

Less Than Significant Impact (Responses a and b). The proposed project would generate a small amount of incremental vehicle trips within SLO County and Santa Barbara County.

The project would not result in new staff and would not increase employee related trips to and from the SLO County project area. In addition, the OHMVR Division has already acquired much of the proposed monitoring equipment, eliminating the need for most equipment delivery trips to SLO County. The project would result in new vehicle trips associated with delivery of straw bales, wood chips, etc. for use in control measures; however, this activity is expected to result in less than 100 total truck trips per year. Similarly, the proposed track-out control measures may result in up to two total truck trips per day. These trip generation levels would not result in increased congestion on, or reduce the effectiveness of, the local and regional transportation system used to access the SLO County portion of the project area.

The project could result in one new employee related trip to Rancho Guadalupe Dunes County Park in Santa Barbara County during phase one or phase three monitoring (one trip per day) and phase two monitoring (one to two trips every other week). These trip generation levels would not result in increased congestion on, or reduce the effectiveness of, the local and regional transportation system used to access the Santa Barbara County portion of the project area.

- c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

No Impact. The proposed project would involve the installation of equipment at a maximum height of 10 meters above ground level. This activity would not result in a change in air traffic patterns or air navigation risks at Oceano County Airport.

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

- e. Result in inadequate emergency access?**

Potentially Significant Impact (Responses d and e). The proposed track-out control measures may temporarily delay visitors from existing Oceano Dunes SVRA at Grand Avenue and Pier Avenue, resulting in vehicle queuing. The EIR will evaluate the potential for the project to increase traffic hazards as a result of the proposed track-out control measures.

- 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 supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

No Impact. The installation, operation, and maintenance of the proposed monitoring equipment and control measures would not affect any alternative transportation facilities and would therefore not conflict with adopted alternative transportation policies.

3.17 UTILITIES AND SERVICE SYSTEMS

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

The project is the installation and operation of temporary and permanent air monitoring equipment, dust control measures, and track-out control measures which do not involve the conventional use of utilities such as natural gas, wastewater treatment, etc.

Would the proposed project:

- a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**
- b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

No Impact (Responses a and b). The project would not increase staffing at Oceano Dunes SVRA, would not result in water or wastewater discharges, and would not require the construction of new or expanded water or wastewater treatment facilities.

- 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?**

Potentially Significant Impact. The proposed monitoring and dust control measures would not require or result in the construction of new storm water drainage facilities. The installation of track-out control measures, however, may require the construction or alteration of existing drainage facilities on Grand Avenue or Pier Avenue. The EIR will evaluate the potential for this impact to occur.

- d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

Less Than Significant Impact. The proposed project may result in a small increase in potable water consumption as a result of the need to germinate additional seedlings for dust control re-vegetation projects. This increase in consumption would not require new or expanded water entitlements.

- e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

No Impact. The project does not involve construction of expanded facilities that would increase wastewater quantities.

- f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Less Than Significant Impact. The proposed project could require solid waste disposal needs if material collected by the proposed track-out control measures is required to be disposed of off-site in a landfill. The EIR will evaluate this potential impact.

- g. Comply with federal, state, and local statutes and regulations related to solid waste?**

No Impact. The OHMVR Division would comply with all regulations related to solid waste generation and disposal.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means the incremental effects of past projects, the effects of other current projects, and the effects of probably future projects as defined in Section 15130.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the proposed project:

- a. **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Potentially Significant Impact. As identified in Section 3.4, Biological Resources, and Section 3.5, Cultural Resources, the OHMVR Division has determined the proposed project could result in potentially significant impacts to biological and cultural resources that will be addressed in the EIR.

- b. **Does the project have possible environmental effects that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means the incremental effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15130)?**

Potentially Significant Impact. The proposed project could individually result in potentially significant impacts. These impacts may combine with the impacts from other recent past, present, and reasonably foreseeable future projects. The EIR will identify the potential cumulative impacts that may occur from implementation of the proposed project as well as other projects in the vicinity of the project area.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The proposed project is expected to result in a long-term air quality benefit associated with a reduction in PM10 and would not cause substantial adverse effects on human beings.

CHAPTER 4 REFERENCES

- Air Resources Board (ARB) 2012. "Area Designations Maps / State and National". ARB, Air Quality, Standards and Area Designations. May 8, 2012. Web. November 14, 2012. <<http://www.arb.ca.gov/desig/adm/adm.htm>>
- Cal Fire 2003. *Land Cover Multi Source Data Compiled for Forest and Range 2003 Assessment*. Cal Fire, Fire and Resource Assessment Program. Sacramento, CA. March 2003.
- California Geological Survey (CGS) 2007. Review of Vegetation Islands, Executive Summary, Oceano Dunes SVRA. Prepared for the Off-High Motor Vehicle Recreation Division. Sacramento, Ca. August 30, 2007.
- _____. 2011. Oceano Dunes SVRA – Sand Grain Analyses, Part 1, Comparison of Sieved Sand Samples with NRCS Soils Data prepared. Prepared for the Off-Highway Motor Vehicle Recreation Division. Sacramento, Ca. February 18, 2011.
- Caltrans 2012. "Officially Designated State Scenic Highways." Caltrans, Landscape Architecture, Scenic Highway Program. July 11, 2012. Web. November 3, 2012. <<http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm>>
- California Department of Conservation (CDC) 2011. *Santa Barbara County Important Farmland 2010*. California Department of Conservation, Division of Land Resource Protection, Farmland Mapping & Monitoring Program. Sacramento, CA. September 2011.
- Envirostor 2012. "San Luis Obispo County." California Department of Toxic Substance Control, Envirostor, Map Location of Interest. n.d. Web. November 18, 2012. <<http://www.envirostor.dtsc.ca.gov/public/>>
- Farber et al 2010. Farber, Robert J. et al. "Capping the Dust in the Antelope Valley" Antelope Valley Air Quality Management District, Windblown Dust Guidance. n.d Web. November 28, 2012. <<http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=2708>>
- Geocon 2009. Geotechnical Investigation for the Visitor Center Project at Pismo State Beach by Geocon Consultants, Rancho Cordova, CA. 2009.
- Jaison 2012. "Sand transport mechanisms." Image. *Greg Jaison*. University of Southampton, Computational Modeling Group, People. n.d. Web. November 12, 2012. <<http://cmg.soton.ac.uk/people/gtj104/>>
- National Oceanic and Atmospheric Administration (NOAA) 2012. "Recent Global CO2." NOAA, Earth Systems Research Laboratory, Global Monitoring Division, Trends in Atmospheric Carbon Dioxide. September 2012. Web November 15, 2012. <<http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html>>
- OHMVR Division 2012. "Wind Data." California State Parks, Off-Highway Vehicles, State Vehicular Recreation Areas, Oceano Dunes SVRA, Particulate Matter Information. October 2012. Web. October 14, 2012.

- San Luis Obispo County Air Pollution Control District (SLO APCD) 2007. Nipomo Mesa Particulate Study 2007. San Luis Obispo, CA. March 2007.
- _____ 2010. South County Phase 2 Particulate Study. San Luis Obispo, CA. February 2010.
- San Luis Obispo (SLO) County 1992. *Noise Element, Part I Policy Document*. Prepared by Brown-Buntin Associates, Inc. Prepared for San Luis Obispo County. San Luis Obispo, CA. May 1992.
- _____ 2007. *Prime Farmland*. San Luis Obispo County Planning and Building Department. San Luis Obispo, CA. January 2007.
- _____ 2011. *EnergyWise Plan – Designing Energy and Climate Solutions for the Future*. Prepared by PMC for San Luis Obispo County. San Luis Obispo County, Ca. November 2011.
- _____ 2012. “Safety Element Maps”. San Luis Obispo County, Planning and Building Department, Zoning and Maps, Map Image Download Center. n.d. Web. November 9, 2012.
<http://www.slocounty.ca.gov/planning/zoning/Map_Image_Download_Center/Safety_Element_Maps.htm>
- Santa Barbara County 2009. *Santa Barbara County Comprehensive Plan Noise Element*. Santa Barbara County Planning and Development Department. Santa Barbara, CA. May 2009.

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**Oceano Dunes SVRA Dust Control Project
Initial Study**

APPENDIX A1

Special-status Plant Species with the Potential to Occur in the Project Area

Table A1. Special-status Plant Species with the Potential to Occur in the Project Area

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Red sand verbena <i>Abronia maritima</i>	CRPR 4.2	Along coast from SLO County to Mexican border.	Coastal dunes, 0-100 m.	Perennial herb, Feb.-Nov.	Present- On-site surveys and CNDDDB records.	Present- Guadalupe-Nipomo Dunes Center website.	3, 4,5
Hoover's bent grass <i>Agrostis hooveri</i>	CRPR 1B.2	Endemic, coastal SLO and SB Counties.	Closed cone coniferous forest, chaparral, cismontane woodland or valley and foothill grassland usually on sandy soils; 6-610 m.	Perennial herb, Apr.-Jul.	Low- Limited suitable habitat.	Low- Limited suitable habitat.	2, 3
Douglas' fiddleneck <i>Amsinckia douglasiana</i>	CRPR 4.2	Endemic, west of the Sierras from Monterey County to Santa Barbara & in Tehachapi Ranges.	Cismontane woodland or valley and foothill grassland on Monterey shale; 0-1950 m.	Annual herb, Mar.-May	Low- No suitable habitat.	None- No suitable habitat or records in the region.	3
Aphanisma <i>Aphanisma blitoides</i>	CRPR 1B.2	Southern California coast and offshore islands from Santa Maria to Mexican border.	Coastal bluff scrub, coastal dunes or coastal scrub on sandy soils; 1-305 m.	Annual herb, Mar.-Jun.	Low- Suitable habitat but no records in the region.	High- Suitable habitat and record 2 miles south.	2, 3
Eastwood's brittle-leaf manzanita <i>Arctostaphylos crustacea</i> ssp. <i>eastwoodiana</i>	CRPR 1B.1	Endemic to coastal SB County.	Chaparral (maritime, sandy); 90-365 m.	Perennial evergreen shrub, March	None- Outside of species range.	Low- Limited suitable habitat and no records from area.	3
Santa Lucia manzanita <i>Arctostaphylos luciana</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on shale; 350-850 m.	Perennial evergreen shrub, Dec.-Mar.	Low- No records from area and likely outside of elevation range.	None- Outside of species range.	2
Morro Manzanita <i>Arctostaphylos morroensis</i>	FT, CRPR 1B.1	Endemic to SLO County.	Chaparral (maritime), cismontane woodland, coastal dunes (pre-Flandrian) or coastal scrub on Baywood fine sand; 5-205 m.	Perennial evergreen shrub, Dec.-Mar.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Pecho manzanita <i>Arctostaphylos pechoensis</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Closed-cone coniferous forest, chaparral or coastal scrub on siliceous shale; 125-850 m.	Perennial evergreen shrub, Nov.-Mar.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
Santa Margarita manzanita <i>Arctostaphylos pilosula</i>	CRPR 1B.2	Endemic, occurs in SLO, SB and Monterey Counties.	Broad-leaved upland forest, closed-cone coniferous forest, chaparral or cismontane woodland sometimes on sandstone; 170-1100 m.	Perennial evergreen shrub, Dec.-May	None- No suitable habitat and no records from area.	Low- Records from area but no suitable habitat.	2, 3
La Purisima Manzanita <i>Arctostaphylos purissima</i>	CRPR 1B.1	Endemic to SB County.	Chaparral (sandy), coastal scrub.	Perennial evergreen shrub, Nov.-May	None- Outside of species range.	Low- Limited suitable habitat and no records from area.	2, 3
Sand mesa manzanita <i>Arctostaphylos rudis</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Chaparral (maritime) or coastal scrub on sandy soils; 25-322 m.	Perennial evergreen shrub, Nov.-Feb.	Moderate- Some suitable habitat and recorded 1.5 mile east at Nipomo Mesa.	Moderate- Some suitable habitat and recorded 2 miles south at Point Sal.	2, 3
Marsh sandwort <i>Arenaria paludicola</i>	FE, SE, CRPR 1B.1	Remaining extant occurrences are in SLO and Los Angeles Counties.	Sandy openings in marshes and swamps (fresh water or brackish); 3-170 m.	Perennial stoloniferous herb, May-Aug.	Present- Known to occur from CNDDDB and State Parks records.	Low- No known occurrences in SB County.	1a, 2, 3
Mile's milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	CRPR 1B.2	Endemic to SLO, SB and Ventura Counties.	Coastal scrub (clay); 20-90 m.	Annual herb, Mar.-Jun.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
Nuttall's Milkvetch <i>Astragalus nuttallii</i> var. <i>nuttallii</i>	CRPR 4.2	Endemic to coast from San Francisco to SB County.	Coastal bluff scrub or coastal dunes; 3-120 m.	Perennial herb, Jan.-Nov.	Present- Found in 2006 State Parks botanical survey.	Moderate- Suitable habitat present but no records from the area.	3, 4

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Coulter's saltbrush <i>Atriplex coulteri</i>	CRPR 1B.2	Along coast from San Luis Obispo to Mexican border.	Coastal bluff scrub, coastal dunes, coastal scrub or valley and foothill grassland on alkaline or clay soils; 3-460 m.	Perennial herb, Mar.-Oct.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
Davidson's saltscale <i>Atriplex serenana</i> var. <i> davidsonii</i>	CRPR 1B.2	Along coast from Santa Maria to San Diego.	Coastal bluff scrub or coastal scrub on alkaline soils; 10-200 m.	Annual herb, April-Oct.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
San Luis Obispo mariposa lily <i>Calochortus obispoensis</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral, coastal scrub or valley and foothill grassland often on serpentine soils; 50-730 m.	Perennial bulbiferous herb, May-Jul.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
La Panza mariposa lily <i>Calochortus simulans</i>	CRPR 1B.3	Endemic to SLO and SB Counties.	Chaparral, cismontane woodland, lower montane coniferous forest or valley and foothill grassland on sandy, often granitic and sometimes serpentine soils; 395-1100 m.	Perennial bulbiferous herb, Apr.-Jun.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2, 3
Cambria morning-glory <i>Calystegia subacaulis</i> subsp. <i>episcopalis</i>	CRPR 4.2	Endemic to SLO and SB Counties.	Chaparral, cismontane woodland, coastal prairie or valley and foothill grassland usually on clay soils; 30-500 m.	Perennial rhizomatous herb, Mar.-May	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
San Luis Obispo owl's clover <i>Castilleja densiflora</i> spp. <i>obispoensis</i>	CRPR 1B.2	Endemic to SLO County.	Meadows and seeps or valley and foothill grassland sometimes on serpentine soils; 10-400 m.	Annual herb, Mar.-May	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2, 3

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Monterey Coast paintbrush <i>Castilleja latifolia</i> ssp. <i>latifolia</i>	CRPR 4.3	Endemic to central coast.	Closed-cone coniferous forest, cismontane woodland (openings), coastal dunes or coastal scrub on sandy soils; 0-185 m.	Perennial herb (hemiparasitic), Feb.-Sep.	Present- Found in 2006 State Parks botanical survey.	Moderate- Suitable habitat present but no records from the area.	4
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congonii</i>	CRPR 1B.2	Endemic to the San Francisco Bay Area, Monterey coast and SLO County.	Valley and foothill grassland (alkaline); 0-230 m.	Annual herb, May-Nov.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
Coastal goosefoot <i>Chenopodium littoreum</i>	CRPR 1B.2	Endemic to SLO, SB and Los Angeles Counties.	Coastal dunes; 10-30 m.	Annual herb, Apr.-Aug.	Present- Occurs at Oso Flaco and Jack Lakes.	High- Suitable habitat and record 2 miles north.	2, 3
Brewer's spineflower <i>Chorizanthe breweri</i>	CRPR 1B.3	Endemic to SLO and Monterey Counties.	Closed-cone coniferous forest, chaparral, cismontane woodland or coastal scrub on serpentine, rocky or gravelly soils; 45-800 m.	Annual herb, Apr.-Aug.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
Douglas's spineflower <i>Chorizanthe douglasii</i>	CRPR 4.3	Endemic to SLO, San Benito and Monterey Counties.	Chaparral, cismontane woodland, coastal scrub or lower montane coniferous forest on sandy or gravelly soils; 55-1600 m.	Annual herb, Apr.-Jul.	Present- Found in 2009 State Parks botanical survey.	None- Outside of species range.	4
Straight-awned spineflower <i>Chorizanthe rectispina</i>	CRPR 1B.3	Endemic to SLO, SB and Monterey Counties.	Chaparral, cismontane woodland or coastal scrub; 85-1035 m.	Annual herb, Apr.-Jul.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2
Bolander's water hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	CRPR 2.1	Endemic to the San Francisco Bay Area, Sacramento Valley and central coast.	Coastal, fresh or brackish water marshes and swamps' 0-200 m.	Perennial herb, Jul.-Sep.	None- Presumed extirpated from SLO County.	None- Presumed extirpated from SB County.	2

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Chorro Creek bog thistle <i>Cirsium fontinale</i> var. <i>obispoense</i>	FE, SE CRPR 1B.2	Endemic to SLO County.	Chaparral, cismontane woodland, coastal scrub or valley and foothill grassland in serpentine seeps and drainages; 35-380 m.	Perennial herb, Feb.-Sep.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
Surf thistle <i>Cirsium rhotophilum</i>	ST, CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal bluff scrub or coastal dunes; 3-60 m.	Perennial herb, Apr.-Jun.	Present- Occurs near Oso Flaco Lake according to CNDDDB and State Parks records.	Present- There is a CNDDDB record of this species in the project area.	2, 3, 5
La Graciosa thistle <i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE, ST, CRPR 1B.1	Endemic to SLO, SB and Monterey Counties.	Cismontane woodland, coastal dunes, coastal scrub, marshes and swamps (brackish) or valley and foothill grassland on mesic, sandy soils; 4-220 m.	Perennial herb, May-Aug.	Present- known to occur at Oso Flaco Lake, near Jack Lake, in the Callander Dunes and at the Dune Lake complex from park surveys and CNDDDB records.	High- Suitable habitat and occurs north of the Santa Maria River.	1, 2, 3
Seaside cistanthe <i>Cistanthe maritima</i>	CRPR 4.2	Along southern coast from Santa Maria to Mexican border.	Coastal bluff scrub, coastal scrub or valley and foothill grassland on sandy soils; 5-300 m.	Annual herb, Feb.-Aug.	None- Outside of species range.	Low- Limited suitable habitat and no records from area.	3
California saw-grass <i>Cladium californicum</i>	CRPR 2.2	Eastern and southern California.	Alkaline or freshwater meadows and seeps; 60-865 m.	Perennial rhizomatous herb, Jun.-Sep.	High- Occurs near project area at a bog near Highway 1.	Low- Limited suitable habitat and no records from area.	2, 3
Pismo clarkia <i>Clarkia speciosa</i> ssp. <i>Immaculata</i>	FE, CRPR 1B.1	Endemic to SLO County.	Chaparral (margins, openings), cismontane woodland or valley and foothill grassland on sandy soils; 25-185 m.	Annual herb, May-Jul.	Moderate- Limited suitable habitat, closest occurrence 2 miles east at Nipomo Mesa.	None- Outside of species range.	1, 2, 3

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Seaside bird's beak <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	CRPR 1B.1	Endemic to SB and Monterey Counties.	Closed-cone coniferous forest, chaparral (maritime), cismontane woodland, coastal dunes or coastal scrub on sandy, often disturbed sites; 0-425 m.	Annual herb, Apr.-Oct.	None- Outside of species range.	Moderate- Suitable habitat, but no records from area.	2
Branching beach aster <i>Corethrogyne leucophylla</i>	CRPR 3.2	Endemic to coast from Santa Cruz to Santa Maria.	Closed-cone coniferous forest or coastal dunes; 3-60 m.	Perennial herb, May-Dec.	Moderate- Suitable habitat, but no records from area.	None- Outside of species range.	3
Gaviota tarplant <i>Deinandra increscens</i> ssp. <i>villosa</i>	FE, CE, CRPR 1B.1	Endemic to SB County.	Coastal bluff scrub, coastal scrub or valley and foothill grassland; 35-430 m.	Annual herb, May-Oct.	None- Outside of species range.	Moderate- Limited suitable habitat, closest occurrence 2.5 miles east.	2, 3
Dune larkspur <i>Delphinium parryi</i> ssp. <i>Blochmaniae</i>	CRPR 1B.2	Endemic to SLO, SB and Ventura Counties.	Chaparral (maritime), coastal dunes; 0-200 m.	Perennial herb, Apr.-May	Present- known to occur south of Oso Flaco Lake, at the Callander Dunes and east of the Oceano Dunes SVRA boundary from CNDDDB records.	High- Suitable habitat and record 2.5 miles south.	2, 3
Beach spectaclepod <i>Dithyrea maritima</i>	ST, CRPR 1B.1	Southern coast and off-shore islands from San Luis Obispo to Los Angeles.	Coastal dunes, coastal scrub (sandy); 3-50 m.	Perennial rhizomatous herb, Mar.-May	Present- known to occur at Oso Flaco Lake and south of Oso Flaco Lake from State Parks and CNDDDB records.	Present- Occurs in the project area according to CNDDDB records.	2, 3, 5
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	CRPR 1B.1	Along coast from west of Paso Robles to Mexican border.	Coastal bluff scrub, chaparral, coastal scrub or valley and foothill grassland on rocky, often clay or serpentine soils; 5-450 m.	Perennial herb; Apr.-Jun.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat, closest record is 1.5 mile south.	2, 3

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes, coastal scrub; 3-45 m.	Perennial rhizomatous herb; Jun.-Aug.	Present- Occurs at "vegetation islands", Oso Flaco Lake, south of Oso Flaco Lake and near Jack and Lettuce Lakes, according to State Parks and CNDDDB records.	High- Suitable habitat and occurs north of the Santa Maria River.	2, 3, 4
Indian Knob mountainbalm <i>Eriodictyon altissimum</i>	FE, SE, CRPR 1B.1	Endemic to SLO County.	Chaparral (maritime), cismontane woodland or coastal scrub; 80-270 m.	Perennial evergreen shrub, Mar.-Jun.	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	3
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>Hooveri</i>	CRPR 1B.1	Extant occurrences in Alameda, San Benito, San Diego and SLO Counties.	Vernal pools, 3-45 m.	Annual/perennial herb, Jul.-Aug.	Low- Limited suitable habitat and no records from area.	None- No known occurrences in SB County.	2
Suffrutescent wallflower <i>Erysimum suffrutescens</i>	CRPR 4.2	Endemic to and southern coast.	Coastal bluff scrub, chaparral (maritime), coastal dunes or coastal scrub; 0-150 m.	Perennial herb, Jan.-Jul.	Present- Species found during 2004-2010 plant surveys in the Oceano Dunes SVRA.	Moderate- Suitable habitat, but no records from area.	3, 4
Mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	CRPR 1B.1	Endemic to central and southern coast.	Chaparral (maritime), cismontane woodland, coastal scrub on sandy or gravelly soils; 70-810 m.	Perennial herb, Feb.-Sep.	Low- Project area probably too low in elevation, closest occurrence is 2 miles north.	Low- Limited suitable habitat and no records from area.	2
Kellogg's horkelia <i>Horkelia cuneata</i> var. <i>sericea</i>	CRPR 1B.1	Endemic to coast from San Francisco Bay Area to vicinity of Lompoc.	Closed-cone coniferous forest, chaparral (maritime), coastal dunes or coastal scrub in sandy or gravelly openings; 10-200 m.	Perennial herb, Apr.-Sep.	Present- occurs in the Pismo Dunes Natural Preserve, at Callander Dunes and at Jack Lake, according to State Parks and CNDDDB records	Moderate- Suitable habitat, but no records from area.	2, 3, 4

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Southwestern spiny rush <i>Juncus acutus</i> ssp. <i>leopoldii</i>	CRPR 4.2	Central and southern coast.	Coastal dunes (mesic), meadows and seeps (alkaline seeps) or marshes and swamps (coastal salt); 3-900 m.	Perennial rhizomatous herb; Mar.-Jun.	Present- Species found during 2004-2010 plant surveys in the Oceano Dunes SVRA.	Moderate- Suitable habitat, but no records from area.	4
Jones' layia <i>Layia jonesii</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or valley and foothill grassland or clay or serpentinite soils; 5-400 m.	Annual herb, Mar.-May	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
Fuzzy prickly phlox <i>Linanthus californicus</i>	CRPR 4.2	Endemic to SLO and SB Counties.	Coastal dunes, 1-30 m.	Perennial deciduous shrub, Mar.-Aug.	Present- occurs at Conoco Philips in Buffer Zone according to 2006 and 2009 plant surveys.	Moderate- Suitable habitat, but no records from area.	4
San Luis Obispo County lupine <i>Lupinus ludovicianus</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on sandstone or sandy soils; 50-525 m.	Perennial shrub, Apr.-Jul	Low- Limited suitable habitat and no records from area.	None- Outside of species range.	2
Nipomo Mesa lupine <i>Lupinus nipomensis</i>	FE, SE, CRPR 1B.1	Endemic to SLO County.	Coastal dunes; 10-50 m.	Annual herb, Dec.-May	Present- Known to occur near Jack Lake, near Black Lake, at the Callander Dunes from State Parks and CNDDDB records.	None- Outside of species range.	1, 2, 3
Dunedelion <i>Malacothrix incana</i>	CRPR 4.3	Endemic to central and southern coast and off-shore islands.	Coastal dunes or coastal scrub; 2-35 m.	Perennial herb, Jan.-Oct.	Present- Species found near Oso Flaco Creek during 2004, 2005 and 2009 plant surveys.	Present- Occurs in the project area according to the Guadalupe-Nipomo Dunes Center website.	4, 5

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
San Luis Obispo monardella <i>Monardella undulata</i> ssp. <i>undulata</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes or coastal scrub (sandy); 10-200 m.	Perennial rhizomatous herb, May-Sep.	Present- Known to occur in the Pismo Dunes Natural Preserve, near Jack Lake, near Black Lake, in the Callander Dunes, in the Oso Flaco Lake area and south of Oso Flaco Lake from CNDDDB records.	High- Suitable habitat and occurs 2 miles north of the Santa Maria River.	2, 3
Crisp monardella <i>Monardella undulata</i> ssp. <i>crispa</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes or coastal scrub; 10-120 m.	Perennial rhizomatous herb, Apr.-Aug.	Present- Occurs throughout project area according to 2012 vegetation mapping and CNDDDB records.	Present- Occurs in the project area according to CNDDDB records.	2, 3, 4
California spineflower <i>Mucronea californica</i>	CRPR 4.2	Endemic to central and southern California.	Chaparral, cismontane woodland, coastal dunes, coastal scrub or valley and foothill grassland on sandy soils; 0-1400 m.	Annual herb, Mar.-Aug.	Moderate- Suitable habitat, but no records from area.	Moderate- Suitable habitat, but no records from area.	3
Gambel's watercress <i>Nasturtium gambelii</i>	FE, ST, CRPR 1B.1	Central and southern coast.	Marshes and swamps (freshwater or brackish)	Perennial rhizomatous herb, Apr.-Oct.	Present- Recorded from Oso Flaco Lake, and Little Oso Flaco Lake; although pure stands (non-hybridized) might be extirpated.	Low- Limited suitable habitat and no records from area.	1, 2, 3
Coast wolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	CRPR 1B.2	Central and southern coast.	Coastal dunes; 0-100 m.	Annual herb, Apr.-Sep.	Moderate- Suitable habitat, but no records from area.	Moderate- Suitable habitat, but no records from area.	3
Short-lobed broomrape <i>Orobanche parishii</i> ssp. <i>brachyloba</i>	CRPR 4.2	Central and southern coast and off-shore islands.	Coastal bluff scrub, coastal dunes or coastal scrub on sandy soils; 3-305 m.	Perennial herb (parasitic), Apr.-Oct.	Present- Known to occur south of Oso Flaco Lake from CNDDDB records.	High- Suitable habitat and closest occurrence 2 miles north.	2, 3

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
Branching phacelia <i>Phacelia ramosissima</i>	CRPR 4.2	Central and southern coast and off-shore islands.	Chaparral, coastal dunes, coastal scrub or marshes and swamps (coastal salt); 5-300 m.	Perennial herb, Mar.-Aug.	Present- Found during 2004-2009 plant surveys in the Pismo Dunes Natural Preserve, Oceano Dunes SVRA and Conoco Phillips Buffer Zone.	Moderate- Suitable habitat, but no records from area.	3, 4
Hickman's popcorn flower <i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	CRPR 4.2	Endemic to San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey and SLO Counties.	Closed-cone coniferous forest, chaparral, coastal scrub, marshes and swamps or vernal pools; 15-185 m.	Annual herb, Apr.-Jun.	Present- Found during 2004-2009 plant surveys in the Oceano Dunes SVRA and Conoco Phillips Buffer Zone.	Low- Limited suitable habitat and no records from area.	4
Sand almond <i>Prunus fasciculata</i> var. <i>punctata</i>	CRPR 4.3	Endemic to SLO and SB Counties.	Chaparral (maritime), cismontane woodland, coastal dunes or coastal scrub on sandy soils; 15-200 m.	Perennial deciduous shrub, Mar.-Apr.	Present- Found during 2006 and 2007 plant surveys in the Conoco Phillips Buffer Zone.	Moderate- Suitable habitat, but no records from area.	3, 4
Hoffmann's sanicle <i>Sanicula hoffmannii</i>	CRPR 4.3	Endemic to central coast and off-shore islands.	Broad-leafed upland forest, chaparral or coastal scrub often on serpentinite or clay soils; 30-300 m.	Perennial herb, Mar.-May	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	3
Black-flowered figwort <i>Scrophularia atrata</i>	CRPR 1B.2	Endemic to SLO and SB Counties	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub or riparian scrub; 10-500 m.	Perennial herb, Mar.-Jul.	High- Suitable habitat, closest occurrence 2.5 miles north.	High- Suitable habitat, occurs east of Mussel Point south of project area.	2, 3
Dune ragwort <i>Senecio blochmaniae</i>	CRPR 4.2	Endemic to SLO and SB Counties.	Coastal dunes, 0-100 m.	Perennial herb, May-Oct.	Present- Occurs throughout project area according to 2012 vegetation mapping and 2004-2009 plant surveys.	Moderate- Suitable habitat, but no records from area.	3, 4

Sources	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur		Sources
					SLO County Project Area	SB County Project Area	
San Bernardino aster <i>Symphotrichum defoliatum</i>	CRPR 1B.2	Endemic to southwestern California.	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps or valley and foothill grassland (vernally mesic) near ditches, streams or springs; 2-2040 m.	Perennial rhizomatous herb, Jul.-Nov.	Moderate- Limited suitable habitat, occurs 0.5 mile east of Dunes Preserve.	Low- Limited suitable habitat and no records from area.	2, 3
¹ Listing Status Key: FE – Federal Endangered FT – Federal Threatened FC – Federal Candidate SE – State Endangered ST – State Threatened SC – State Candidate				California Rare Plant Rank: CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere. CRPR 2: Plants rare, threatened, or endangered in Calif. but common elsewhere. CRPR 3: More information about this plant needed (Review List). CRPR 4: Limited distribution (Watch List). CRPR Threat Code extensions and their meanings: .1 – Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat) .2 – Fairly endangered in California (20-80% occurrences threatened) .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).			

Sources

- 1a. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2012. Species Lists: Oceano (221D), Pismo Beach (221B), Arroyo Grande NE (221A), Tar Spring Ridge (220B), Nipomo (220C), Santa Maria (195B), Guadalupe (196A) and Point Sal (196B) Quads. Last updated July 27, 2012. Available at: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm, accessed August 7, 2012.
- 1b. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2012. Species Lists: Point Sal (196B), Port San Luis (222A), Oceano (221D), Guadalupe (196A) and Camsalia (196D) Quads. Last updated July 27, 2012. Available at: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm, accessed August 15, 2012.
2. California Natural Diversity Database (CNDDB). 2012. California Department of Fish and Game, Biogeographic Data Branch. Last updated July, 2012.
3. California Native Plant Society Inventory of Rare and Endangered Plants, 2012. Oceano and Point Sal Quads. Available at: <http://www.rareplants.crpr.org/result.html?adv=t&quad=35120A5:1>, accessed August 15, 2012.
4. California Department of Parks and Recreation. 2011. Habitat Monitoring Report. Oceano Dunes State Vehicular Recreation Area 2004-2011. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District. March. Appendix 2. Sensitive wildlife, Oceano Dunes.
5. The Guadalupe-Nipomo Dunes Center Website. Available at: <http://www.dunescenter.org/aboutus/rgdp.html>, accessed August 21, 2012.

**Oceano Dunes SVRA Dust Control Project
Initial Study**

APPENDIX A2

**Special-status Animal Species with the Potential to Occur in the Project
Area**

Table A2. Special-status Animal Species with the Potential to Occur in the Project Area

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Fish						
Steelhead - south/central California coast ESU <i>Oncorhynchus mykiss irideus</i>	FT, CSSC	Coastal river basins from the Russian River south to Soquel and Aptos Creek, and the drainages of San Francisco and San Pablo Bays, including the Napa River.	Hatches in fresh water, lives adult life in the ocean, and returns to natal stream or river to spawn; spawning and rearing habitat is consists of perennial streams with clear, cool to cold, fast flowing water with a high dissolved oxygen content and abundant gravels and riffles.	Present- occurs in Arroyo Grande Creek and Lagoon.	None- There are no rivers or streams in the project area and this species is not known from the area.	2, 3
Arroyo chub <i>Gila orcuttii</i>	CSSC	Native to streams from Malibu Creek to San Luis Rey River Basin; introduced into streams in Santa Clara, Ventura and Santa Ynez.	Slow water stream sections with mud or sand bottoms; feeds heavily on aquatic vegetation and associated invertebrates.	Low- Has not been detected in spite of regular fish surveys.	None- There are no rivers or streams in the project area, although it occurs in the Santa Maria estuary to the immediate north.	2
Unarmored threespine sickleback <i>Gasterosteus aculeatus williamsoni</i>	FE SE	Weedy pools, backwaters and among emergent vegetation in small southern California streams.	Cool, clear water with abundant vegetation	Low- Has not been detected in spite of regular fish surveys.	None- There are no rivers or streams in the project area and this species is not known from the area.	2
Tidewater goby <i>Eucyclogobius newberryi</i>	FE CSSC	Occurs in brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Present- occurs in Arroyo Grande Creek and Lagoon.	None- There are no rivers or streams in the project area, although it occurs in the Santa Maria River to the immediate north.	1a, 1b, 2, 3
Amphibians/Reptiles						
California tiger salamander <i>Ambystoma californianse</i>	FT ST CSSC	Endemic, found in isolated populations the Central Valley and Central Coast ranges.	Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal wetlands for breeding.	None- No suitable habitat and not known from project area.	None- No suitable habitat and not known from project area.	2

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
California red-legged frog <i>Rana draytonii</i>	FT CH CSSC	Historically, this species was found along the coast and Coast Ranges from Mendocino County in northern California south to northern Baja California, and inland east through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to Tulare county, and possibly Kern county.	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Present- Occurs in the Oso Flaco Lake complex, in Little Oso Flaco Lake, in Jack Lake, in Little Oso Flaco Creek and in Arroyo Grande Creek.	None- There is no freshwater aquatic habitat in the project area, although it occurs to the north in the Santa Maria River.	1a, 1b, 2, 3
Western spadefoot <i>Spea hammondi</i>	CSSC	Ranges from near Redding south throughout the Great Valley and its associated foothills, through the South Coast Ranges into coastal southern California south of the Transverse mountains and west of the Peninsular mountains, into northwest Baja California.	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands; needs vernal pools for egg laying and breeding.	Present- Observed at Oso Flaco Lake in February and March of 2000.	None- No suitable habitat and not known from project area.	2, 3, 4
Southwestern pond turtle <i>Actinemys marmorata</i>	CSSC	From Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley and on western slope of Sierra Nevada.	Ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	Present- Has been observed at Jack Lake, Oso Flaco Lake and Arroyo Grande Creek.	None- No suitable habitat and not known from project area.	2, 3, 4

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Silvery legless lizard <i>Anniella pulchra pulchra</i>	CSSC	Occurs from the southern edge of the San Joaquin River in northern Contra Costa County south to northwestern Baja California Del Norte just south of Colonia Guerrero. Five lineages; Lineage D occurs in project area.	Dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and riparian habitats with moist, sandy soils.	Present- Has been observed at Oso Flaco Lake, Little Oso Flaco Lake, Jack Lake and near Lettuce Lake.	Low- Records from area but limited suitable habitat.	2, 3, 4
Coast (California) horned lizard <i>Phrynosoma coronatum</i> (frontale population)	CSSC	Historically, found along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California. Ranges up onto the Kern Plateau east of the crest of the Sierra Nevada. Current range is more fragmented.	Chaparral, grasslands, coniferous forests in fine, loose soils.	Present- Has been observed at Oso Flaco Lake and Little Oso Flaco Lake.	Present- has been recorded within the Rancho Guadalupe Dunes Preserve County Park near the northwestern boundary of the Preserve.	2, 3, 4
Two-striped garter snake <i>Thamnophis hammondi</i>	CSSC	Coastal California from vicinity of Salinas to northwest Baja California, from sea level to about 7,000 feet.	Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	Present- Has been observed near Oso Flaco Lake.	None- There is no freshwater aquatic habitat in the project area, although it occurs to the north in the Santa Maria River.	2, 3
Birds						
American white pelican <i>Pelecanus erythrorhynchos</i>	CSSC (nesting)	Year-round resident along the Coast and Central Valley from the San Francisco Bay Area south to the border with Mexico; and a summer resident in the northeast corner of California.	White pelicans nest on the ground in colonies on earthen, sandy or rocky, islands, peninsulas or tule mats. They forage in shallow inland waters or shallow coastal marine waters.	Present- Detected in project area during 2004-2010 point count surveys.	High-Suitable habitat present and known from region.	3

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
California brown pelican <i>Pelecanus occidentalis californicus</i>	CFP	Year-round resident along southern California coast, migrant elsewhere along coast.	Colonial nester on coastal islands just outside the surf line.	Present- have been detected on beach by State Parks staff.	High-Suitable habitat present and known from region.	5
Least bittern <i>Ixobrychus exilis</i>	CSSC BCC	Year-round resident in southern California, summer resident in the Central Valley.	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover; nests usually placed low in tules, over water.	Present- has been recorded as a vagrant at Oso Flaco Lake.	Low- Project area is outside of normal range; no suitable habitat.	3
Woodstork <i>Mycteria Americana</i>	CSSC	Migrant in southern California, vagrant elsewhere.	Freshwater and saltwater sloughs, shallow ponds and marshes.	Present- has been recorded as a vagrant at Oso Flaco Lake.	Low- Project area is outside of normal range; no suitable habitat.	3
Brant <i>Branta bernicla</i>	CSSC	Winters along entire California coast.	Requires well-protected, shallow marine waters with inter-tidal eel grass beds, primarily within bays and estuaries; primary food is eel grass.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Moderate- Ocean may not be sheltered enough for this species in project area.	3
Redhead <i>Aythya Americana</i>	CSSC	Year-round resident in central valley, winter resident elsewhere in state.	Nests on marshy lakes and ponds, winters in large flocks on sheltered bays and lakes.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Harlequin duck <i>Histrionicus histrionicus</i>	CSSC	Breeds on the west slope of the Sierra Nevada, nesting along shores of swift, shallow rivers; winters along north coast.	Nest often built in a recess, sheltered overhead by streambank or woody debris, usually within 7 feet of water.	Moderate- area has wintering habitat, but no records of this species.	Moderate- area has wintering habitat, but no records of this species.	2
Northern harrier <i>Circus cyaneus</i>	CSSC	Throughout lowland California; has been recorded in fall at high elevations.	Grasslands, meadows, marshes, and seasonal and agricultural wetlands.	Present- observed in the 2006 through 2009 point count surveys and is known to breed in the project area.	Moderate- area has some suitable habitat, but no records of this species.	3, 5

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
White-tailed kite <i>Elanus leucurus</i>	CFP	Lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills, to western San Diego County at Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	Present- Occasionally seen in project area, but not in recent years.	Moderate- area has some suitable habitat, but no records of this species.	3
Golden eagle <i>Aquila chrysaetos</i>	CFP	Foothills and mountains throughout California.	Nests on cliffs and escarpments or in tall trees overlooking open country; forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Bald eagle <i>Haliaeetus leucocephalus</i>	SE CFP	Year-round resident in northwestern and northeastern California, winter resident elsewhere in the state.	Ocean shore, lake margins and rivers for both nesting and wintering; most nests are within 1 mile of water.	Present- Observed migrating through project area.	Moderate- May migrate through project area.	5
American Peregrine falcon <i>Falco peregrines</i> ssp. <i>anatum</i>	CFP BCC	Year-round resident throughout California.	Nests on cliffs or man-made structures such as buildings and bridges; feeds on birds.	Present- Has been observed in flight and hunting within Oceano Dunes SVRA, but not nesting.	Moderate- May pass through area, but no records from area.	3, 5
California black rail <i>Laterallus jamaicensis</i> ssp. <i>coturniculus</i>	ST	This endemic subspecies of the black rail (<i>Laterallus jamaicensis</i>) occurs in the San Francisco Bay region, parts of the Central Valley and at the southeastern border of the State.	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. It needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Present- Recorded at Oso Flaco Lake in 1991.	Low- Limited suitable habitat and no records from area.	2, 3

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
California clapper rail <i>Rallus longirostris</i> ssp. <i>levipes</i>	FE SE CFP	This California endemic inhabits salt water and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay.	Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	None- Project area is outside of known range of this species.	None- Project area is outside of known range of this species.	2
Western snowy plover <i>Charadrius alexandrinus</i> ssp. <i>nivosus</i>	FT CSSC BCC	Pacific population of western snowy plover occurs along the entire coastline.	Occurs on sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Present- Known to nest in the project area.	Present- Known to nest in the project area.	1a, 1b, 2, 3
Long-billed curlew <i>Numenius americanus</i>	BCC	Occurs as a winter (non-breeding) migrant along the California coast, and in the Central and Imperial Valleys. Summer (breeding) migrant in northeastern California and in the Owens Valley.	Nests in meadows; winters in open habitats, wetlands, grasslands and agricultural fields.	Present- Detected in the Oceano Dunes SVRA during point count surveys in 2004.	High- Known from the region; likely occurs in the project area during the winter.	3
California least tern <i>Sternula antillarum browni</i>	FE SE CFP	Nests along the coast from San Francisco Bay south to Northern Baja California.	Colonial breeder on bare or sparsely vegetated flat substrates, sandy beaches, alkali flats, landfills or paved areas.	Present- Known to nest in the project area.	Present- Occurs from the mouth of the Santa Maria River to Mussel Point; recorded nesting in the project area in 1977 and 1996.	1a, 1b, 2, 3
Black tern <i>Chidonias niger</i>	CSSC	Breeds primarily in Modoc Plateau region, with some breeding in the Sacramento and San Joaquin valleys.	Freshwater lakes, ponds, marshes and flooded agricultural fields; at coastal lagoons or estuaries during migration.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Black skimmer <i>Rynchops niger</i>	CSSC BCC	Summer resident in southern California, winter resident on central coast.	Nests on gravel bars, low islets and sandy beaches, in unvegetated sites; colonies usually less than 200 pairs.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Marbled murrelet <i>Brachyramphus marmoratus</i>	FT SE	Nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz.	Nests in old-growth redwood dominated forests, up to six miles inland, often in Douglas fir.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Moderate- Could occur off shore, but no records from area.	3
Western yellow-billed cuckoo <i>Coccyzus americanus</i> ssp. <i>occidentalis</i>	SE BCC	Breeds at isolated locations in central and southern California.	Riparian forest nester, along the broad, lower flood bottoms of large river systems; nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles or wild grape.	Present- Observed at Oso Flaco Lake in 1999 and at Oceano Lagoon in 2010.	Low- Limited suitable habitat and no records from area.	3
Burrowing owl <i>Athene cunicularia</i>	CSSC BCC	Lowlands throughout California, including Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast.	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	Present- Observed at Oso Flaco Lake in 1999 and at Oceano Lagoon in 2010.	Moderate- Recorded north of project area, but limited suitable habitat in project area.	2, 3, 5
Vaux's swift <i>Chaetura vauxi</i>	CSSC	A summer (breeding) migrant in northern California and coastal California from the Oregon border to Monterey County, and in the Sierra Nevada from the Oregon border to northern Kern County.	Nests in snags and hollow trees in redwood and Douglas fir forests.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3, 5
Black swift <i>Cypseloides niger</i>	CSSC BCC	This species occurs in California as a summer resident and its breeding range is patchily distributed throughout the State excluding the Central Valley and much of the coast.	Nests behind or beside permanent or semi-permanent waterfalls, on perpendicular cliffs near water and in sea caves.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Allen's hummingbird <i>Selasphorus sasin</i>	BCC	Summer resident along the northern and central coast.	Breeds in coastal lowlands of the upper Sonoran and transition life zones; prefers coastal sage scrub, soft chaparral, ravines and canyons, broken coastal forests, oak woodlands and riparian woodland.	Present- Detected in the Oceano Dunes SVRA and/or Conoco Philips Buffer Zone during point count surveys in 2004 and 2010.	High- Suitable habitat and within species normal range.	3
Lewis's woodpecker <i>Melanerpes lewis</i>	BCC	Winter resident in central California, year-round resident in northeastern California.	Breeds in open forest and woodland with an open canopy and brushy understory.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Nuttall's woodpecker <i>Picoides nuttallii</i>	BCC	Year-round resident throughout coastal and central California.	Oak forest and woodlands; requires standing snag or hollow tree for nest cavity.	Present- Detected in the Oceano Dunes SVRA and/or Conoco Philips Buffer Zone during point count surveys in 2004 and 2010.	Present- Observed adjacent to project area during site visit.	3
Olive-sided flycatcher <i>Contopus cooperi</i>	CSSC	A summer (breeding) migrant in the Cascade Range and Modoc Plateau in northern California, Sierra Nevada in eastern California, Coast Ranges, and Transverse and Peninsular Ranges in Southern California.	Nests in coniferous forests.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Willow flycatcher <i>Empidonax trailii</i>	SE	Occurs as a summer (breeding) migrant in moist thickets and riparian areas throughout California.	Nests in dense riparian habitats with perennial water.	Present- Has been observed in project area during migration.	Moderate- Could pass through during migration.	3

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Loggerhead shrike <i>Lanius ludovicianus</i>	CSSC (nesting) BCC	Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north of Mendocino County, occurring only in winter.	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	Present- observed in the 2004 through 2006 point count surveys and is known to nest in the project area.	High- Suitable habitat and known from project area.	3, 5
Least Bell's vireo <i>Vireo bellii</i> ssp. <i>pusillus</i>	FE, SE	Occurs as a summer (breeding) migrant in the far south of California and in northern Baja California.	Nests in riparian habitats, generally in dense vegetation near surface water.	Moderate- Suitable habitat in riparian areas, but has not been observed in project area in recent years.	None- No suitable habitat or records from the area.	3, 5
Bank swallow <i>Riparia riparia</i>	ST	Occurs primarily around the remaining natural river banks of the Sacramento and Feather Rivers in the Sacramento Valley.	Colonial nester, nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine textured/sandy soils near streams, rivers, lakes or ocean to dig nesting hole.	Present- Forty-five individuals were observed within Oceano Dunes SVRA and/or Conoco Phillips Buffer Zone during 2005 point count surveys, but they do not breed in the area.	Moderate- May pass through the area, but do not breed there.	3
Oak titmouse <i>Baeolophus inornatus</i>	BCC	Year-round resident in Central California and Coastal California from San Francisco to the Mexican border.	Found primarily in oak and oak-pine woodlands of the Pacific slope.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Lucy's warbler <i>Oreothlypis luciae</i>	CSSC	Lower Colorado River valley and washes and arroyos emptying into it.	Partial to thickets of mesquite, riparian scrub and even stands of tamarisk.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Yellow warbler <i>Setophaga petechia</i>	CSSC BCC	Nests over all California except Central Valley, Mojave Desert region, and high altitudes in Sierra Nevada; winters along Colorado River and in parts of Imperial and Riverside Counties.	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses.	Present- Documented Arroyo Grande Creek, Jack Lake, Little Oso Flaco Lake, and Oso Flaco Lake.	Low- Limited suitable habitat and no records from area.	3, 4, 5

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Yellow-breasted chat <i>Icteria virens</i>	CSSC (nesting)	Summer (breeding) migrant in northern California, in portions of the Central Valley and the west slope of the Sierra Nevada, on the Central and Southern coast, and in portions of the southern California deserts.	Nests in dense riparian and shrub habitats.	Present- Recorded at the Oso Flaco Maps Station in 2000 but there was no evidence of breeding.	Low- Limited suitable habitat and no records from area.	5
Summer tanager <i>Piranga rubra</i>	CSSC	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts.	Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Large-billed savannah sparrow <i>Passerculus sandwichensis ssp. rostratus</i>	CSSC	Breeds along the Colorado River Delta in Mexico, winters at the Salton Sea.	Saline emergent wetlands at the Salton Sea and Southern Coast.	Moderate- has not been documented within the project area in recent years, but occurs at Morro Strand SB to the north.	None- Outside of species range.	2
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	CSSC	Winter resident along the central and south coast, summer resident in eastern California, and year-round resident in southern California.	Nests in freshwater emergent wetlands with dense vegetation and deep water, often along the borders of lakes or ponds.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Tricolored blackbird <i>Agelaius tricolor</i>	CSSC (nesting colony) BCC	Permanent resident in Central Valley from Butte to Kern Counties; breeds at scattered coastal locations from Marin to San Diego Counties and at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields; habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony.	Moderate- Tricolored blackbirds may occur occasionally in the project area, but are not known to nest there.	Low- Limited suitable habitat and no records from area.	2

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Lawrence's goldfinch <i>Spinus lawrencei</i>	BCC	Summer resident on the central coast and central valley, year-round resident on the southern coast.	Nests in open oak or other arid woodland and chaparral, near water; nearby herbaceous habitats used for feeding.	Moderate- Listed in Appendix 2 of HMR, but hasn't been recorded in recent years.	Low- Limited suitable habitat and no records from area.	3
Mammals						
Pallid Bat <i>Antrozous pallidus</i>	CSSC	Throughout California except high Sierra from Shasta to Kern Counties and northwest coast, primarily at lower and mid-elevations.	Occurs in a variety of typically arid habitats including all types of woodland especially oak savanna and grassland. May also be found in riparian areas and wetlands, orchards, vineyards, and cropland if appropriate roosting sites are available.	Present- Recorded at Oso Flaco Lake and south of Oso Flaco	Low- no records from area and limited roosting sites in project area.	2, 3
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	CSSC	Found throughout California, but details of its distribution are not well known.	Roosts in caves, buildings, hollow trees; forages in many habitats. Most abundant in mesic habitats.	Low- no records from area and limited roosting sites in project area.	Low- no records from area and limited roosting sites in project area.	2
Western red bat <i>Lasiurus blossevillii</i>	CSSC	Scattered throughout much of California at lower elevations	Found primarily in riparian and wooded habitats. Occurs at least seasonally in urban areas. Day roosts in trees within the foliage.	Low- no records from area and limited roosting sites in project area.	Low- no records from area and limited roosting sites in project area.	1, 2, 3
Giant kangaroo rat <i>Dipodomys ingens</i>	FE SE	Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub.	Needs level terrain and sandy loam soils for burrowing.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	1a
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSSC	Coastal scrub of southern California from San Diego County to SLO County.	Moderate to dense canopies preferred; they are particularly abundant in rock outcrops and rocky cliffs and slopes.	Low- Limited suitable habitat and no records from area.	Low- Limited suitable habitat and no records from area.	2

Sources	Listing Status	Range in California	Habitat	Potential to Occur		Sources
				SLO County Project Area	SB County Project Area	
Southern sea otter <i>Enhydra lutris nereis</i>	FT CFP	Near shore marine environments from about Ano Nuevo, San Mateo County to Point Sal, SB County.	Needs canopies of giant kelp and bull kelp for rafting and feeding; prefers rocky substrates with abundant invertebrates.	Present- occasionally seen off-shore of Pismo State Beach.	High- Likely occurs off-shore occasionally.	3
American badger <i>Taxidea taxus</i>	CSSC	Occurs throughout California and the western United States and Canada.	Variety of open habitats with friable soils.	Present- Has been observed at Pipeline vegetation island, Conoco Phillips buffer area and elsewhere in the project area.	Moderate- Suitable habitat but no records from project area.	2, 3, 4
¹ Listing Status Key: FE – Federal Endangered FT – Federal Threatened SE – State Endangered ST – State Threatened CFP – California Fully Protected CSSC – California Species of Special Concern BCC – USFWS Bird of Conservation Concern						

Sources

- 1a. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2012. Species Lists: Oceano (221D), Pismo Beach (221B), Arroyo Grande NE (221A), Tar Spring Ridge (220B), Nipomo (220C), Santa Maria (195B), Guadalupe (196A) and Point Sal (196B) Quads. Last updated July 27, 2012. Available at: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm, accessed August 7, 2012.
- 1b. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2012. Species Lists: Point Sal (196B), Port San Luis (222A), Oceano (221D), Guadalupe (196A) and Camsalia (196D) Quads. Last updated July 27, 2012. Available at: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm, accessed August 15, 2012.
2. California Natural Diversity Database (CNDDB). 2012. California Department of Fish and Game, Biogeographic Data Branch. Last updated July, 2012.
3. California Department of Parks and Recreation. 2011. Habitat Monitoring Report. Oceano Dunes State Vehicular Recreation Area 2004-2011. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District. March. Appendix 2. Sensitive wildlife, Oceano Dunes.
4. Condor Environmental Planning Services, Inc. Alternative Access Study: Oceano Dunes State Vehicular Recreation Area. Prepared for State of California: Department of Parks and Recreation, Oceano Dunes District. November 15, 2006.
5. Personal communication with CDPR staff.